KARNATAKA

HUMAN DEVELOPMENT REPORT-2015

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Accelerating Equitable Human Development

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Accelerating Equitable Human Development

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H.D.Kumaraswamy
Chief Minister
Government of Karnataka

VIDHANA SOUDHA
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Message

Karnataka State has made significant progress in human development over the last decade. The Government of Karnataka's policy decisions and investments in human development have brought in visible change in human development indicators such as improved living conditions, life expectancy, literacy and female literacy, reduction in the Infant Mortality Rate and Maternal Mortality Rate, Women Empowerment and welfare of Marginalised groups.

This report, with a theme Accelerating Equitable Human Development, has focused on examining the spread and inclusiveness of these achievements in human development across the regions and social groups and has identified areas of development that would reflect tangible good-governance. This will strengthen the districts in Northern Karnataka, mainly those in Hyderabad Karnataka region to attain desired level of human development.

Strategies to overcome inequalities as indicated by education, health and income parameters that are wide across the regions and social groups are being addressed for promoting faster and inclusive human development in the State.

We are formulating enabling policies, promoting appropriate institutions and effective governance to ensure mainstreaming of different social groups and regions in the development process.

This Human Development Report is the outcome of an interactive process, Consultations with different Stakeholders, have provided considerable insights to analyse the issues adequately.

I am confident that it will help to develop an integrated strategy to ensure human development for everyone-now and in the future for Karnataka State.

H.D.Kumaraswamy

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Preface

Human development is the process of enlarging the freedoms of individuals and helping them to improve their quality of life. As such, it is a priority agenda of the Karnataka Government.

Karnataka has been a pioneer in the work of human development analysis, publishing its first Human Development Report in 1999 with a focus on regional imbalances in the state. The Second Human Development Report was published in 2005, highlighting issues of governance and social equity.

This report, the third in the series of Karnataka's Human Development Reports and being brought out in collaboration with UNDP, focuses on the theme of accelerating equitable human development in the state.

It is the outcome of much thought and many deliberations at different levels, involving all stakeholders, to bring out a realistic picture of the work done by the state in human development. The state has made significant progress in health, education and the provision of a secure livelihood for its people. However, challenges remain in the areas of spatial, social and gender inequalities. Focus of policymaking in future needs to be on bridging these divides and redressing these deprivations, to promote inclusive human development for all.

Commendable efforts have been made by many members of the team in bringing out this document. I would like to acknowledge the valuable assistance rendered by all in this endeavour. Firstly, I thank the Hon'ble Chief Minister of Karnataka for his support and encouragement throughout the process. The sincere efforts made by Shri. Chakravarthi Mohan, IAS, Secretary to Government, Planning, Programme Monitoring and Statistics Department are greatly appreciated. Researchers and experts have contributed significantly to provide quality analysis of the human development issues in different chapters of the report. The inputs from different Departments have helped to make the analysis more granular and relevant.

The efforts by Shri. K. Narayana, Senior Director, Human Development Division and the entire team to bring out the report are duly acknowledged.

The Editorial Committee is to be congratulated for useful guidance which has added to the richness of this volume. I expect that this document will be useful for policymakers, government agencies, academic institutions, researchers, individuals and civil society organizations in working together to shape policy and actions to promote human development for all in the State.

Umadhadevan

(UMA MAHADEVAN)

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LIST OF ABBREVIATIONS

AAY	:	Anthyodaya Anna Yojana
AD	:	Aggregate Disbursement
ADB	:	Asian Development Bank
AEH	:	All Electric Home
AFR	:	Adolescent Fertility Rate
AHINDA	:	Alpasankyatharu, Hindulidavaru and Dalitharu
AIDIS	:	All India Debt and Investment Survey
AISHE	:	All India Survey on Higher Education
ALM	:	Active Learning Methodology
AMC	:	Acute Malnutrition Children
AMUL	:	Anand Milk Union Limited
ANM	:	Auxiliary Nurse Midwifery
AR	:	Analytical Report
ANSSIRD	:	Abdul Nazeer Saab State Institute for Rural Development
AP	:	Andhra Pradesh
APL	:	Above Poverty Line
APRM	:	African Peer Review Mechanism
APU	:	Azim Premji University
ASER	:	Annual Survey of Education Reports
ASER	:	Annual Survey of Education Research
ATS	:	Apprenticeship Training Scheme
AWC	:	Anganawadi Centre
AWCs	:	Anganawadi Centers
AYUSH	:	Ayurveda, Unani, Siddha, Homeopathy
B.Ed	:	Bachelor of Education
BAIF	:	Bharatiya Agro Industrial Foundation
BAS	:	Base-line Assessment Survey
BASIN	:	Basic Infrastructure Score
BBMP	:	Bruhat Bengaluru Mahanagara Palike
BC	:	Backward Castes
BCM	:	Backward Classes and Minorities
BE	:	Budget Estimate

BESCOM	:	Bengaluru Electricity Supply Company
BMI	:	Body Mass Index
BMTC	:	Bengaluru Metropolitan Transport Corporation
BNG	:	Bengaluru
BPL	:	Below Poverty Line
BRGF	:	Backward Regions Grant Fund
BRICS	:	Brazil, Russia, India, China and South Africa
BT	:	Black Top
BWSSB	:	Bengaluru Water Supply and Sewerage Board
CAGR	:	Compound annual growth rate
CBMWTF	:	Common Bio-Medical Waste Treatment Facilities
CBSE	:	Central Board of Secondary Education
CC	:	Cement Concrete
CCDI	:	Composite Comprehensive Development Index
CCTV	:	Closed Circuit Television
CDI	:	Child Development Index
CDI	:	Cumulative Deprivation Index
CDKN	:	Climate and Development Knowledge Network
CDS	:	Current Daily Status
CEC	:	Central Empower Committee
CED	:	Chronic Energy Deficiency
CEDAW	:	Convention on the Elimination of all Forms of Discrimination Against Women
CEHAT	:	Centre for Enquiry into Health and Allied Themes.
CESC	:	Calcutta Electric Supply Corporation
CESS	:	Centre for Economic and Social Studies
CETPs	:	Common Effluent Treatment Plants
CGWB	:	Central Ground Water Board
CHC	:	Community Health Care
CIDA	:	Canadian International Development Agency
CLD	:	Cumulative Learning Deficit
CMC	:	City Municipal Council
CMDR	:	Centre for Multi disciplinary Research
CO	:	Carbon Monoxide
CPI	:	Consumer Price Index

CR	:	Conviction Rate
CRC	:	Cluster Resource Coordinators
CRC	:	Calamity Relief Committee
CRP	:	Cluster Resource Person
CRS	:	Comprehensive Ranking System
CRSP	:	Central Rural Sanitation Programme
CRZ	:	Coastal Regulation Zone
CSDS	:	Centre for the Study of Developing Societies
CSO	:	Central Statistical Organization
CSR	:	Child Sex Ratio
CSR	:	Corporate Social Responsibility
CU	:	Consumption Unit
CV	:	Co-efficient of Variation
CVI	:	Coastal Vulnerability Index
CWSN	:	Child With Special Needs
D.Ed	:	Diploma in Education
DCDI	:	District Composite Development Index
DEE	:	Department of Ecology and Environment
DES	:	Directorate of Economics and Statistics
DFEE	:	Department of Forest ,Ecology and Environment
DFID	:	Department for International Development
DHDRs	:	District Human Development Reports
DIET	:	District Institute of Educational Training
DIETs	:	District Institute of Educational Trainings
DISE	:	District Information System for Education
DLHS	:	District Level Household and facility Survey
DMC	:	Drought Monitoring Cell
DME	:	Department of Mass Education
DMER	:	Directorate of Medical Education and Research
DOE	:	Department of Education
DOR	:	Drop Out Ratio
DPAR	:	Department of Personal Administrative Reforms
DPMMS	:	Department of Pure Mathematics and Mathematical Statistics
DSERT	:	Department of Secondary Educational Research and Training
DSM	:	Demand Side Management

ECCE	:	Early Child-hood Care and Education
EDI	:	Education Development Index
ELIP	:	English Language Improvement Programme
EMPRI	:	Environmental Management and Policy Research Institute
EPR	:	Extended Producer Responsibility
3Es	:	Effectiveness, Efficiency and Economy
ERs	:	Elected Representatives
ESA	:	Ecologically Sensitive Area
ESCOMs	:	Electricity Supply Companies
EWRs	:	Elected Women Representatives
EWS	:	Economically Weaker Section
EYS	:	Expected years of Schooling
FAO	:	Food and Agriculture Organization
FBDEAAS	:	Fund Based Double Entry Accrual Accounting System
FC	:	Forward Castes
FCS	:	Family and child Studies
FDL	:	Female Disadvantage in Literacy
FEVORD-K	:	Federation of Voluntary Organization for Rural Development-Karnataka
FGT	:	Foster–Greer–Thorbecke index
FICCI	:	Federation of Indian Chambers of Commerce and Industry
FPAC	:	Fiscal Policy Analysis Cell
FPS	:	Fair Price Shops
FRA	:	Fiscal Responsibility Act
FRLHT	:	Foundation for Revitalization of Local Health Traditions
FSI	:	Food Security Index
FSI	:	Forest Survey of India
FSSA	:	Food Safety and Standard Act
FY	:	Financial Year
GAIN	:	Global Alliance for Improved Nutrition
GB	:	Gender Budget
GBC	:	Gender Budget Cell
GCF	:	Green Climate Fund
GDDP	:	Gross District Domestic Product
GDI	:	Gender Development Index

GDP	:	Gross Domestic Product
GEF	:	Global Environment Facility
GER	:	Gross Enrolment Ratio
GFD	:	Gross Fiscal Deficit
GHG	:	Green House Gas
GII	:	Gender Inequality Index
GIS	:	Geographic Information system
GM	:	General Merit
GOI	:	Government Of India
GOVT	:	Government
GP	:	Gram Panchayat
GPHDI	:	Gram Panchayat Human Development Index
GPI	:	Gender Parity Index
GRAM	:	Grassroots Research and Advocacy Movement
GRB	:	Gender Responsive Budget
GSDP	:	Gross State Domestic Product
GW	:	Giga Watt
HAP	:	Household Air Pollution
HARM	:	Harmonic mean
HCR	:	Head Count Ratio
HDI	:	Human Development Index
HDR	:	Human Development Report
HeDI	:	Health Development Index
HER	:	Human Expenditure Ratio
HES	:	High Emission Scenario
HHs	:	House Holds
HIV/AIDS	:	Human Immunodeficiency Virus/Acquired Immunodeficiency syndrome
HKADB	:	Hyderabad Karnataka Area Development Board
HKR	:	Hyderabad Karnataka Region
HKRDB	:	Hyderabad Karnataka Region Development Board
HOPCOMS	:	Horticulture Primary co-operative Marketing societies
HP	:	Higher Primary
HPC	:	High Power Committee
HPCFRRI	:	High Power Committee for Redressal of Regional Imbalances

HPS	:	Higher Primary School
HPS/HS	:	Higher Primary School/High School
HRC	:	Human Rights Commission
HRD	:	Human Resource Development
HRDCs	:	Human Resources Development Centers
HRLN	:	Human Rights Law Network
HS	:	High School
HT	:	High Tension
I S	:	Informal Sector
IAY	:	Indira Awas Yojane
IBID	:	Short for ibidem, meaning "in the same place"
ICAR	:	Indian Council of Agricultural Research
ICD	:	Integrated Child Development
ICDS	:	Integrated Child Development Services
ICFRE	:	Indian Council of Forestry Research and Education
ICMR	:	Indian Council of Medical Research
IDA	:	Iron Deficiency Anemia
IDD	:	Iodine Deficiency Disorders
IEC	:	Internal Efficiency control
IFA	:	Indian Food Act
IGMSY	:	Indira Gandi Matritva Sahayog yojane
IHDI	:	Inequality Adjusted Human Development Index
IHDS	:	Indian Human Development Survey
IHHLs	:	Individual House Hold Latrines
IHMR	:	Institute of Health Management and Research
IIA	:	Indian Institute of Astrophysics
IIHS	:	Indian Institute for Human Settlements
IIITB	:	International Institute of Information Technology Bangalore
IIM	:	Indian Institute of Management
IIMB	:	Indian Institute of Management , Bangalore
IISc	:	Indian Institute of Science
IIT	:	Indian Institute of Technology
ILE	:	Institute of Labor Economics
ILO	:	International Labor Organization
IMF	:	International Monetary Fund

IMR	:	Infant Mortality Rate
INC	:	Initial National Communication
INDC	:	India's Intended Nationally Determined Contribution
INS	:	Indian Navy Services
IP	:	Irrigation Pump sets
IPC	:	Indian Penal Code
IPCC	:	Intergovernmental Panel on Climate Change
IPH	:	Institute of Public Health
IPT	:	Intermediate Public Transport
IPU	:	Inter Parliamentary Union
IQ	:	Intelligence Quotient
ISEC	:	Institute for Social and Economic Change
ISMR	:	Indian Summer Monsoon Rainfall
ISRO	:	Indian Space Research Organization
ISST	:	Institute of Social Studies Trust
ISWM	:	Integrated Solid Waste Management
IT	:	Information Technology
ITI	:	Industrial Training Institute
IYCF	:	Infant and Young Child Feeding
JAAK	:	Jana Aarogya Andolana – Karnataka
JFPM	:	Joint Forest Planning and Management
JMP	:	Joint Monitoring Programme
JNCASR	:	Jawaharlal Nehru Centre for Advanced Scientific Research
JNNURM	:	Jawaharlal Nehru National Urban Renewal Mission
JRY	:	Jawaharlal Rojgar Yojana
JSY	:	Janani Suraksha Yojane
KAPPEC	:	Karnataka State Agricultural Produce Processing and Export Corporation Limited
KASSIA	:	Karnataka Small-Scale Industries Association
KBB	:	Karnataka Biodiversity Board
KCAL	:	Kilocalorie- large calorie
Kcal	:	Kilo Calories
KEA	:	Karnataka Examination Authority
KERC	:	Karnataka Electricity Regulatory Commission
KES	:	Karnataka Election Study

KFD	:	Karnataka Forest Department
KFRA	:	Karnataka Fiscal Responsibility Act
KG	:	Kilo Gram
KHAP	:	KHAP panchayats
KHAS	:	Karnataka Household Asset Survey
KHDR	:	Karnataka Human Development Report
KIADB	:	Karnataka Industrial Area Development Board
KMAY	:	Karnataka Mahila Abhivrudhi Yojane
KMF	:	Karnataka Milk Federation
KMs	:	Kilo Meters
KPTCL	:	Karnataka Power Transmission Corporation Limited
KRDCL	:	Karnataka Road Development Corporation Limited
KREDL	:	Karnataka Renewable Energy Development Limited
KSCZMA	:	Karnataka State Coastal Zone Management Authority
KSDB	:	Karnataka Slum Development Board
KSGCP	:	Karnataka State Girl Child Policy
KSHIP	:	Karnataka State Highways Improvement Project
KSIIDC	:	Karnataka State Industrial Infrastructure Development Corporation
KSMHA	:	Karnataka State Mental Health Authority
KSNDMC	:	Karnataka State Natural Disaster Monitoring Cell
KSPCB	:	Karnataka State Pollution Central Board
KSPOF	:	Karnataka State Policy on Organic Farming
KSQAAC	:	Karnataka School Quality Assessment and Accreditation Council
KSRTC	:	Karnataka State Road Transport Corporation
KSSEEB	:	Karnataka State Secondary Education Examination Board
KSWAN	:	Karnataka State Wide Area Network
KUWS & DB	:	Karnataka Urban Water Supply and Drainage Board
KVTSDC	:	Karnataka Vocational Training and Skill Development Corporation
KWh	:	Kilo Watt
LAMPS	:	Large-scale Adivasi Multi-Purpose Societies
LBW	:	Low Birth weight
LEB	:	Life Expectancy at Birth
LFPR	:	Labor Force Participation Rate
LFPR F	:	Labor Force Participation Rate Female
LFPR M	:	Labor Force Participation Rate Male

LFS	:	Land Filled Sites
LHV	:	Lady Health Volunteer
LIG	:	Low Income Group
LKG/UKG	:	Lower Kindergarten / Upper Kindergarten
LMIS	:	Labor Market Information System
LPCD	:	Liters per capita daily
LPG	:	Liquid petroleum Gas
LPS	:	Lower Primary School
LSG	:	Local Self Government
LT	:	Low Tension
M ha	:	Million Hectare
M/F	:	Male/Female
MBA	:	Master of Business Administration
MBS	:	Maternity Benefit Scheme
MCH	:	Maternal and Child Health
MDG	:	Millennium Development Goals
MDM	:	Mid Day Meal
MDR	:	Major District Roads
MDRS	:	Morarji Desai Residential Schools
MES	:	Modular Employable Skills
MES	:	Moderate Emission Scenario
mg/L	:	Milligram/Liter
MGNREGA	:	Mahatma Gandhi National Rural Employment Guarantee Act
MHFW	:	Ministry of Health and Family Welfare
MHRD	:	Ministry of Human Resource Development
MIS	:	Monitoring Information System
MIS	:	Management Information system
MLAs	:	Members of Legislative Assembly
MLE	:	Mean Level of Education
MMR	:	Maternal Mortality Rate
MNY	:	Mukhyamantrigala Nagara Yojane
MoEF	:	Ministry of Environment and Forests
MoUD	:	Ministry of Urban Development
MP	:	Madhya Pradesh
MP/MLA	:	Member of Parliament / Member of Legislative Assembly

MPCE	:	Monthly Per Capita Expenditure
MPI	:	Multi Dimensional Poverty Index
MPIC	:	Monthly Program Implementation Calendar
MPs	:	Member of Parliament
MRD	:	Ministry of Rural Development
MRP	:	Mixed Reference Period
MSK	:	Mahila Samakya, Karnataka
MSNP	:	Multi-sectorial nutrition program
MSSRF	:	M S Swaminathan Research Foundation
MT	:	Million Tonnes
Mt	:	Metric Ton
MTCO2e	:	Metric tons of carbon dioxide equivalent
MTFP	:	Medium Term Fiscal Plan
MTPA	:	Metric tonnes per annum
MTs	:	Milion Tonnes
MU	:	Mega Unit
MW	:	Mega Watt
MYS	:	Mean Years of Schooling
N1	:	Note 1
NAAQS	:	National Ambient Air Quality Standards
NAAS	:	National Academy of Agricultural Sciences
NABARD	:	National Bank for Agriculture and Rural Development
NAL	:	National Aeronautics Laboratory
NALSA	:	National Legal Services Authority
NAMP	:	National Air Monitoring Programme
NASVI	:	National Association of Street Venders of India
NBM	:	National Bamboo Mission
NCBS	:	National Centre of Biological Sciences
NCD	:	Non Communicable Disease
NCDEX	:	National Commodity and Derivatives Exchange
NCDs	:	Non-Communicable Diseases
NCERT	:	National Council for Educational Research and Training
NCEUS	:	National Commission for Enterprises in the Unorganized Sector
NCO	:	National Classification of Occupation
NCRB	:	National Crime Records Bureau

NDDP	:	Net District Domestic Product
NDF	:	Non Development Expenditure
NDMA	:	National Disaster Management Authority
NDMF	:	National Disaster Management Fund
NEAMA	:	National Environment Assessment and Monitoring Authority
NEGP	:	National e-Governance Plan
NER	:	Net Enrolment Ratio
NES	:	National Election Studies
NFHS	:	National Food and Health Services
NFSA	:	National Food Security Act
NFSM	:	National Food Security Mission
NGO	:	Non Governmental Organization
NH	:	National Highway
NHDR	:	National Human Development Report
NHM	:	National Health Mission
NIAS	:	National Institute of Advanced Studies
NIIT	:	National Institute of Information Technology
NIMHANS	:	National Institute of Mental Health and Neuro Sciences
NITK	:	National Institute of Technology -Karnataka
NJDG	:	National Judicial Data Grid
NKC	:	National Knowledge Commission
NLM	:	National Literacy Mission
NLSIU	:	National Law School of India University
NMMS	:	National Merit-cum Means Scholarships
NMVOCs	:	Non-Methane Volatile Organic Compounds
NNDP	:	Net National Domestic Product
NNMB	:	National Nutrition Monitoring Bureau
NPE	:	National Policy of Education
NP-NSPE	:	National Program for Nutritional Support to Primary Education
NRC	:	Nutrition Rehabilitation Centers
NRDWP	:	National Rural Drinking Water Programme
NREGA	:	National Rural Employment Guarantee Act
NRHM	:	National Rural Health Mission
NRW	:	Non-Revenue Water
NSAP	:	National Social Assistance Programme

NSDC	:	National Skill Development Corporation
NSDP	:	Net State Domestic Product
NSQF	:	National Skills Qualifications Framework
NSS	:	National Sample Survey
NSSO	:	National Sample Survey Organization
NTFP	:	Non-timber forest products
NTS	:	National Talent Search
NUEPA	:	National University of Education Planning and Administration
NUSP	:	National Upgrading Support Programme
O&M	:	Operation and Management
OBC/OBCs	:	Other Backward Classes
OD	:	Open Defecation
ODF	:	Open Defecation Free
ODR	:	Other District Road
OOP	:	Object Oriented Programming
OSHA	:	Occupational Safety and Health Aspects
PBR	:	People's Biodiversity Register
PBRs	:	People's Biodiversity Registers
PC	:	Possession Certificate
PCPNDT	:	Pre-Conception and Pre-Natal Diagnostic Techniques
PDS	:	Public Distribution System
PEM	:	Protein Energy Malnutrition
PER	:	Public Expenditure Ratio
PG	:	Post Graduate
PGI	:	Poverty Gap Index
PHC	:	Primary Health Care
PHFI	:	Public Health Foundation of India
PM	:	Particulate Matter
PMAY-G	:	Pradhana Mantri Awas Yojane
PMGSY	:	Pradhana Mantri Gram Swaraj Yojana
POCSO	:	Protection of Children from Sexual offences
PPP	:	Public Private Partnership
PR F	:	Parliamentary Representation Female
PR M	:	Parliamentary Representation Male
PRI	:	Panchayat Raj Institution

PRIs	:	Panchayat Raj Institutions
PTIS	:	Property Tax Information System
PTR	:	Pupil Teacher Ratio
PU	:	Pre-University
PUCL	:	People's Union for Civil Liberties
PUE	:	Pre-University Education
PWD	:	Person With Disability
QMT	:	Quality Monitoring Tool
R&D	:	Research & Development
RAY	:	Rajiv Awas Yojane
RCP	:	Representative Concentration Pathways
RD	:	Revenue Deficit
RDA	:	Recommended Dietary Allowances
RDI	:	Recommended Dietary Intake
RDP	:	Regional Development Policy
RDPR	:	Rural Development & Panchayat Raj
RE	:	Revised Estimate
RE	:	Revenue Expenditure
Re MS	:	Rashtriya e-Market Services
RES	:	Review of Economic Studies
RFD	:	Results Framework Document
RGUHS	:	Rajiv Gandhi University of Health Sciences
RIDF	:	Rural Infrastructure Development Fund
RMSA	:	Rashtriya Madhyamika Shikshana Abhiyana
RRI	:	Raman Research Institute
RSBY	:	Rashtriya Swasthya Bima Yojane
RSVY	:	Rastriya Sam Viaks Yojane
RTC	:	Record of Tenancy and Crops
RTE	:	Right To Education
RTO	:	Road Transport Organizations
RWH	:	Rain Water Harvesting
SAM	:	Severely Acute Malnourished
SAR	:	Social Allocation Ratio
SAS	:	Self Assessment Scheme
SAST	:	Suvarna Arogya Suraksha Trust

SBM-G	:	Swatch Bharat Mission - Grameen
SBM-U	:	Swatch Bharat Mission - Urban
SC-ST	:	Scheduled Caste – Scheduled Tribes
SCVT	:	State Council for Vocational Training
SDC	:	State Data Centre
SDEL	:	Skill Development Entrepreneurship and Livelihood
SDG	:	Sustainable Development Goals
SDMC	:	School Development Management Committee
SDP	:	Special Development Plan
SEF	:	Secondary and Higher Education by Female
SEM	:	Secondary and Higher Education by Male
SEC	:	State Election Commission
SECC	:	Socio and Economic Caste Census
SEWA	:	Self Employment Women's Association
SH	:	State Highway
SHGs	:	Self-help Groups
SLB	:	Service Level Benchmark
SLL	:	Special and Local Laws
SLWM	:	Solid and Liquid Waste Management
SNCUs	:	Special New Born Care Units
SNTR	:	States Non Tax Revenue
SO	:	Sulphur Dioxide
SOCHARA	:	Society for Community Health Awareness Research and Action
SPGI	:	Squared Poverty Gap Index
SPR	:	Social Priority Ratio
SR	:	Sex Ratio
SRB	:	Sex Ratio at Birth
SRP	:	State Recruitment Policy
SSA	:	Sarva Shikshana Abhiyana
STEP	:	Support for Training and Employment of People
STR	:	State Tax Revenue
STs	:	Scheduled Tribes
SW	:	Social Welfare
SWM	:	Sewerage Water Management
SWMRT	:	Solid Waste Management Round Table

T & D Loss	:	Transmission and Distribution Loss
TDS	:	Total Dissolved Solids
TERI	:	Tata Energy Research Institute
TLC	:	Total Literacy Campaign
TMC	:	Town Municipal Council
TP	:	Taluk Panchayat
TPDS	:	Targeted Public Distribution System
TRG	:	Telemetric Rain Gauges
TSC	:	Total Sanitation Campaign
TT	:	Tetanus Toxoid
TVs	:	Televions
UDD	:	Urban Development Department
UEE	:	Universal Elementary Education
UEE	:	Universalization of Elementary Education
UGC	:	University Grants Commission
UHC	:	Universal Health Coverage
UK	:	Uttar Kannada
ULBs	:	Urban Local Bodies
UN	:	United Nations
UNDP	:	United Nations Development Programme
UNFCCC	:	United Nations Framework Convention on Climate Change
UNICEF	:	United Nations International Children's Emergency Fund
UP	:	Uttar Pradesh
UPSS	:	Usual Principal and Subsidiary Status
UR	:	Unemployment Rate
URP	:	Uniform Reference Period
URP/MRP	:	Uniform References Period/Mixed References Period
US	:	United States
USAID	:	United States Agency for International Development
UT s	:	Union Territories
VAD	:	Vitamin A Deficiency
VAMBAY	:	Valmiki Ambedkar Malin Basti Awas Yojane
VAS	:	Vajpayee Arogyasri Scheme
VE	:	Vocational Education
VFCs	:	Village Forest Committees

VHA-K	:	Veterans Health Administration-Karnataka
VOCs	:	Volatile Organic Compounds
VR	:	Village Road
VWSC	:	Village Water and Sanitation Committee
WB	:	World Bank
WBM	:	Water Bound Macadam
WCD	:	Women and Child Development
WHO	:	World Health Organization
WIFS	:	Weekly Iron – Folic acid Supplementation
WPR	:	Work Participation Rate
WRD	:	Water Resource Department
WSP	:	Water Safety Plan
ZP	:	Zilla Panchayat

Introduction

Karnataka is one of the progressive and 'human friendly' States in India. The State is continuously striving to transform the rapid economic growth into human development through targeting on human development sectors and programmes, keeping in view the sustainable development goals. The State has brought out two human development reports in 1999 and 2005. For tracking the progress achieved thereafter, the third human development report is prepared. The first report was a status report and attempted to present the picture of human development in the State. The second report focused on assessing the outcomes of investment in human development sectors. Planning Department in collaboration with UNDP- has now brought out the third State Human Development Report-2015. The theme of the present report is to review the impact of programmes and policies on 'accelerating equitable human development' in the State across the regions, gender and social groups and design the road map to attain human development for all.

The report takes the stock of human development in the state in the fields of health, education and standard of living over the period 2001-02, 2011-12. During the decade a lot of investment has flown into the sectors like education, health drinking water and sanitation, housing, urban development etc. It is expected that this resource flow might have impacted human development significantly. With focused policies, its spread is also expected to be more equitable and sustainable.

It is therefore necessary to examine the outcomes in terms of the levels of human development across the regions, gender and social groups and identify gaps if any in different fields; the extent to which the State is able to achieve the targets set in the Sustainable Development Goals and identify the future course of action.

Objectives

The broad objectives of the report are:

- To give a comprehensive and integrated analysis of present status of human development and assess the trends over the period of time.
- To make a gender disaggregated analysis of outcomes in human development sectors.
- Examine the disparities in human development across the regions, and social groups
- To assess the impact of applications of technology in governance on service delivery and human development.
- Analyse the progress made by the State in attaining the Sustainable Development goals.
- Document the best practices in different human development sectors.
- Acknowledge the contributions of different stakeholders –NGOs, Panchayat Institutions, Self Help Groups and Community Organisations in promoting human development.
- Identify future course of action for promoting human development for all.

To understand the relative position of different Indian States and subsequently districts of Karnataka in international context, this study estimates HDIs across Indian States and across Districts of Karnataka using the goal posts as that of international one provided in HDR 2014. The various indicators used for estimating the human development index across the states and districts are Life Expectancy (Years) for health, Expected years of schooling and mean years of schooling for education, and Gross National Income per capita for Standard of living. To examine the different dimensions of human development, the other indices estimated are, Inequality Adjusted Human Development Index and Gender Inequality Index.

The Human Development Index for the districts in the State is estimated based on two methodologies : one with the methodology based on global goalposts and the other based on goal posts with values within the State. The other indices that are estimated at district level in the report include, Multi Dimensional Poverty Index (MPI) and Child Development Index (CDI). The report has also taken into account the asset ownership pattern and its impact on human development. The report thus tries to capture progress made in different sectors contributing to enhanced level of human development and its spread across the regions and social groups.

The present report is the outcome of many brainstorming sessions held at different levels involving all the stakeholders to bring out a realistic picture of achievements made by the State in human development. The activities undertaken in this context include:

The National level Steering Committee

A National level Steering Committee was formed and Stakeholder Consultation and First National Steering committee meeting was held on 23 January 2012 at Viceregal, The Claridges, New Delhi. 2nd National Steering Committee meeting was held on 24 August 2012, at planning Commission, New Delhi. 3rd National Steering Committee meeting was held on 14 December 2012, at Yojana Bhawan, New Delhi. 4th National Steering Committee meeting was held on 25 September 2013,at Yojana Bhawan, New Delhi . 5th National Steering Committee meeting and a workshop was held on 20-21 December 2013, at Mahabalipuram, Tamil Nadu. 6th National Steering Committee meeting was held on 3rd November 2015,at NITI Aayog, New Delhi and Joint steering Committee meeting was held on 6th June 2016 at NITI Aayog New Delhi; for reviewing and monitoring the progress of "Human Development: Accelerating Equitable Human Development-Towards Bridging Inequalities" project in accordance with the Annual Work Plans.

The State Level Steering Committee

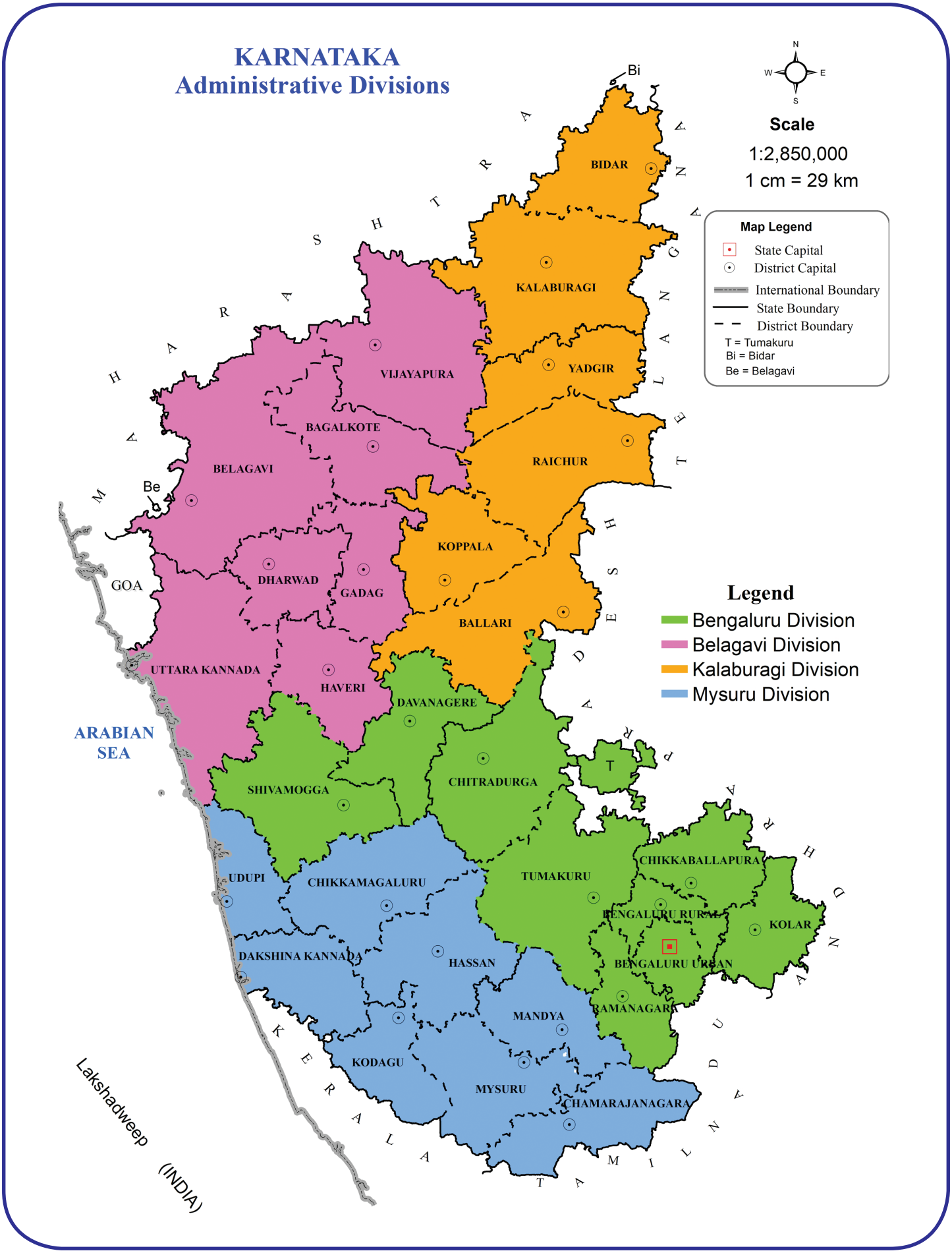
The State level Steering Committee was constituted Chaired by Chief Secretary to Government on 25th July 2013 to monitor and guide the activities at the state level. The committee finalized the state indicators, chapterisation scheme and identified the subject experts to draft the Karnataka state human development report. The Planning, Programme Monitoring and Statistics Department, Government of Karnataka

in collaboration with Institute for Social and Economic Change (ISEC) organized one day workshop on State Human development Report, on the theme: Accelerating Equitable Human Development, on 29th March 2014 at ISEC Bengaluru.

The first draft of all the chapters was reviewed by sending it to the concerned Additional Chief Secretaries / Principal Secretaries /Secretaries of different Departments. Suggestions & comments were incorporated by the subject experts in the Final report. The final report was edited by a Committee of Experts.

It is expected that the report will be useful to administrators, policy makers, academicians, researchers, Non Government Organizations and to the common people to understand the status and dimensions of human development in the State and to design programmes and policies to maximise outcomes in future.

Karnataka - an Overview


KARNATAKA
Administrative Divisions
N
W
E
S
Scale
1:2,850,000
1 cm = 29 km
Map Legend
State Capital
District Capital
International Boundary
State Boundary
District Boundary
T = Tumakuru
Bi = Bidar
Be = Belagavi
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T
BIDAR
KALABURAGI
YADGIR
RAICHUR
VIJAYAPURA
BAGALKOTE
BELAGAVI
KOPPALA
DHARWAD
GADAG
BALLARI
GOA
UTTARA KANNADA
HAVERI
DAVANAGERE
CHITRADURGA
SHIVAMOGGA
UDUPI
CHIKKAMAGALURU
TUMAKURU
CHIKKABALLAPURA
BENGALURU RURAL
KOLAR
DAKSHINA KANNADA
HASSAN
BENGALURU URBAN
RAMANAGARA
MANDYA
KODAGU
MYSURU
CHAMARAJANAGARA
Legend
Bengaluru Division
Belagavi Division
Kalaburagi Division
Mysuru Division
ARABIAN SEA
Lakshadweep (INDIA)
MAHARASHTRA
TELANGANA
ANDHRA PRADESH
KERALA
TAMIL NADU

Chapter-1

Karnataka - An Overview

Introduction

Progress in human development has been very impressive in Karnataka over the past 25 years. People now live longer, more children are in school and more people have access to basic social services. The Millennium Declaration and the Millennium Development Goals,global commitments at the turn of the century to end basic human deprivations within 15 years,added to the momentum. Yet human development has been uneven, and human deprivations persist across regions and social groups. Progress has bypassed groups, communities, societies, and people have been left out. New development challenges have emerged, ranging from inequalities to climate change. This 2015 report focuses on how human development can be ensured for everyone-now and in the future in Karnataka. It starts with an account of the achievements, challenges and hopes for human progress, envisioning where humanity wants to go.

The First Human Development Report was published in Karnataka in 1999. Karnataka became the second Indian State (first Madhya Pradesh) to publish a Human Development Report (HDR) in 1999 – a balanced, analytical deconstruction of the human development scenario in the State. The HDR noted that while Karnataka had performed well, on both human development and gender development indices of the nation, but the State lagged behind Kerala, Maharashtra and Gujarat, which occupied the top three places in the HDI. The Report's ranking of the districts of Karnataka on the global HDI and GDI revealed the existence of sharp socio-economic disparities between the districts.

The level of human development in Karnataka was a shade better than that of the nation with a HDI of 0.470. When inequalities in socio-economic development were computed, the Gender related Development Index of the State worked out to 0.450. This was higher than the GDI level of the country at 0.401. As a result, the State by itself ranked around 93 at the international level, whereas the ranking of India was around 99. Nonetheless, within the State, different districts exhibited vastly different levels of human development. The three indicators used to capture development are : adjusted real per capita income, educational attainment measured by a combination of school enrolment ratios and adult literacy and longevity reflected in life expectancy at birth which have been put together (with equal weightage for each variable) within the maximum and minimum levels adopted by the UNDP for its international comparisons. HDI ranking of top 5 and bottom 5 districts of Karnataka State were Kodagu, Bengaluru Urban, Dakshina Kannada, Uttara Kannada and Mysuru. The districts of Chikkamagluru, Ballari

This 2015 report focuses on how human development can be ensured for everyone-now and in the future in Karnataka. It starts with an account of the achievements, challenges and hopes for human progress, envisioning where humanity wants to go.

Second Human Development Report published in 2005- Financing Human Development took the stock of the human development scenario in Karnataka along with certain key issues that impact the development process, namely, the Government of Karnataka's investments in human development and the outcomes of these policy decisions for human development indicators

Bidar, Kalaburgi and Raichur were at the bottom. While Kodagu and Dakshina Kannada ranked on par with China, Raichur ranks among the worst in the world Human development in 1999. The range of variation in human development levels were fairly alarming. Within Karnataka itself, it moved from an index of 0.630 in Kodagu district to 0.399 in Raichur. The coastal and malnad districts appeared to offer their citizens a better quality of life than the maidan (plateau) districts, not only because of reasonably good income levels but also (and more significantly) because of historically better health and educational attainments and the socio-cultural traits of their population. Again, not too surprisingly, the four districts of Hyderabad Karnataka cluster are at the bottom of the scale. Bombay Karnataka, however, (except for the district of Vijayapura) appeared to be slightly better than Mysuru, Mandya and Kolar districts.

Second Human Development Report published in 2005- Financing Human Development took the stock of the human development scenario in Karnataka along with certain key issues that impact the development process, namely, the Government of Karnataka's investments in human development and the outcomes of these policy decisions for human development indicators such as life expectancy, female literacy, access to education, reductions in the IMR and MMR, quality of life, and diminution in gender, caste and economic disparities. The second report examined and analysed the relation between public investment patterns and human development outcomes. The State is, after all, the principal investor in basic needs and special interest group programmes. Karnataka has definitely invested in poverty reduction, health and nutrition, education, and social welfare. It reviewed the implications of the investment for human development in the State with reference to all-India norms.

In the second report HDI and GDI of States were estimated based on UNDP methodology. This report sought to compare the position of Karnataka vis-à-vis other States. The States, by and large, have maintained their relative ranks on the basis of both methods of HDI computation. For example, Kerala was first, Tamil Nadu was 3rd place, Karnataka was in the 7th place. There was no change in the ranking of Karnataka either way. As far as the GDI of States is concerned, NHDR estimates were not available for 2001. The estimates of the GDI computed with the UNDP methodology for 15 major States showed that GDI values were invariably lower than their corresponding HDI values, indicating how entrenched gender disparities can be. Karnataka's ranking in the GDI has improved by one place, i.e. it moved from seventh rank in HDI to sixth rank in GDI, exhibiting the characteristics of improved gender equality in the State. Even though the five top ranking districts of 1991 have maintained their performance in 2001, there were changes in the order of ranking. Bengaluru Urban ranked first in the GDI although, ironically, it had very adverse female and child sex ratios. In the case of the five bottom ranking districts, four districts, namely, Koppal, Chamarajnagar, Kalaburagi and Raichur had unfortunately, maintained their status in 2001, with some changes in placements. However,

one district, Bidar, which was 23rd in the GDI ranking in 1991, no longer finds a place among the five lowest performing districts in 2001. Bagalkot district, which was 23rd in the GDI ranking in 2001,was a new entrant. The GDI ranking compared favourably with the HDI ranking for a majority of the districts in 1991 as well as in 2001. This clearly indicates that districts with high human development levels will have lower gender disparities, while districts with poor human development indicators are characterized by greater gender inequality. All districts of Hyderabad Karnataka were below the State average in HDI and GDI.

Comparison of HDI between Second and Third Human Development Reports

In order to compare the improvement in human development between second and third human development reports in Karnataka , it was decided that HDI would be computed using the same indicators as in second human development report and the dimension indices are aggregated through geometric mean. Indicators used here are Life expectancy at birth to represent health dimension, Literacy rate and Gross enrolment ratio are used to represent knowledge and per capita income to represent level of living. All the districts showed an improvement over the decades. Position of the top five districts have not changed over a decade. Raichur and Kalaburagi continue to rank the lowest and second lowest. Koppal, Chamarajanagar and Bagalkote, which were next three lowest districts in 2001-02 showed an improvement over a decade, moving up by two ranks. Chitradurga and Bellari has been pushed to lower positions.. Districts which showed greater improvements are Mysuru,, Mandya, Dharwad, Haveri and Bidar. Districts of Belagavi, Ballari, Chitradurga, Davangere and Gadag showed a fall in their positions over the 10 years

Comparison of HDI value and their Ranking in all the Three HD Reports

1999, 2005 and 2015 in Karnataka. It is evident from the table -1.1 that there is continous improvement in HDI value and ranking of 21 districts out of 27 considered in the State of Karnataka during the period of 1991, 2001 to 2012 and remaining 6 districts have shown declining HDI value and ranking. Most of them are from the Hyderabad Karnataka region. However, the district of Bidar, though comes under H K Region, has improved from 21th position in 2001 to 17th in 2012 period indicating the lesson that other districts of HK region can also improve provided the high migration (during off season) is halted and more active role is played by the civil society and HKRDB Board in the region. The alarming result is obtained with regard to the district of Chitradurga, whose ranking has changed from 10th position in 1991, 16th in 2001 and 25th position in 2012.

Districts with high human development levels will have lower gender disparities, while districts with poor human development indicators are characterized by greater gender inequality. All districts of Hyderabad Karnataka were below the State average in HDI and GDI.

Table1.1
Comparison of District wise HDI value and their Ranking from Three HD Reports of 1999, 2005 and 2015 in Karnataka

Districts	1991		2001		2012	
	HDI value	Rank	HDI value	Rank	HDI value	Rank
Bagalkote	-	-	0.591	22	0.593	20
Bengaluru Urban	0.623	2	0.753	1	0.958	1
Bengaluru Rural	0.472	8	0.653	6	0.735	10
Belagavi	0.471	9	0.648	8	0.657	15
Ballari	0.429	17	0.617	18	0.545	24
Bidar	0.419	18	0.599	21	0.642	17
Vijayapura	0.443	14	0.589	23	0.627	19
Chamarajanagara	-	-	0.576	25	0.589	22
Chikkamagaluru	0.524	5	0.647	9	0.774	6
Chitradurga	0.466	10	0.627	16	0.526	25
Dakshina Kannada	0.592	3	0.722	2	0.866	2
Davanagere	-	-	0.635	12	0.654	16
Dharwad	0.459	11	0.642	10	0.755	8
Gadag	-	-	0.634	13	0.59	21
Kalaburagi	0.412	19	0.564	26	0.447	26
Hassan	0.473	7	0.639	11	0.768	7
Haveri	-	-	0.603	20	0.631	18
Kodagu	0.63	1	0.697	4	0.817	4
Kolar	0.443	15	0.625	17	0.671	13
Koppal	-	-	0.582	24	0.556	23
Mandya	0.444	13	0.609	19	0.69	12
Mysuru	0.44	16	0.631	14	0.698	11
Raichur	0.399	20	0.547	27	0.42	27
Shivamogga	0.483	6	0.673	5	0.786	5
Tumakuru	0.447	12	0.63	15	0.668	14
Udupi	-	-	0.714	3	0.861	3
Uttara Kannada	0.533	4	0.653	7	0.752	9

Source: 1) KHDR 2005 and 2015

2) Doted line indicates non existence of the district

Though the district of Chamarajanagar is backward in south Karnataka, its ranking has improved from 25th in 2001 to 22nd in 2012. Similar is the case of Mysuru district from its 16th position in 1991 to 11th in 2012. The district of Shivamogga has retained its position at 5th position in both the periods of 2001 and 2012.

The Bengaluru Urban district has consistently and rapidly improved its HDI value and ranking from 0.623 in 1991 to 0.958 in 2012 and retained its first position in the last two periods followed by the district of Dakshina Kannada. However, the Kodagu district has lost its first position of 1991 and relegated to 4th position in 2012.

Table-1.2 reveals variations in the performance of top 5 and bottom 5 districts. While 5 top districts are Bengaluru Urban, DK, Udupi, Kodagu and Shivamogga during 2001 and 2012, Kodagu district relegated to fourth position in the subsequent periods. Similarly there are some changes in the bottom five districts. The districts of Raichur, Kalaburagi, Koppal, Ballari and Chitradurga have remained in the bottom five districts in the HDI ranking in the State. Strangely Chitradurga district entered among the bottom five districts in 2001 and 2012. Overall it is true that the districts of Hyderabad Karnataka are very slow in accelerating the human development over a period of time

Overall it is true that the districts of Hyderabad Karnataka are very slow in accelerating the human development over a period of time

Table 1.2
Performance of Top 5 and Bottom 5 districts in terms of Ranking and their HDI value from 1991 to 2012 in the State of Karnataka

HDR Reports	Top 5 Districts			Bottom 5 Districts		
	Districts	HDI	Rank	Districts	HDI	Rank
1999 (1991 data)	Kodagu	0.630	1	Raichur	0.399	20
	Bengaluru urban	0.623	2	Kalaburagi	0.412	19
	Dakshina Kannada	0.592	3	Bidar	0.419	18
	Uttara Kannada	0.533	4	Ballari	0.429	17
	Chikkamagaluru	0.524	5	Mysuru	0.440	16
2005 (2001 data)	Bengaluru urban	0.753	1	Raichur	0.547	27
	Dakshina Kannada	0.722	2	Kalaburagi	0.564	26
	Udupi	0.714	3	Chamarajnagara	0.576	25
	Kodagu	0.697	4	Koppal	0.582	24
	Shivamogga	0.673	5	Vijayapura	0.589	23
2015 (2012 data)	Bengaluru urban	0.958	1	Raichur	0.420	27
	Dakshina Kannada	0.866	2	Kalaburagi	0.447	26
	Udupi	0.861	3	Chitradurga	0.526	25
	Kodagu	0.817	4	Ballari	0.545	24
	Shivamogga	0.786	5	Koppal	0.556	23

Source: Data from HD Reports of 2005 and 2015

Karnataka is the first State in the country to have published District-wise Human Development Reports for all the 30 districts and 176 talukas at a time in 2014.

Third Human Development Report is prepared under the aegis of Human Development division of the Planning, Progromme Monitoring and Statistics Department, Government of Karnataka. By using Global goal indicators, **Karnataka is placed as a medium human development State.** Inequality adjusted HDI showed that potential loss due to inequality in Karnataka is 26% as against 27.2% for all India. The loss due to inequality is highest with respect to education dimension (40%) followed by health dimension (22%) and least by income dimension (12%). Gender Inequality Index is highest in Karnataka with the value being 0.598, reflecting 60% loss in achievement across the three dimensions due to gender inequality. Main reason for such a high gender inequality is due to very low female political participation. In the absence of political participation indicator, Karnataka would be in the middle range ranking 10th position out of 20 major States of India in 2015.

Third Human Development Report is prepared under the aegis of Human Development division of the Planning, Progromme Monitoring and Statistics Department ,Government of Karnataka. Karnataka is placed as a medium human development State.

Location and Geographical traits of Karnataka

Karnataka is a State of diverse cultures, languages and faith and the economic and social scenario within the State, in many ways, mirrors the scenario prevalent in the country itself. Located in the southern part of India, between the latitudes 11.31° and 18.45° North and the longitudes 74.12° and 78.40° East, Karnataka is, in terms of population, the ninth largest State among India's 29 major States and 7 Union Territories. Along its northern borders lie the States of Maharashtra and Goa; Andhra Pradesh is to the east; Tamil Nadu and Kerala to the south, while the Arabian Sea forms the western boundary

Karnataka came into being as a State of the Union of India on November 1, 1956 as a result of the merger of five territories where Kannada was the language of the people. These were: four districts of the erstwhile Bombay State; three districts of the erstwhile princely State of Hyderabad; two districts and one taluk of the former Madras State; the former Part C State of Coorg (now known as Kodagu); and nine districts of the former princely State of Mysore. The new State was initially known as Mysore, but subsequently, in 1973, it was renamed as 'Karnataka', thereby fulfilling a long standing demand of the people of the State. For administrative purposes, the State is divided into 30 revenue districts. There were initially, at the time of reorganization, 19 districts, but over time more new districts were created.

Geographical traits

The State has an area of 1,91,791 sq km, which constitutes 5.83 per cent of the total geographical area of India. Karnataka has four natural regions – the west coast, the Western Ghats or malnad, the northern maidan and the southern maidan. These four natural regions have distinct characteristics: The coastal region, a narrow belt that lies between the Western Ghats and the Arabian Sea, encompasses the districts of Dakshina Kannada, Udupi and Uttara Kannada. The coastal belt

has an average width of 50 to 80 km, and a length of about 267 km. This region receives heavy rainfall, in the range of 2,500 mm to 3,000 mm. Coconut groves and paddy fields typically dominate the landscape. The Western Ghats or malnad includes the districts of Chikkamagluru, Hassan, Kodagu, Shivamogga and the uplands of Dakshina Kannada, Uttara Kannada, Udupi, Belagavi and Dharwad districts. It receives rainfall in the range of 1,000 mm to 2,500 mm. Much of the dense rain forest area of the State lies in this region, which is rich in teak, rosewood and bamboo. Commercial crops include coffee, areca nut, pepper, cardamom and rubber. The southern maidan or plateau is the basin of the river Cauvery, which has its origins in Kodagu, and lies adjacent to the Western Ghats in the west and the south. The Cauvery and its tributaries – the Hemavathy, the Harangi, the Tunga and the Bhadra nurture this region. Its elevation is between 600 metres and 900 metres above sea level. Rice, sugarcane, ragi, coconut and mulberry are the principal crops. The northern maidan or plateau, elevated at 300 metres to 600 metres, primarily includes Deccan plateau, with its rich black cotton soil. The Krishna and its tributaries – the Malaprabha, Ghataprabha, Tungabhadra, Bheema and Karanja – sustain agriculture here. It is a low rainfall area where jowar, cotton, oilseeds and pulses are cultivated. Sugarcane is grown in irrigated areas. The forest cover in the State comprises about 19.3 per cent of its total area. The State has substantial mineral resources such as high-grade iron ore, copper, manganese, chromites, bauxite, china clay, granite and limestone.

Furthermore, Karnataka has the distinction of being the only State in the country with gold deposits. The State has a well-knit infrastructure of roads, air and waterways. The total length of motorable roads comes to about 2,53,602 km(2016). In addition, the State has a rail network of 3,172 km, which includes broad gauge, meter gauge and narrow gauge. The four important airports of the State are located at Bengaluru, Belagavi, Mangaluru Hubballi and Mysuru. There is also an all-weather sea-port at Mangalore, which mainly handles cargo vessels. One of Asia's biggest naval bases (INS Kadamba) is located at Karwar in Uttara Kannada district.

Population Trends

Karnataka has a population of 61.10 million (2011) accounting for 5.05 per cent of India's population. The population of the State has increased four-fold, from 13.05 million in 1901 to 52.73 million in 2001 and further to 61.10 million in 2011. The highest decadal growth rate of 26.75 per cent, since the beginning of the century, occurred in 1971-81. The growth rate thereafter slowed down to 21.12 per cent during 1981-91, to 17.51 per cent during 1991-2001, and further declined to 15.67 percent during 2001-2011, which is indeed a welcome trend. The sex ratio of 965 in the State stands above the all-India average of 933, with an increase of 5 percentage points in the sex ratio of 2001 over 1991. However, the sex ratio for children (0-6 years) has declined from 960 in 1991 to 946 in 2001 and is 948 in 2011, which is a matter of grave concern. The population density in the State is 319 as compared to 324 at

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the all-India level in 2011. About 61.3 per cent of the population in the State lives in rural areas. The Scheduled Caste and Scheduled Tribes population constitutes about 24.10 per cent of the total population in Karnataka, which is little less than 25.24 percent share of the Scheduled Caste/Scheduled Tribes population in the country.

Literacy

Literacy rate in the State are all along marginally higher than the All India average rate from 1961 to 2011. The State has recorded 9th rank in literacy rate among major States, in 2011. Sex, social and spatial inequities are observed in literacy rates all along. Progress over the years is also very slow, 16.46 percent is the State-level gap in 2011. 11 districts record higher values. All India M/F gap is 16.60 percent. Yadgir and Raichur record less than 50 percent literacy rates for Women even by 2011. Hyderabad Karnataka districts are poor performers with regard to gender gap in Literacy rates, across all three reference years. There is a yawning gap across rural and urban literacy rates in the three districts of HK region viz., Yadgir, Raichur and Kalaburagi as well as in Mysuru and Chamrajnagar districts. The gaps is low in districts of Coastal Karnataka. There appears on surface, an intimate relation between backwardness of districts as well as rural and urban gaps.

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In order of performance among south Indian States, Karnataka follows Kerala and Tamil Nadu but ahead of Andhra Pradesh. The position of Kerala has all along been good and relatively far better than all other States at the national scenario. Position of the three States viz; Tamil Nadu, Andhra Pradesh and Karnataka with regard to Male / Female gaps was similar in 1991. In order of performance, in bridging the gaps during 1991 to 2011, Tamil Nadu is better than Karnataka while Karnataka is better than Andhra Pradesh. Andhra Pradesh falls in line with the national scenario. Overall the gains in the two decades are low in Kerala because of a higher base value. This is relatively true for both Karnataka and Tamil Nadu.

School Education

Physical access to schools was a problem in 2001 when there was a large number of 'Children without Schools' An aggressive policy of opening of schools by the Government, 'on demand' by communities, led to a State of 'Schools without Children' by the year 2009. Fertility effects in general, improvements in rural roads and transport, marginal growth of private sector schools, migration of people to larger habitations were reasons for the phenomenon of 'small schools'. Provision of qualified / trained teachers even to small schools at the initial stages (early 2000 AD) and infrastructure facilities thereon prevented the merger of schools at later stages. School is a community asset. Communities and their leaders are unwilling to surrender them.

The RTE norm is 'access' within 1 km for a Lower Primary School and within 3km for a Higher Primary School. The norm has been more than satisfied in the State. The issue of access is limited to 'Social Access' which refers to the inter- caste, inter-religious, integration of children with the school. To some extent, the Mid-Day Meal organization addresses this concern, though it is not adequate. Private un-aided schools

who provide 25 percent RTE quota seats to disadvantaged children do not have Mid-Day Meal scheme. Thus, basic thrust is quality with equity.

Higher Education

Karnataka is home for 56 Universities out of the total 789 Universities in the country. 1 Central university; 28 State Universities, 12 Private Universities, 11 Deemed Universities (private and public) and 04 Institution of National Importances. The State claims about diversity of higher education institutions across various specializations: 02 Agriculture, 06 medical, 02 Law, 03 Technical, 01 Veterinary, 34 general/ other institutions (2017). Karnataka has a large number of Public State Universities (28) in the country.

In addition to the large number of Universities, Karnataka is a hub for independent/autonomous research or specialized institutions like the Raman Research Institute; Institute of Social and Economic Change (ISEC); National Institute of Advanced Studied (NIAS); National Centre of Biological Sciences (NCBS) and other specialized institutions totalling to more than 25 institutions. These institutions not only contribute to specialized research but also to the larger social development within and outside the State. The form and spectrum of higher education institutions in the State of Karnataka is wide and varied, from independent research institutions to social and scientific research institutions. Apart from these, Karnataka has over 3,075 colleges (2,451 private and 624 government colleges), out of the total 38,056 colleges in India (2017)

Similar to the national pattern, majority of the Universities i.e., over 50 percent of the Universities are State Universities. The National Institute of Technology in Dakshina Kannada (NITK) is the only institution of national importance in the State. The lone Central University is located in Kalaburagi and was established recently in 2010. This year, Karnataka has been granted an IIT in 2015 after several years of follow up and is located in Dharwad. Seventeen of the Universities are classified as Private Deemed, State Private and Government Deemed Universities. The only State Open University is located in Mysuru.

Based on the enrolment figures of All India Survey of Higher Education 2015-16, the gender difference between men and women of Karnataka with respect to overall enrolment is better when compared to national figures. When one compares the gender difference in enrolment of Karnataka with select southern States of India, Kerala is way ahead of Karnataka. The gender difference for Tamil Nadu is comparable to Karnataka. The highest gender difference in the enrolment for overall figures is Andhra Pradesh followed by Telangana. The total enrolment of students in higher education in Karnataka for the year 2015-16 was 17,82,954. Out of this, 9,21857 were men and 8,61097 were women for the year 2015-16. The data reveal that the lowest student enrolment is recorded in the Kalaburagi division characterized by its low development indicators. This is further coupled with the fact that these regions have the lowest number of colleges and Universities in the State. In contrast, Dakshina Kannada has been earmarked as a separate region due to the terrain and is high on development

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Distribution of enrolment by social category and gender is an important measure to examine the aspects of inclusiveness and equity. According to AISHE (2016), Gender Parity Index (GPI) in higher education in Karnataka 0.91 and is higher than the all-India figures of 0.84 in 2015-16.

indicators despite smaller student's enrolment in higher education. The fact that student enrolment in higher education in this region is low could be due to the size of the population and the reduced number of colleges and Universities in this region. On the other hand, Bengaluru and Belgavi region which has historically established itself as seats of higher learning (particularly Dharwad) , over a period of time has a greater number of higher educational institutions and Universities. Bengaluru region has the highest number of colleges (924) among all other districts in the country. Thus, the data on student enrolment across the regions is reflective of the distribution of higher educational facilities in different parts of the State.

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The Economy

The State Income or Net State Domestic Product (at 1993-94 prices) increased from Rs.30,087.57 crore in 1990-91 to Rs.61,386.40 crore in 2001-02 registering an increase of 9.5 per cent per annum. But at current prices it has increased to Rs.1,59,893 crore during 2016-17. The per capita income (NSDP) at constant prices increased from Rs.6,739 to Rs.11,516 showing an annual increase of 7.1 per cent during the same period. The economy of the State, which was predominantly agrarian in character in 1956, has changed significantly since 1980-81. The primary sector, which contributed about 60 per cent of the State GDP in 1960-61 (at 1980-81 prices), regressed to about 43 per cent in 1981, subsequently declining to 26 per cent in 2001-02 and further it slipped to 12 percent in 2016 (Economic survey 2016-17) . Meanwhile, the share of the secondary sector increased from 15.2 per cent to 23 per cent, and then to 26

per cent, in the corresponding period. The increase in the share of the tertiary sector. However,, was spectacular – from 24.8 per cent in 1960-61 to 34 per cent in 1981, 48 per cent in 2001-02 further increased to 64 percent in 2016-17 at current prices (based on 2011-12 series). While the trend towards diversification is a characteristic of a modern economy, there is a cause for concern in the fact that the size of the workforce dependant on the primary sector is not commensurate with its share in the GDP.

Poverty and Inequality

In Karnataka, extreme poverty still remains a concern. 24.5 percent in rural areas and 15.3 percent in urban areas are poor constituting nearly 13 million. Although poverty has been reducing during the last two decades, it is still high and the challenges remain vast. States progress in fighting poverty has been modest when compared with some of its neighboring States. 72 percent of the poor in Karnataka reside in rural areas, where broader economic growth as a poverty eliminator may not reach the poor. Majority of these poor households are concentrated in districts of Northern Karnataka and socially disadvantaged groups. Extra efforts are required to ensure economic sustainability through targeted and effective policies to keep with the pace of poverty decline.

By way of mean per-capita expenditure and Gini co-efficient, measure of inequality, across State for 2011-12, we see that mean consumption in Karnataka is higher than the national average both in rural and urban areas. In rural areas, Karnataka's per capita consumption is quite low and it stands in the 12th position and mean consumption being less than all the southern States. However, in Urban areas Karnataka stands in 5th position, mainly because of the Bengaluru city, and has better mean consumption expenditure than other southern States, except Kerala. However, it is quite disappointing to note that, inequality in urban areas is highest in Karnataka, again may be due to Bengaluru city. Even in rural areas inequality is quite high but better than our neighboring States Kerala and Tamil Nadu. Further per capita expenditure and inequality over the years 1993-94 to 2011-12, clearly indicated a growth in rural per capita consumption over the years both at Karnataka and national level. However, urban area had a fall in 2004-05 and then it subsequently increased. The inequality in urban areas grew substantially in Karnataka from 0.30 (Gini co-efficient) to 0.42. On the other hand inequality in rural areas in Karnataka was more or less stable around 0.24 during 1993-94 to 2009-10 and rose marginally to 0.27 in 2011-12.

Agriculture

Agriculture is the mainstay of the people in the State. Cultivators and agricultural labourers form about 56 per cent of the workforce in 2001 census and decreased to 53 percent in 2011. Since Karnataka experienced stronger structural shift of employment from agriculture to non-agriculture compared to All India, similar share of shift of employment (5-6 per cent) towards industry in both Karnataka and India led to different direction of this shift. In India, the structural shift from agriculture to non-agriculture was

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towards industry and within industry not towards manufacturing but towards construction. In Karnataka, the larger shift of employment from agriculture was towards services and services absorbed much larger proportion of net shift of employment compared to industry. This was due to the extent of arid land in Karnataka being second only to Rajasthan in the country, agriculture is highly dependent on the vagaries of the southwest monsoon. Out of the net area sown, only 25 per cent is irrigated. Agricultural production and productivity in the State has received a tremendous setback in the recent years (2001-02 to 2003-04) due to the continuous prevalence of drought conditions. Thereafter, agricultural production, particularly cereals, has improved due to relatively good monsoons in the year 2004-05. Food grain production was 91.54 lakh tonnes during 2016-17 against the target of 108.17 lakh tones. The vast extent of dry, un-irrigated land, located primarily in northern Karnataka, casts its long shadow on the socio-economic development of the local people in many significant ways. The net irrigated area in the State has increased three-fold, from 7.6 lakh hectares in 1957-58 to 26.4 lakh hectares in 2000-01. By 2000, the State had invested about Rs.14,267 crore, of which Rs.13,399 crore was spent on major and medium irrigation and Rs.868 crore on minor irrigation. At the end of March 2001, the irrigation potential created by major, medium and minor (surface water) irrigation was about 18.11 lakh hectares out of a projected 29.73 lakh hectares potential. The irrigation potential from all sources is estimated at 55 lakh hectares and the potential created up to 2016-17 is 40.75 lakh hectars. The present proportion of net area irrigated to net area sown is about 25 per cent.

One of the key innovations is that the State has implemented end-to-end computerization of TPDS operations. A beneficiary data base is created which other States are yet to begin

Food and Nutrition

National Food Security Act-2013 is in force with effect from January-2014 in the State with the objective to provide for food & nutritional security, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity. The Act provides for coverage of upto 75 percent of the rural population and up to 50 percent of the urban population for receiving subsidized food grains under TPDS, Thus, covering about two-thirds of the population. The eligible persons receives 5 Kgs of food grains per person per month at subsidised prices for rice/wheat. The existing Antyodaya Anna Yojana (AAY) households, which constitute the poorest of the poor, receives 35 Kgs of food grains per household per month. With the concept of "Priority families" instead of erstwhile concept of BPL, receives food grain free of cost, under Annabhagya scheme to address food security. Under PDS system there are 4.4 Crores beneficiaries which is according to the directions of the Central Government. Karnataka is one of the earliest States to have taken prompt action and implemented the NFSA & the experience of the State showed that implementation of NFSA has improved the PDS in the State. One of the key innovations is that the State has implemented end-to-end computerization of TPDS operations. A beneficiary data base is created which other States are yet to begin While this has enabled in weeding out the irregularities, it has also aided in de-

duplication of the beneficiaries. Most significantly 3,000 Fair Price Shops (FPS) have been automated & entire beneficiary list and FPS wise allocation details are on the portal also supply-chain has been computerized. These system strengthening arrangements, to some extent has enabled both transparency & greater accountability.

It is a reality that PDS has become a lifeline for many rural households & an effective means to mitigate hunger & food insecurity to some extent. The launch of NFSA, is a major paradigm shift from a welfare to a rights based approach to address food insecurity. An overall 20,400 FPS are operating in the State of which 9 are mobile FP in hilly areas of D.K, Kodagu, Raichur, Mysuru, Chamarajnagar districts. As an early intervention & for timely distribution, **Padithara Khatari** scheme has been introduced since 2014, which guarantees the availability of food grains in Fair Price Shops from first of every month till 10th from 8 a.m to 8 p.m, enabling the card holders to draw the food grains, in addition to the regular operating hours on the other days. MIS is instituted by creating a website to track all transactions & all records of public, under Section 27 of NFSA & under Section 4.1 of RTI Act. The replies to RTI applications are addressed in 7 days, to bring transparency in the system, which renders support to reduce stress and food insecurity to some extent. Yet Information gap in the context of the National Food Security Act 2013 (NFSA) is a concern & concerted effort to build awareness on all aspects of the delivery system including instilling accountability at every level is imminent. Mandatory area specific, monthly monitoring down the chain is vital. While the grievance redressal mechanism is in place, there are many hurdles for the system to address. A community monitoring mechanism on pilot basis is worth attempting & ensuring procured food is consumed by the family.

Integrated Child Development Services (ICDS) program- India's primary response to the Nutrition & Developmental needs of children, is addressed in a comprehensive approach through the platform of ICDS. It is a key intervention of the government, to augment the nutrition challenge & to accommodate, the intergenerational concern, whereby Maternal and Child Nutrition is given attention. The program is pivotal, especially in reducing the Under Nutrition among the children. While nutrition supplementation in the program is significant, it is vital to recognize that, just the single intervention cannot by itself bring about drastic changes in nutrition outcome. A simultaneous support & compliance of Health, Water, Sanitation & other services that influences the target group's behaviour brings greater dividends.

State operates the program in with a total of 65911 Anganawadi centres 204 ICDS blocks covering 181 rural 12 tribal and 11 urban projects covering all the 175 Community Development blocks. At present there are 62580 Anganwadi centers and 3331 mini AWCs functioning in the State.During the year 2014-15, 57.66 lakh beneficiaries availed the benefit, of Supplementary nutrition under the ICDS program. With revised Nutrition norms of 500 KCAL of energy & 12-15 gms of protein to 6 months to six years children ,800 KCAL

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to severely underweight children, 600 KCAL for pregnant, lactating women also Adolescent girls under SABLA scheme. The additional support is from Ksheerabhagya scheme of the State. While many studies have indicated that more than 85 percent of under three years children were residing in the operational area of Anganwadi centers, yet the access is still a challenge. RSOC 2013-14 in Karnataka has indicated that percentage availing Supplementary food in Anganwadi centers is less than 56 percent & more significantly only 49 percent of pregnant mothers are availing supplementary food. In the rural area the user percentage is better than urban, despite easy access in urban area.

The target of halving the proportion of households without access to safe drinking water sources from its 1990 level to be reached by 2015, has been achieved in both rural and urban areas in Karnataka.

Among the different social category user percentage is only 60 among the SC & ST community. The access to the children from the poorest of the poor communities or the most vulnerable varies from region to region. Even where access is good there is no linear relationship between performance of ICDS & outcomes in terms of reduction of under nutrition. The ICDS has been generally noted for its relative lack of focus for below 3 year children who are most vulnerable to slip into under nutrition. In practice, it is seen that most ICDS activity transpires at the Anganwadi centre itself, where children aged above three are brought, thereby the crucial period to combat under nutrition elapses.

Infrastructure

Progress towards achievement of human development outcomes is catalyzed by the improved access to basic infrastructure such as drinking water, sanitation, housing, energy and transportation. While, traditionally, these services were provided by the State with funds being allocated under various programs and schemes, the last few years has seen the emergence of innovative mechanisms to deliver these services in partnership with the private sector. Backed by relevant policies , distinct governance and service delivery, infrastructure to implement State-sponsored and central-sponsored programmes / schemes, Karnataka has been striving to provide these essential services to all segments of the population spread across geographies which, by themselves, are characterized by vastly different levels of natural endowments. The target of halving the proportion of households without access to safe drinking water sources from its 1990 level to be reached by 2015, has been achieved in both rural and urban areas in Karnataka.

The proportion of Karnataka's rural and urban households with tapwater (treated/untreated) as the main source of drinking water rose during the period 2001 to 2011 with 66.1% of the State's households having access to this service in 2011 as compared to 58.9% in 2001. while the proportion of rural households with this source increased to 56.4% from 48.5% during the decade. While 18.2% of the State's all households had water source away, 25.8% of SC and ST households (combined) had water source away with the proportion of such ST households being 27.2% (vis-à-vis 25.2% of SC households).

Sanitation, along with drinking water, is seen as a basic necessity of human beings, and the United Nations General Assembly and the UN

Human Rights Council have adopted resolutions (A/64/292 and A/HRC/RES/18/1) recognizing the Human Right to Safe Drinking Water and Sanitation. Recently, in 2015, the UN General Assembly adopted Resolution A/RES/70/169, recognising that 'the human right to sanitation entitles everyone, without discrimination, to have physical and affordable access to sanitation, in all spheres of life, that is safe, hygienic, secure, socially and culturally acceptable and that provides privacy and ensures dignity'. The **Mar del Plata resolution of 1977** which declared the period 1981-1990 as the International Decade of Water and Sanitation was one of the earliest expressions of the global concern on sanitation.

As a responsible signatory to the Mar del Plata resolution, India introduced new programs during the sixth and the seventh five year plans to improve rural sanitation coverage. Further, the Central Rural Sanitation Programme (CRSP) was launched in 1986, and a more integrated, broad-based Total Sanitation Campaign (TSC) in 1999. Despite various initiatives to address the situation, the Census 2011 revealed that only 32.7% urban Indians were connected to a piped sewer system and 12.6% roughly 50 million urban Indians still defecated in the open. Consequently, towards accelerating its efforts and to encourage the involvement of local governments/communities, the Government of India also launched the **Nirmal Bharat Abhiyan in 2012.** In 2014, towards intensifying efforts to promote basic sanitation, the Government of India launched the **"Swachh Bharat Mission"** to accelerate efforts to achieve universal sanitation coverage, improve cleanliness, and eliminate open defecation in India by 2019. This program is being implemented through two verticals - Swachh Bharat Mission, Urban (SBM-U) for cities and Swachh Bharat Mission, Gramin (SBM-G) for rural areas.

According to the recently launched Joint Monitoring Programme (JMP) update 2015, about 564 million people practiced open defecation in India out of 946 million open defecators of the world and the unenviable distinction of having the most number of individuals practicing open defecation even today in the World. As of 2015, about 10 percent of urban population of 419 million resorted to open defecation (OD) in India. India has been unable to achieve the Millennium Development Goal of halving the proportion of people with sustainable access to basic sanitation by 2015, and lack of sanitation in India has also led to the economic losses for the country (6.4 % of India's GDP).

Karnataka as in the national context, continues to grapple with the complex issues involved in providing basic sanitation facilities for its citizens. The State has been implementing the above-mentioned central programs and has also launched its own initiatives to accelerate the provision of sanitation services. Since 2007, 1,070 Gram Panchayats, 6 Taluk Panchayats and One Zilla Panchayat in Karnataka have been awarded Nirmal Gram Puraskar Awards. Further, towards accelerating progress in the State, Karnataka has also launched **"Nairmalya Award"** at Taluk Level, **"Rajata Nairmalya"** at District level and **"Nairmalya Rathna"**

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at the State level to recognize the sanitation-related achievement of Gram Panchayats, Taluk Panchayats and Zilla Panchayats respectively.

However, the progress in providing basic sanitation is satisfactory in the Coastal and Malnad Districts of Dakshina Kannada, Uttara Kannada, Udupi, Shivamogga, Kodagu and Chikkmagaluru only, while in a majority of the districts, the progress achieved is not satisfactory. In 2011, 51.20% of the State's households had latrines with the proportion of rural households having individual latrines (28.40%) being about a third of the proportion of urban households (84.90%) having individual latrines. 11.23% of Yadgir district's households had latrines (Rural - 4.18%, Urban – 38.60%) as compared to 90.18% of Dakshina Kannada's households (Rural – 87.40%, Urban – 96.60%). 92.2% (about 59 lakh households) of the State's all households which did not own a latrine practiced Open defecation as compared to 92.2% and 93.8% of the State's SC and ST households.

Karnataka has established dedicated institutions to implement various programs that provide housing for its rural and urban populace. The Rajiv Gandhi Rural Housing Corporation and the Karnataka Housing Board has been implementing the central housing programs as well as the State's own programs such as the Rural Ashraya/Basava Vasathi Yojane, the Urban Ashraya/Vajpayee housing scheme, a special housing scheme for the differently-abled and other disadvantaged communities, the Nanna Mane program that seeks to provide affordable housing to low income groups and Dr. B R Ambedkar Nivasa Yojane that provides houses to homeless SC/ST families. Since, 2012-13 about 1.01 million houses have been provided under the schemes with a higher level of target achievement being recorded by the rural housing schemes.

Although the proportion of dilapidated houses has declined during 2001-11 (but with an increase in the absolute numbers of houses) in the State, disparities across rural-urban and SC/ST are evident with these inequalities being higher in a few districts/taluks. About 5% of houses and about 9% of houses in Chamarajanagar district and Sindhanur taluk (Raichur district) respectively were in dilapidated condition. About a tenth of all houses in rural areas of Sindhanur and Shikaripur taluks were dilapidated. A higher proportion of SC and ST houses were in dilapidated condition as compared to All households in the State. Across all other characteristics too which indicated a lower quality of housing, the proportion of SC/ST and slum houses was seen to be higher as compared to the overall households in Karnataka. It is evident that the conditions of houses in the State varied across districts especially across regions such as Hyderabad Karnataka and Southern Karnataka.

Karnataka home to Asia's first hydroelectric generating station at Shivanasamudram, has over the years, been grappling with challenges to meet the ever growing demand for electricity. In 2015, Karnataka had an installed capacity of utilities of 13.05 GW (15.72 GW, upon including the centre's share) accounting for about 4.8 percent of the country total utilities' generation capacity and grid interactive renewable power capacity of 4.81 GW

(12.41 percent of the country's total grid interactive renewable power capacity), with about 41.8 percent of the State's total installed capacity being met from cogeneration and renewable. The State has been a pioneer in setting up distinct bodies for power generation and distribution and in effecting power sector reforms. The Karnataka Electricity Reforms Act (1999) led to the establishment of the Karnataka Power Transmission Corporation Ltd. (KPTCL) and an autonomous Karnataka Electricity Regulatory Commission (KERC). In 2002, KPTCL was further unbundled to form transmission and distribution companies and currently, the State has five electricity companies and one Rural Electricity Co-operative Society involved in distribution and retail supply of electricity. In 2015-16, 50894 MU were sold by the distribution companies to 22.26 million installations in the State (as compared to 43009 MU sold to 18.62 million installations in 2011-12). In 2014-15, 5915 MU were procured from other States through bilateral trade and purchase through energy exchanges.

During the last few years, Bhagya Jyothi/ Kutira Jyothi (free power connections upto 18 kWh/month) for BPL consumers for a single-point light connection and Domestic AEH (incl. private educational institutions) accounted for 20-22 percent of Karnataka's electricity consumption. Free power is being supplied by the State to IP sets and Bhagya Jyothi / Kutira Jyothi consumers. Since 2011-12, about 4 lakh IP sets and more than 1200 hamlets have been electrified. Transmission and distribution companies are emerging as more efficient (as indicated by declining T&D losses) and the State has also achieved its Renewable energy Purchase Obligation for both solar and non-solar. Karnataka has formulated a Biofuel policy 2009, Solar policy (2014-21) and implemented the Soura Belaku programme for installation of solar street lights in Gram Panchayats. The State has also launched the Niranthara Jyothi Yojane to provide 24 hours of quality power supply to rural areas and assured hours of power supply to irrigation pumpsets

The progress in the power sector (in production and consumption of electricity) in the State, while remarkable, did not keep pace with the rising demand from agriculture and industry. The per capita electricity consumption in the State was 481 units in 2004-05 as compared with 35 units for the newly created State of Mysore in 1956. Installed capacity in the public sector is expected to reach 4,884.83 MW, consisting of 3,282.35 MW of hydel power, 1,597.92 MW of thermal and diesel power and 4.56 MW of wind power by the end of 2004-05. For the private sector the figure is expected to be around 852.76 MW. Total energy generation in the State is projected at 20,462 MU in the public sector and 5,995 MU in the private sector. However, even this step up in generation does not meet all the State's power needs.

Efficient and affordable transport connectivity enabled by safe road infrastructure and transport services especially in rural areas, is an essential part of the enabling environment for sustainable economic growth in developing countries. It may be observed that achievement of a few targets of the recently-announced

The State has been a pioneer in setting up distinct bodies for power generation and distribution and in effecting power sector reforms. The Karnataka Electricity Reforms Act (1999) led to the establishment of the Karnataka Power Transmission Corporation Ltd. (KPTCL) and an autonomous Karnakata Electricity Regulatory Commission (KERC).

sustainable development goals (especially SDG 9 and SDG 2, target 2.3, which aim to build resilient infrastructure and promote sustainable agriculture through secure and equal access to productive resources and inputs respectively) are dependent on access to transport.

Karnataka's Public Works Ports & Inland Water Transport Department is responsible for the development and maintenance of National Highways, State Highways and Major District Roads in the State. The State has also established the Karnataka Road Development Corporation Limited (KRDCL) in 1999 as a State-owned enterprise for the development of road infrastructure facilities. In 1999, Karnataka launched the Karnataka State Highways Improvement Project (KSHIP, Phase 1) for improvement of road network of the State with external assistance. Subsequently, the State has also implemented KSHIP-II, stages I and II, and KSHIP-III. In 2012-13, Karnataka also launched the State Highways Development Programme for the improvement and strengthening of the existing State Highways. Further, the State has also been undertaking development of rural roads through the NABARD-assisted Rural Infrastructure Development Fund (RIDF) and the PMGSY. A distinct Karnataka Rural Road Development Agency has been formed in 2005 to implement the PMGSY in an effective manner. From 2013-14, the State has also been implementing the Chief Minister's rural roads development scheme through the Zilla panchayats for maintenance of rural roads.

With a road network of 240131 kms in 2014-15, Karnataka has about 4.38% of the country's road network and 6.56% of the country's national highways (< 2 lane: 2315 kms, 2 lane: 2751 kms, 4 lane and above: 1366 kms). 99.50% of Karnataka's State highways had BT (Blacktop)/CC (Cement concrete) surface with 81.96% of these roads being of width below standard single lane or standard single lane. In contrast, in 2015, 57.08% of the State's rural roads (excluding JRY roads) and 52.18% of Karnataka's Panchayat Raj roads were surfaced. 91.87% of the State's PMGSY roads were surfaced. However,, the State's road network is yet to connect 1771 (population between 250-499) & 10269 (population less than 250) unconnected habitations (2013-14).

Urbanization

Karnataka is India's 7th most urbanized State, with 38.6 percent of residents living in urban areas. Its levels of urbanization are consistently higher than the national average.

Karnataka is India's 7th most urbanized State, with 38.6 percent of residents living in urban areas. Its levels of urbanization are consistently higher than the national average. The decadal growth rate has been gradual, though particular cities and districts have grown rapidly. The State's urbanization pattern is peculiar. It has only one large metropolitan area – Bengaluru (8.4mn in 2011) – as its only million plus city though Mysuru (0.94mn) and Hubli-Dharwad (0.92mn) may soon cross that barrier. About 37% of the State's urban residents live in Bengaluru it visualizes this metropolitan primacy that sets the State apart from its neighbours, particularly Kerala and Tamil Nadu which have much more dispersed and balance settlement structures, the former with rural-urban areas relatively inter-mixed and the latter with several medium sized million plus cities beyond Chennai. Metropolitan primacy

has posed challenges for the State, particularly in raising investments in small and medium urban centres, this has had its impact on urbanisation by stagnating capacity of ULBs to manage urbanization.

Natural resources and climate change

Growing population and its ever-increasing demand for resources, is leading to increased pressure on natural resources. Natural resources such as forests, grasslands, rivers, oceans and air are subjected to over exploitation or pollution leading to degradation or loss, with adverse implications on human development. Land degradation, loss of forests, depletion of groundwater, air and water pollution, loss of biodiversity and climate change are some of the major environmental challenges facing humanity.

In Karnataka, about 50% of the area is irrigated by surface water and another 50% by groundwater and the contribution of groundwater irrigation is increasing faster than that of surface water. The area under forests has stabilized over the recent decades (a total of 13% increase in area under forests from 1960 to 2012) due to effective forest conservation policies and rigorous plantation activities. However,, the degradation processes caused due to both natural and anthropogenic activities like soil erosion, overgrazing, incorrect agronomic practices, salinization of arable lands, water logging, flooding and drought has constantly affected the land quality and productivity. In Karnataka, 9.39 M ha of land is affected by soil erosion (2010), 0.15 M ha of land is salt affected. About 8.09 M ha of land is affected by one or the other form of degradation and are classified as waste/degraded land. Belagavi, Kalaburagi, Vijayapura, Koppal and Bagalkote districts show higher proportion of area under degradation (mainly soil erosion). Land degradation adversely impacts food production, grass productivity and groundwater recharge.

Exploitation of groundwater in the dry regions of North and South Karnataka is much higher than the coastal, malnad and irrigation command areas. Wells irrigate a net area of 1.70 M ha, contributing 50% of the State's net irrigated area. The replenishable groundwater is 562 TMC and annual groundwater availability is 541 TMC. The increasing dependence on groundwater in the State has already led to 70% of groundwater development against 58% nationally. Hence, efforts should be made to create awareness among all stakeholders of water to include the cost of water in the cost of cultivation of irrigated crops, towards achieving water use efficiency and wise use of irrigation water.

Irrigation is also an important source for raising productivity in agricultural sector. Expansion of both the groundwater and surface water resources has contributed to increase in cultivated area under irrigation. The net irrigated area has increased considerably from 1.36 Mha in 1980-81 to 2.64 M ha in 2000-01 and to 3.56 M ha in 2013-14.

The higher temperatures and altered patterns of precipitation – the likely results of increased climate variability and climate change – could lower

The State of Karnataka has often been the focus of attention for its initiatives and innovations linked to `citizen-centric` governance that focuses on promoting human development. Karnataka as a 'reform oriented State' is pro-active in improving `governance, accountability, and transparency through a mix of reforms in administration, service delivery, and financial management. The Karnataka Guarantee of Services to Citizen Act 2011, has sought to ensure timely service delivery to people.

water supplies and increase water demand. The overall duration of the rainy season and in turn, the length of the growing season is expected to change. This alters the sowing window and the length of the growing period. Major rice-growing districts like Ballari, Mandya, Belagavi, Bagalkote, the coastal districts and Shivamogga will witness a decline in yields by 1% to 18%. Haveri and Raichur will see sorghum yields decline by 6% to 10%; and yields of red gram will decline by 10% to 38% and those of ragi by 10% to 20% in other six districts.

Governance

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The Karnataka Guarantee of Services to Citizen Act 2011, has sought to ensure timely service delivery to people. The Karnataka Fiscal Responsibility Act (KFRA) 2003, has attempted to usher in fiscal consolidation and more effective fiscal management. The State has attempted to make processes and procedures for procurement more transparent by detailing provisions under the Karnataka Transparency in Public Procurement Act, 1999.

The Karnataka Government has received several international and national recognition for its flagship e-Governance initiatives: Bhoomi (Computerisation of Land Records), Khajane I and II (Computerisation of Treasury Offices), Kaveri (Computerisation of Registration processes), Mobile one (multimode mobile governance platform) and Sakala (Guarantee of Services).

Under Khajane II, the government is attempting to implement as Integrated Financial Management System. It aims at a comprehensive management of the financial transactions of government and is projected as the next generation Integrated Automation initiative towards sound fiscal management.

Under the provisions of the Central Government's National e-Governance plan (NEGP), Karnataka was the first State to implement the State Data Centre (SDC). The SDC provides strong and secure data storage for various government departments that are implementing e-Governance programmes. The State has also started the implementation of the Karnataka State Wide Area Network (KSWAN) project and establishing close to 200 Points of Presence (POP) across the State. This facilitates data connectivity to all government departments. Presently more than 4000 officers of the Departments of the Government of Karnataka including the Governor's and Chief Minister's Office, High Court, Police, Judicial Courts and Prisons have been brought under the umbrella of KSWAN. Video Conferencing facility is extended to all the 177 Taluka Headquarters in addition to all the headquarters of Departments.

The Sakala initiative of the Government as part of its efforts to enable efficient and citizen friendly governance took the form of a legislation termed as the Karnataka Sakala Services Act 2011.

This Act commits the government to provide to Citizens as a Right, services on time and in a hassle free manner. Under Sakala, 419 services are delivered and it has three major functionalities: a) web portal based data dissemination; b) Online request receipt; and c) processing of the existing heterogeneous citizen centric applications of all government departments.

The government took the decision to create the Rashtriya e Market Services Private limited (ReMS) as a joint venture with NCDEX Spot Exchange Limited., both being equal share holders. It aimed at implementing its Agricultural Marketing Policy and ensures greater efficiency and transparency in the process. ReMS hopes to provide an electronic auction system across the State for transparent price determination. Launched in February 2014, within two years the initiative had achieved 7.5 lakhs lots of trading with 45 lakh bids being made. Transaction on the platform in this period have been over Rs 15,000 crores. It has accommodated lakhs of farmers, 31473 traders, 17149 commission agents for all the 92 registered commodities.

The above reforms speak of the multi-track efforts made by the government to encourage and sustain e-initiaitves. A review of the governance initiatives thus, indicates the presence of extremely innovative, bold and pro-active measures.

Regional Dimensions

The persistence of regional disparities is a fact in Karnataka it has a long history. The government of Karnataka has been striving hard to combat, contain and control it since 1991 through various measures. Not With standing these measures, regional disparities persist in Karnataka. The Dr. D. M. Nanjundappa Committee Report (HPCFRRI-2002), Karnataka Human Development Report (2005) and District Human Development Reports 2014 have shown in a systematic way the nature, magnitude and spread of regional disparities with the help of various quantitative measures.

The HPCRRI has classified 61 taluks whose CCDI value is more than 1 as Relatively Developed Taluks and the remaining 114 taluks whose CCDI values are less than 1 are classified into three categories, namely, Backward Taluks, More Backward Taluks and Most Backward Taluks.According to the HPC, 39 taluks come under the category of the Most Backward Taluks. Out of 39 Most Backward Taluks, 26 belong to Belagavi and Kalburagi Divisions. Out of 26, 21 belong to Kalburagi Division while the share of Belagavi Division is 05. From this we can conclude that in Karnataka, Kalburagi Division is the extremely backward division. The share of Bengaluru and Mysuru Divisions in the 39 Most Backward Taluks, is 13. Of the 13, 11 belong to the former and two to the latter. Mysuru division emerges as the most prosperous region in the State.

The Special Development Plan (SDP) was recommended by HPCFRRI with a view to reducing, if not eradicating the regional disparities in development in the State with an additional amount expenditure of Rs16000 crore to the regular budgetary all ocation of Rs 15000 crore to the 114 less developed taluks in 8 years. The performance of the 8-year SDP is far from satisfactory. The analysis shows that the magnitude of regional development disparity

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has remained intact even after the completion of SDP. The 8-Year SDP has not succeeded in addressing the problem of regional disparity. The HPCFRRI expected that the extent of regional disparity would disappear after the 8-Year SDP. Given the present status of regional disparities, we are not in a position to say that SDP has reduced the regional disparities. The districts of North Karnataka especially Hyderabad Karnataka still are at the bottom of human development.

As the disparities persist, the government has decided to continue providing SDP grants to backward taluks earmarking Rs 12000 crore for the next four years (2015-2019). Unlike 371(J), the SDP covers all the 114 backward taluks identified by the HPCFRRI. These 114 backward taluks spread all over the State. The Article 371(J) and the Board constituted by the government, namely HKRDB cover only the six backward districts of Kalaburagi division. There are many programmes addressing regional disparity. However, they have not succeeded in reducing the disparity. Not withstanding all these State level and central level measures, the issue of regional disparity is persisting in the State. The programmes formulated to address the issues of regional disparities have to give due consideration to the issue of intra-regional/divisional disparity.

Our approach is largely economic and infrastructure oriented in nature. But, regional disparities have social and human dimensions. The programmes which are operating in the field of regional equality have to give priority to social indicators such as literacy, nutrition, health, child care, reproductive health, food security etc. It is essential to treat the policy of correcting regional disparity as a matter of social justice. Our efforts in making development inclusive and equitable fail, if regional disparities are not considered a part of development policy. Karnataka needs a Regional Development Policy. The issue of regional disparities involves more than 2 crore people in Karnataka. Regional balance in development is necessary to realize the goals set by the architects and champions of Karnataka.

Financing Human Development

Efficient allocation of expenditure within the social services spending is an important aspect in the promotion of human development. Asian advanced economies during their high growth phase had combined large allocations to social sectors with efficient resource allocation within the social sectors for basic education and health services and reliance on the private sector for higher levels of education and expensive curative health care. Social and community services expenditure in Karnataka comprises of important items such as Education, Health and Family Welfare, Urban Development, Social Security and Welfare, Water Supply, Sanitation, Housing, Welfare of SC/ST's and OBCs. A little more than 40 percent of the total social and community services expenditure is spent on Education, Art and Culture. The expenditure on Welfare of SC, ST and OBC's has received increased attention by the State government as indicated by a sharp rise in its share from 9 percent in 2007-08 to 14.71 percent in 2015-16, the largest increase among all the items. The share of Social

Welfare and Nutrition has increased from 11.68 percent to 14.23 percent during the above reference period. Health and family welfare has had a marginal increase, However, marked by reduced share during some years in between, especially in 2009-10.

Karnataka's fiscal capability assessed in terms of the broad fiscal indicators such as fiscal and revenue deficits has revealed that the State has had a sharp fiscal recovery during the last decade as compared to that of nineties, hence in a better position to support human development intervention. State's revenue position has substantially improved. Further, the government's priorities have undergone a substantial change in favor of social and community services by assigning thrust sector status to select sectors such as Education, Health etc. The compound annual rates of growth of the functional categories of expenditure reveal that social and community services have experienced the highest rate of growth. The current decade has seen a good gain in the social and community and economic services as opposed to the highest rate of growth revealed by the general services expenditure in the decade of nineties. This accounts for an increased focus on the social services by the Government of Karnataka which certainly is a very welcome trend, given the adverse trends that prevailed during the course of last decade and slow improvement in the Human Development Index (HDI) of the State. However, fluctuations are observed that are largely caused by revenue uncertainties. For instance, the revenue shortfall experienced in post 2007-08 resulted in an absolute decline in the expenditure Health sector in the FY 2009-10. It is important to insulate social sectors from such adhocism by earmarking a prescribed share in the GSDP to ensure sustained improvements in human development.

Per capita real expenditure of Karnataka has been on the increase and was fifth largest among the major fifteen States in 2002-03. Growth in per capita expenditure in other States has been larger during the last decade relegating Karnataka to seventh place. Despite the fact that Karnataka's per capita real expenditure on some key social services expenditure is on the increase and comparable with States like Tamil Nadu (to a larger extent) and Kerala (to a smaller extent) the State does not compare well with reference to the indicators of human development. However, per capita private expenditure in these States has been larger than Karnataka, Thus, probably leading to better human development levels considering the fact that development is influenced by total investment (public and private) in a sector. The relatively smaller per capita public and private sector expenditure in Karnataka as compared to the neighboring States is a cause for concern in the broader context of human development. The issue related to the role of government in financing human development assumes greater significance as Karnataka has been having the highest poverty level among the southern States and Thus, reiterates the need for greater government spending.

Scheme execution plays an important role in the effectiveness with which services are delivered. Weak expenditure planning leading to bunchingrushing of expenditure towards the close of the financial year in the process of delivering

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the services not only adversely affect the quality of public services but also affects the monitoring. An analysis of expenditure incurred under the plan and non-plan; social and community services; Health and family welfare and Rural development by each quarter reveals that close to fifty percent of the expenditure is incurred in the last quarter and third and fourth quarter's together account for more than sixty percent of the expenditure. There is an urgent need to rectify these practices to enhance effectiveness of public spending.The fiscal reform process has still not focused on redefining the 'Role of State' in the changing times. This is the right opportune time to make a systematic delineation of the responsibility of the State in terms of direct provision, facilitation regulation etc., Expenditure reprioritized on these lines would not only right size the government but also help enhance fiscal space and allocative efficiency of public spending.

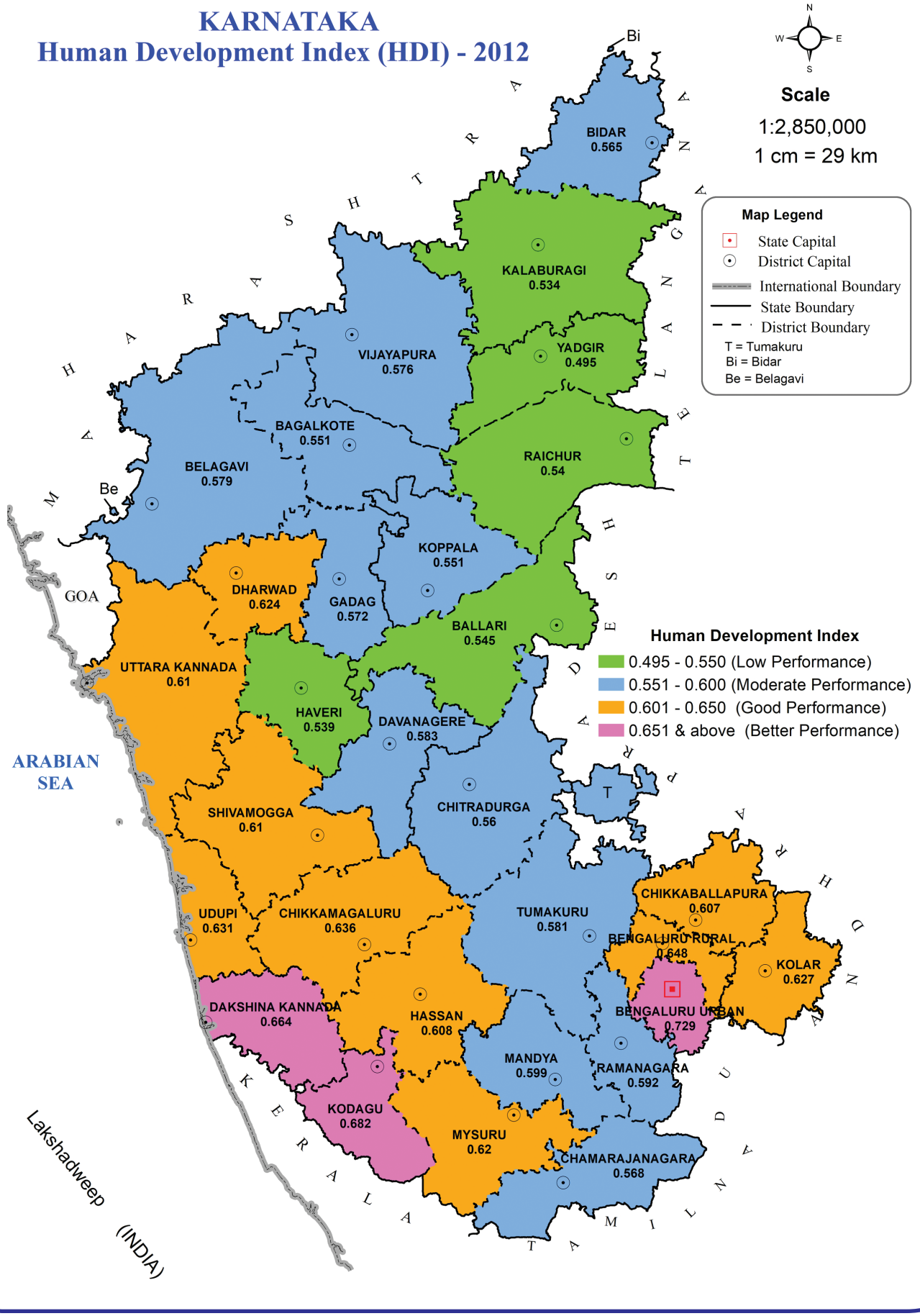
What needed is an integrated and inclusive human development policy and its effective implementation. Government efforts are found in the right direction as evident from the exercise in measuring Human Development Index (HDI) at the district level.

Conclusion

The road to equitable Human Development in Karnataka is very clear. This report has brought out the dimensions and magnitude of human development exclusions across regions, gender and social groups. The policy requirements are also suggested. What needed is an integrated and inclusive human development policy and its effective implementation. Government efforts are found in the right direction as evident from the exercise in measuring Human Development Index (HDI) at the district level. In 2016, Karnataka edged out Gujarat to become the leading State in India in terms of investments proposed. Karnataka held first rank as service/software exporter in the country. Karnataka also emerged as the role model for other States in agricultural market reforms. However, there are certain gray areas where the Karnataka government has to focus in future.

While nutrition supplementation in the program is significant, it is vital to recognize that, just the single intervention cannot by itself bring about drastic changes in nutrition outcome. A simultaneous support & compliance of Health, Water, Sanitation & other services that influences the target group's behaviour brings greater dividends. Hence special attention is needed here. Economic infrastructure inadequacies continue to hinder growth prospects. Large parts of Karnataka continue to experience power shortages. Karnataka's rail network density is still the lowest amongst all Southern States and poor road connectivity through the western ghats is still a hindrance for the growth of the coastal belt. The focus on health, education and supporting services is essential, ensuring that the benefits reach to the marginalized groups. In education, the quality issues need urgent attention. Health and Education sectors need to be further strengthened by increasing the amount of untied funds devolved. A regional development policy for spread of human development needs to be evolved. It is Thus, expected that with increased allocations to human development sectors and effective implementation of the appropriate programmes and schemes the State will be able to attain the Sustainable Developmental Goals (SDGs) and human development for all.

Accelerating Equitable Human Development in Karnataka


KARNATAKA
Human Development Index (HDI) - 2012
N
W
E
S
Scale
1:2,850,000
1 cm = 29 km
Map Legend
State Capital
District Capital
International Boundary
State Boundary
District Boundary
T = Tumakuru
Bi = Bidar
Be = Belagavi
Human Development Index
0.495 - 0.550 (Low Performance)
0.551 - 0.600 (Moderate Performance)
0.601 - 0.650 (Good Performance)
0.651 & above (Better Performance)
BIDAR 0.565
KALABURAGI 0.534
YADGIR 0.495
VIJAYAPURA 0.576
BAGALKOTE 0.551
BELAGAVI 0.579
RAICHUR 0.54
KOPPALA 0.551
DHARWAD 0.624
GADAG 0.572
BALLARI 0.545
UTTARA KANNADA 0.61
HAVERI 0.539
DAVANAGERE 0.583
CHITRADURGA 0.56
SHIVAMOGGA 0.61
UDUPI 0.631
CHIKKAMAGALURU 0.636
TUMAKURU 0.581
CHIKKABALLAPURA 0.607
BENGALURU RURAL 0.648
KOLAR 0.627
DAKSHINA KANNADA 0.664
HASSAN 0.608
BENGALURU URBAN 0.729
MANDYA 0.599
RAMANAGARA 0.592
KODAGU 0.682
MYSURU 0.62
CHAMARAJANAGARA 0.568
GOA
Bi
Be
T
ARABIAN SEA
Lakshadweep (INDIA)
MAHARASHTRA
TELANGANA
ANDHRA PRADESH
KERALA
TAMILNADU

Chapter-2

Accelerating Equitable Human Development in Karnataka

Introduction

Ever since the introduction of Human Development Reports by UNDP, 1990, country wise developments are addressed periodically in global HDRs. These help in understanding the position of the country and its movement over the period. However, National or regional reports are better to identify local patterns of inequality and exclusion and ultimately help in specific and concrete policy options. National or regional HDRs are also better placed to enhance the monitoring of challenges in human development at the national or regional level by providing data that are disaggregated to identify disparities across geographical position, religious groups, gender, socioeconomic status etc., It is therefore essential to regularly analyse national or regional Human Development and related Indices. In this effort, Karnataka State has already brought out two State Human Development Reports and an attempt is being made for the third report with the latest data and new methodology.

Human Development Report 2010, "The Real Wealth of Nations: Pathways to Human Development", analyses alternative concepts in the measurement of human development such as the Gender Inequality Index, the Inequality adjusted Human Development Index and the Multidimensional Poverty Index.

In view of the above discussion, this chapter presents methodology and estimates for Human Development Index (HDI), Inequality adjusted HDI(IHDI) and Gender Inequality Index(GII) for Indian States first and then provides estimates at district level for Karnataka State. Due to lack of data for all States, Multidimensional Poverty Index (MPI) was estimated only at district level for Karnataka State.

Methodology

To understand the relative position of different Indian States and subsequently districts of Karnataka in international context, this study estimates HDI across Indian States and across Districts of Karnataka using the goal posts as that of international one provided in HDR 2014. The global goalposts set by UNDP for the year 2014 are as follows:

Box 2.1
Global Goal Posts by UNDP-2014

Dimension	Indicator	Minimum	Maximum
Health	Life Expectancy (years)	20	85
Education	Expected years of schooling	0	18
	Mean years of schooling	0	15
Standard of living	Gross national Income per capita (PPP 2011)	100	75000

Source UNDP (2014)

The dimension indices are calculated as:

$$Dimension\ Index = \frac{actual value - \min value}{\max value - \min value}$$

For the education dimension, dimension index is first applied to Expected Years of Schooling (EYS) and Mean Years of Schooling (MYS) separately and then education index is obtained as the arithmetic mean of the two resulting indices. Finally HDI is the aggregation of the above three dimensional indices.

$$HDI = (I_{Health} \times I_{Education} \times I_{Income})^{1/3}$$

This study uses the estimate of Gross National Income per capita (PPP US$) for India from world development tables. State wise Income estimates are based on NSS per capita consumer expenditure for the year 2011-12 and converted into PPP US$ terms. Mean years of schooling of the adult population (25+) are estimated using NSS 68th round unit record data on employment and unemployment survey. Expected years of schooling are based on NSS unit record data on Social consumption: Education 2014. Based on the data mentioned above the HDI across States are presented in Table 2.1.

As per UNDP 2014 HDR report, India had an HDI value of 0.587 ranking 135th among 187 countries belonging to medium human development countries. Among the States Kerala had the highest value (0.69), and if we juxtapose this with the Global HDR report, Kerala would have ranked closer to 100 and with a marginal effort, Kerala can elevate itself to high human development countries. Bihar ranks the lowest with the value being 0.536. Karnataka stands in 8th position among 20 major States with a value being 0.611.

Table 2.1
Human Development Index Across Indian States (2012)

States	Health Index	Income Index	MYS Index	EYS Index	Education Index	HDI	Rank
Andhra Pradesh	0.7367	0.6111	0.2898	0.6383	0.4640	0.5934	11
Assam	0.6664	0.5380	0.3677	0.6278	0.4977	0.5630	14
Bihar	0.7337	0.5167	0.2504	0.5633	0.4069	0.5363	20
Chattisgarh	0.6739	0.5280	0.2972	0.6017	0.4494	0.5428	17
Gujarat	0.7408	0.6081	0.3622	0.5894	0.4758	0.5985	10
Haryana	0.7410	0.6444	0.4098	0.6283	0.5191	0.6281	6
Himachal Pradesh	0.7847	0.6158	0.4227	0.6794	0.5511	0.6434	2
Jammu & Kashmir	0.7998	0.6006	0.3444	0.6544	0.4994	0.6214	7
Jharkhand	0.7337	0.5322	0.2947	0.5878	0.4412	0.5564	15
Karnataka	**0.7463**	**0.6151**	**0.3767**	**0.6178**	**0.4972**	**0.6111**	**8**
Kerala	0.8437	0.6556	0.5134	0.6922	0.6028	0.6934	1
Madhya Pradesh	0.6739	0.5466	0.3057	0.5861	0.4459	0.5476	16
Maharashtra	0.7898	0.6291	0.4389	0.6283	0.5336	0.6424	3
Orissa	0.6896	0.5215	0.2947	0.5800	0.4373	0.5398	18
Punjab	0.7866	0.6444	0.4029	0.6378	0.5203	0.6413	4
Rajasthan	0.7314	0.5884	0.2600	0.5822	0.4211	0.5659	13
Tamil Nadu	0.7723	0.6197	0.3974	0.6672	0.5323	0.6339	5
Uttar Pradesh	0.6742	0.5497	0.2880	0.5506	0.4193	0.5376	19
Uttaranchal	0.6742	0.6020	0.4097	0.6550	0.5323	0.6000	9
West Bengal	0.7680	0.5783	0.3352	0.6022	0.4687	0.5927	12
All India	**0.7303**	**0.5885**	**0.3459**	**0.5967**	**0.4713**	**0.5873**	

Note: MYS: Mean Years of Schooling; EYS: Expected Years of Schooling

Inequality Adjusted human Development Index

The Inequality Adjusted Human Development Index (IHDI) adjusts the Human development Index for inequality in the distribution of each dimension across population.

The inequality adjusted dimension indices are obtained from the HDI dimension indices, Ix by multiplying them by (1-Ax) i.e., $I^*_X = (1 - A_X) \times I_X$ where

$A_x = 1 - \frac{\sqrt[n]{X_1 \ldots X_n}}{\bar{X}}$, is the corresponding Atkinson measure

Inequality Adjusted HDI is the geometric mean of the three dimension indices adjusted for inequality:

$$IHDI^* = (I^*_{Health} \times I^*_{Education} \times I^*_{Income})^{1/3}$$

The loss in the Human Development Index due to inequality is:

Loss% = 1-[(1-AHealth)*(1-AEducation)*(1-AIncome)]1/3

An un weighted average of inequalities in health, education and income is denoted as the co-efficient of human inequality.

Table 2.2
Inequality Adjusted Human Development Index across Indian States (2012)

States	Ineq adj health index	Ineq adj income index	Ineq.adj education index	IHDI	Rank	Loss due to inequality %	Co-efficient of human inequality %
Andhra Pradesh	0.5911	0.5576	0.2554	0.4383	13	26.14	24.50
Assam	0.5178	0.5079	0.3557	0.4540	11	19.37	18.81
Bihar	0.5573	0.4909	0.2284	0.3969	17	26.00	24.29
Chhattisgarh	0.4619	0.4822	0.2757	0.3945	18	27.32	26.26
Gujarat	0.5733	0.5503	0.2976	0.4545	9	24.06	23.19
Haryana	0.5864	0.5848	0.3158	0.4767	6	24.11	23.08
Himachal Pradesh	0.6163	0.5641	0. 3595	0.5000	3	22.29	21.54
Jammu & Kashmir	0.6441	0.5567	0.2886	0.4695	7	24.44	22.99
Jharkhand	0.5573	0.4924	0.2495	0.4091	15	26.47	24.98
Karnataka	**0.5801**	**0.5412**	**0.2988**	**0.4544**	**10**	**25.65**	**24.73**
Kerala	0.6522	0.5819	0.4937	0.5722	1	17.48	17.35
Madhya Pradesh	0.4619	0.4965	0.2597	0.3906	20	28.68	27.45
Maharashtra	0.6873	0.5561	0.3512	0.5120	2	20.30	19.58
Orissa	0.5308	0.4816	0.2677	0.4091	16	24.22	23.15
Punjab	0.6280	0.5897	0.3278	0.4952	4	22.79	21.88
Rajasthan	0.5751	0.5462	0.2299	0.4164	14	26.41	24.65
Tamil Nadu	0.5983	0.5533	0.3443	0.4848	5	23.52	22.86
Uttar Pradesh	0.5234	0.5067	0.2270	0.3919	19	27.10	25.35
Uttaranchal	0.5234	0.5533	0.3379	0.4609	8	23.20	22.32
West Bengal	0.5932	0.5226	0.2918	0.4489	12	24.25	23.38
All India	**0.5688**	**0.5224**	**0.2814**	**0.4373**		**25.54**	**24.55**

Figure 2.1
Box plot of HDI and its Dimensions

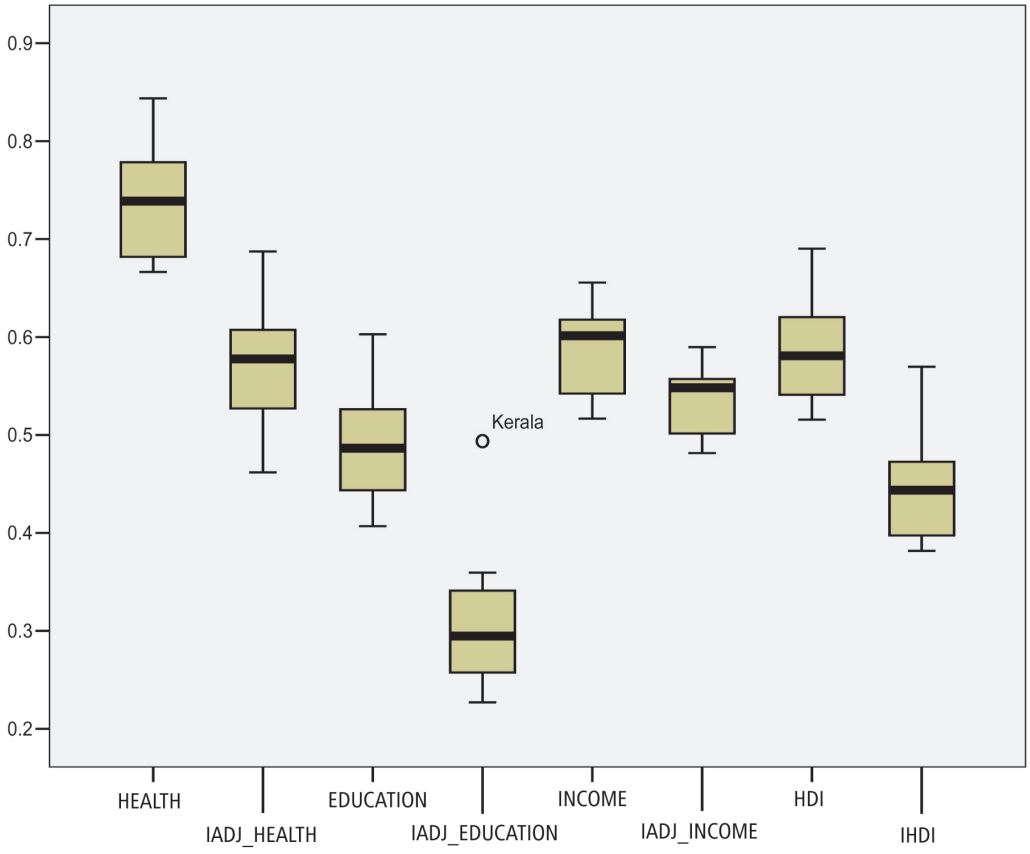


Table 2.2 presents estimates of sub indices and the inequality adjusted index across States. At all India level the overall loss due to inequality is 26%. The loss due to inequality is highest with respect to education dimension (40%) followed by health (22%) and least by income dimension (11%). Highest loss was witnessed by Madhya Pradesh(27%) followed by Chattisgarh (26%) and lowest loss is observed for Kerala(17%).

Box plot (fig2.1) also indicates that Kerala is a way ahead of other States with respect to educational attainment after adjusting for inequality and seen as an outlier. States like Assam and Bihar gain in their position by three ranks where as Madhya Pradesh looses by 4 ranks after inequality adjustment. All other States remain either in the same position or one or two positions up or down compared to ranks without adjusting for inequality. Karnataka lost its position by two ranks and as per IHDI, it stands at tenth position among twenty major States.

Gender Inequality Index (GII)

Gender inequality index reflects gender based disadvantage in three dimensions – reproductive health, empowerment and labour market. It shows the loss in potential human development due to inequality between female and male achievements in these dimensions. Values closer to zero indicate that

Gender inequality index reflects gender based disadvantage in three dimensions – reproductive health, empowerment and labour market. It shows the loss in potential human development due to inequality between female and male achievements in these dimensions.

women and men fare equally and a value closer to 1 indicates one gender fares poorly in all three dimensions. GII is based on the general mean of general means of different orders – the first aggregation is by geometric mean across dimensions: these means, calculated separately for women and men, are then aggregated using a harmonic mean across genders. Steps involved in computation of GII are as follows:

Box 2.2
Indicators considered for computation of GII

Dimension	Female	Male
Reproductive Health	MMR: Maternal Mortality Rate defined as number of deaths per 100,000 live births, SRS	
	AFR: Adolescent Fertility rate defined as births per 1,000 women ages 15-19, SRS	
Empowerment	PRF: Female Parlimentary representation (%)	PRM: Male Parlimentary representation(%)
	SEF: Attainment at secondary and higher education by females(25+ years)(%)	SEM: Attainment at secondary and higher education by males(25+ years)(%)
Labour Marker	LFPRF: Labour force participation rate by females(%)	LFPRM: Labour force participation rate by males(%)

Step 1- Aggregating across dimensions within each gender group by the geometric mean

$$G_F = \sqrt[3]{\left(\frac{10}{MMR}.\frac{1}{AFR}\right)^{1/2} \times (PR_F.SE_F)^{1/2} \times LFPR_F}$$

$$G_M = \sqrt[3]{1 \times (PR_M.SE_M)^{1/2} \times LFPR_M}$$

Step 2 - Aggregating across gender groups using harmonic mean to obtain equally distributed gender index

$$HARM(G_F, G_M) = \left[\frac{(G_F)^{-1} + (G_M)^{-1}}{2}\right]^{-1}$$

Step 3 - Calculating the geometric mean of the arithmetic means for each indicator

$$G_{\bar{F},\bar{M}} = \sqrt[3]{\overline{Health} \times \overline{Empowerment}\ \overline{LFPR}}$$

$$\text{Where } \overline{Health} = \left[\sqrt{\frac{10}{MMR} \times \frac{1}{AFR}} + 1\right]/2,$$

$$\overline{Empowerment} = \left[\sqrt{PR_F \times SE_F} + \sqrt{PR_M \times SE_M}\right]/2 \text{ and}$$

$$\overline{LFPR} = \frac{LFPR_F + LFPR_M}{2}$$

Step 4 - Calculating Gender Inequality Index

$$GII = 1 - \frac{HARM(G_F, G_M)}{G_{\bar{F},\bar{M}}}$$

all India average score on GII is 0.5126 reflecting 51% loss in achievement across the three dimensions due to gender inequality. State level losses due to gender inequality range from 42% (Punjab) to 60% (Karnataka). The major inequality is mainly due to less political participation especially in Karnataka. Female political participation is only 2% in Karnataka. Even at all India level political participation is only 10%. If political participation is not considered in GII calculation the picture would change completely (see appendix table1). Jammu & Kashmir, Kerala, Himachal Pradesh and Tamil Nadu are the States in top positions and Assam, Uttar Pradesh, Bihar and Jharkhand are in the bottom positions. Karnataka is again an average State, in the 10th position.

Tamil Nadu which stands second i.e., low GII, is because of good reproductive health parameters. Kerala, which stands third, is again due to good reproductive health parameters as well as the education level. In Kerala 64% of female (25+) have attained secondary and higher education as compared to 70% with respect to males. At all India level educational attainment by female and male is 30% and 50% respectively. Orissa and Uttar Pradesh, rank 18th and 19th respectively and have performed badly in reproductive health parameters.

The major inequality is mainly due to less political participation especially in Karnataka. Female political participation is only 2% in Karnataka.

Table 2.3
Basic Information for GII across States in India(2012)

			LFPR(15+)		Political Participation		Sec & Higher Education attainment by adults(25+)	
States	MMR	AFR(15-19)	Female	Male	Female	Male	Female	Male
Andhra Pradesh	92	36.8	0.53	0.81	0.09	0.91	0.24	0.44
Assam	300	49.8	0.47	0.86	0.14	0.86	0.35	0.50
Bihar	208	37.7	0.38	0.81	0.16	0.84	0.17	0.42
Chattisgarh	221	31.1	0.61	0.84	0.12	0.88	0.21	0.43
Gujarat	112	27.6	0.35	0.82	0.08	0.92	0.33	0.51
Haryana	127	17.9	0.31	0.77	0.10	0.90	0.35	0.58
Himachal Pradesh	126	16.5	0.64	0.82	0.04	0.96	0.39	0.60
Jammu & Kashmir	126	6.2	0.44	0.81	0.04	0.96	0.29	0.55
Jharkhand	208	46.5	0.51	0.82	0.09	0.91	0.24	0.45
Karnataka	**133**	**33.8**	**0.46**	**0.82**	**0.02**	**0.98**	**0.35**	**0.54**
Kerala	61	21.3	0.43	0.79	0.05	0.95	0.64	0.70
Madhya Pradesh	221	34.2	0.53	0.83	0.16	0.84	0.23	0.43
Maharastra	68	26.3	0.45	0.79	0.05	0.95	0.43	0.64
Orissa	222	35.1	0.47	0.85	0.06	0.94	0.26	0.46
Punjab	141	7.5	0.27	0.80	0.13	0.87	0.40	0.54
Rajasthan	244	27.8	0.56	0.82	0.15	0.85	0.16	0.43
Tamil Nadu	79	21.0	0.48	0.82	0.08	0.92	0.37	0.54
Uttar Pradesh	285	26.2	0.31	0.79	0.11	0.89	0.21	0.46
Uttaranchal	285	26.2	0.43	0.78	0.09	0.91	0.35	0.61
West Bengal	113	59.0	0.51	0.87	0.15	0.85	0.30	0.43
All India	**167**	**31.5**	**0.44**	**0.82**	**0.10**	**0.90**	**0.30**	**0.50**

Table 2.4
Gender Inequality Index Across Indian States (2012)

States	GII	Rank
Andhra Pradesh	0.4815	7
Assam	0.5529	17
Bihar	0.5440	15
Chhattisgarh	0.5081	12
Gujarat	0.5062	11
Haryana	0.4822	8
Himachal Pradesh	0.4684	5
Jammu & Kashmir	0.4419	4
Jharkhand	0.5518	16
Karnataka	**0.5978**	**20**
Kerala	0.4315	3
Madhya Pradesh	0.5017	10
Maharashtra	0.4731	6
Orissa	0.5697	19
Punjab	0.4191	1
Rajasthan	0.5147	13
Tamil Nadu	0.4312	2
Uttar Pradesh	0.5673	18
Uttaranchal	0.5436	14
West Bengal	0.4889	9
All India	**0.5126**	

Human Development at District level in Karnataka State

Human Development Index is estimated at district level for all the thirty districts in Karnataka State.

At the district level the HDI is computed with two different goal posts.

(i) International Global goal posts, which enables to compare across States or even across countries.

(ii) Goal posts based on State information containing the maximum, and minimum values of the indicators within the State.

Table 2.5 presents the results with respect to global goal posts. The table shows that Bangalore urban stands first with HDI being 0.73. Comparing with other States, human development is much higher than Kerala State and with global comparison, Bengaluru falls under the category of high Human development countries. Kodagu stands second highest with HDI value being 0.682, which value is close to that of Kerala State. Dakshina Kannada and Bengaluru rural district stands in the third and fourth positions. Yadgir, Kalaburagi, Haveri and Raichur are the districts in the bottom Four positions. HDI value in these districts is around 0.52, and these fall in the category of low human development.

Bengaluru falls under the category of high Human development countries. Kodagu stands second highest with HDI value being 0.682.

Table 2.5
HDI across the districts of Karnataka (2012)

Districts	Health Index	Income Index	Mean Years of Schooling Index	Expected Years of Schooling Index	Education Index	HDI	Rank
Bagalkote	0.7240	0.5431	0.2840	0.5681	0.4260	0.5513	24
Bengaluru	0.8151	0.7279	0.6477	0.6599	0.6538	0.7293	1
Bengaluru Rural	0.7760	0.6204	0.4542	0.6782	0.5662	0.6484	4
Belagavi	0.7442	0.5672	0.3330	0.5889	0.4609	0.5794	18
Ballari	0.6854	0.5551	0.2361	0.6128	0.4245	0.5446	26
Bidar	0.7647	0.5311	0.2907	0.5979	0.4443	0.5651	22
Vijayapura	0.7539	0.5424	0.2951	0.6383	0.4667	0.5757	19
Chamarajanagara	0.7537	0.5937	0.2441	0.5762	0.4101	0.5683	21
Chikkaballapura	0.7539	0.5885	0.3365	0.6728	0.5046	0.6072	13
Chikkamagaluru	0.7928	0.5521	0.4643	0.7111	0.5877	0.6360	5
Chitradurga	0.7256	0.5356	0.2720	0.6303	0.4511	0.5597	23
Dakshina Kannada	0.8027	0.6796	0.4476	0.6239	0.5358	0.6636	3
Davanagere	0.7396	0.5761	0.2901	0.6384	0.4643	0.5827	16
Dharwad	0.7488	0.5922	0.4312	0.6620	0.5466	0.6235	8
Gadag	0.7019	0.5659	0.3060	0.6338	0.4699	0.5715	20
Kalaburagi	0.7038	0.5373	0.2178	0.5884	0.4031	0.5342	29
Hassan	0.7998	0.5625	0.3325	0.6673	0.4999	0.6081	12
Haveri	0.7485	0.5583	0.2286	0.5207	0.3747	0.5390	28
Kodagu	0.7693	0.7147	0.5853	0.5667	0.5760	0.6816	2
Kolar	0.7539	0.6271	0.3409	0.7000	0.5204	0.6266	7
Koppal	0.6744	0.5380	0.2470	0.6753	0.4611	0.5510	25
Mandya	0.7801	0.6012	0.2957	0.6188	0.4572	0.5986	14
Mysuru	0.7375	0.6143	0.4072	0.6468	0.5270	0.6204	9
Raichur	0.6444	0.5633	0.2195	0.6477	0.4336	0.5399	27
Ramanagara	0.7760	0.5819	0.3288	0.5881	0.4584	0.5916	15
Shivamogga	0.7868	0.5615	0.3588	0.6690	0.5139	0.6101	10
Tumakuru	0.7528	0.5590	0.2922	0.6387	0.4654	0.5807	17
Udupi	0.8289	0.6250	0.3591	0.6123	0.4857	0.6313	6
Uttara Kannada	0.7828	0.5943	0.3462	0.6289	0.4876	0.6099	11
Yadagir	0.7038	0.5373	0.2178	0.4253	0.3215	0.4954	30
KARNATAKA	0.7462	0.6151	0.3767	0.6178	0.4973	0.6111	

Goal posts within the State

With the change in the goal posts, derived from the values within the State, the position of the districts has not changed. The range which was around 0.50 to 0.73 now gets widened from 0.13 to 0.98, indicating extreme inequalities in human development across the districts

If the goal is to achieve, the value of 1, Yadgir which has a value of 0.13 needs to go in a long way to achieve the goal. Yadgir ranks the lowest in both education and income index and second lowest in terms of health index. Thus, the district needs a big push in all the dimensions. There is also a big gap between the HDI of Bengaluru Urban- the top and Bengaluru Rural –at the second position - about 204 points.

There are significant variations in regional development across the divisions. It can be seen that all the districts belonging to the Gulbarga division are in the last few places. Yadgir, Raichur and Kalaburagi are the bottom three districts in human development. All the districts belonging to Mysuru division except, Chamarajanagara are placed in top few positions. Many of the districts belonging to Bengaluru division are also in a better off position compared to the districts belonging to Belagavi division. Thus, one can see a clear regional disparity across different regions in human development in Karnataka.

Box 2.3
Goal posts within the State

LEB: Max: 74 and Min 56

MYS: Max: 10 and min 3

EYS: Max 13 and min 8

Yadgir ranks the lowest in both education and income index and second lowest in terms of health index. Thus, the district needs a big push in all the dimensions.

Table 2.6
HDI Across Districts in Karnataka (Goal posts within the State)

Districts	Health index	Edu index	Income index	HDI	Rank
Bagalkote	0.625	0.307	0.495	0.456	22
Bengaluru	0.951	1.000	1.000	0.983	1
Bengaluru Rural	0.811	0.762	0.765	0.779	2
Belagavi	0.697	0.431	0.514	0.536	15
Ballari	0.487	0.210	0.632	0.402	25
Bidar	0.771	0.353	0.398	0.477	21
Vijayapura	0.732	0.404	0.449	0.510	19
Chamarajanagara	0.731	0.212	0.397	0.395	26
Chikkaballapura	0.732	0.534	0.451	0.561	14
Chikkamagaluru	0.871	0.825	0.570	0.743	5
Chitradurga	0.631	0.336	0.440	0.453	23

Districts	Health index	Edu index	Income index	HDI	Rank
Dakshina Kannada	0.906	0.671	0.719	0.759	4
Davanagere	0.681	0.391	0.509	0.514	18
Dharwad	0.714	0.701	0.642	0.685	7
Gadag	0.546	0.425	0.469	0.478	20
Kalaburagi	0.553	0.121	0.448	0.311	28
Hassan	0.896	0.520	0.504	0.617	10
Haveri	0.713	0.122	0.440	0.337	27
Kodagu	0.787	0.736	0.771	0.764	3
Kolar	0.732	0.573	0.533	0.607	11
Koppal	0.447	0.290	0.502	0.403	24
Mandya	0.825	0.386	0.447	0.522	16
Mysuru	0.673	0.640	0.621	0.644	8
Raichur	0.340	0.158	0.425	0.284	29
Ramanagara	0.811	0.422	0.621	0.597	13
Shivamogga	0.850	0.577	0.528	0.638	9
Tumakuru	0.728	0.397	0.476	0.516	17
Udupi	1.000	0.509	0.673	0.700	6
Uttara Kannada	0.835	0.505	0.525	0.605	12
Yadagir	0.553	0.009	0.379	0.125	30

Districts of Udupi, Dakshina Kannada and Kodagu are top in the list with less inequality and districts with high GII are Kalaburagi, Ballari and Bagalkote.

Gender Inequality Index

GII was also attempted at district level with goal posts based on the values within the State. This cannot be compared with that of the estimates so obtained at the State level, since the variable political participation at district level also comprises of the political participation at local level, i.e. in local self government, whereas at State level it is the political participation at only MP/ MLA level. With the inclusion of local level political participation, the inequality has drastically reduced as the female political participation is on par with male participation. This is mainly due to reservation of the seats for females. (One can see that at State level female political participation is only 2% for Karnataka).

At the district level gender inequality ranged from 0.21 to 0.50 i.e., loss due to gender inequality is between 21% and 50%. Districts of Udupi, Dakshina Kannada and Kodagu are top in the list with less inequality and districts with high GII are Kalaburagi, Ballari and Bagalkote. Bengaluru urban stands 9th position with GII being 0.38 reflecting a 38% loss in achievement across the three dimensions due to gender inequality.

Table 2.7
Basic data for Gender Inequality Index (GII) construction at District level

States	MMR	AFR(15-19)	LFPR (15+)		Political Participation		Sec & Higher Education attainment by adults(25+)	
			Female	Male	Female	Male	Female	Male
Bagalkote	163	83.0	0.49	0.81	0.42	0.58	0.21	0.50
Bengaluru	73	36.0	0.36	0.82	0.43	0.57	0.69	0.82
Bengaluru Rural	120	19.0	0.43	0.84	0.45	0.55	0.43	0.75
Belagavi	155	65.0	0.46	0.82	0.44	0.56	0.31	0.50
Ballari	227	57.0	0.50	0.83	0.39	0.61	0.15	0.41
Bidar	134	39.0	0.46	0.79	0.42	0.58	0.24	0.52
Vijayapura	135	50.0	0.50	0.79	0.43	0.57	0.24	0.46
Chamarajanagara	142	52.0	0.44	0.85	0.42	0.58	0.18	0.33
Chikkamagaluru	94	40.0	0.50	0.84	0.49	0.51	0.44	0.66
Chikkaballapura	137	40.0	0.58	0.83	0.42	0.58	0.33	0.38
Chitradurga	170	31.0	0.59	0.84	0.39	0.61	0.24	0.42
Dakshina Kannada	89	7.0	0.48	0.80	0.45	0.55	0.47	0.57
Davanagere	163	29.0	0.44	0.83	0.44	0.56	0.30	0.41
Dharwad	157	39.0	0.39	0.81	0.46	0.54	0.41	0.64
Gadag	215	55.0	0.51	0.82	0.39	0.61	0.21	0.49
Kalaburagi	182	86.0	0.51	0.80	0.44	0.56	0.14	0.39
Hassan	98	27.0	0.53	0.85	0.46	0.55	0.27	0.45
Haveri	163	31.0	0.45	0.84	0.45	0.55	0.12	0.35
Kodagu	138	11.0	0.53	0.85	0.49	0.51	0.67	0.80
Kolar	140	51.0	0.51	0.82	0.43	0.57	0.37	0.50
Koppal	236	43.0	0.58	0.83	0.41	0.59	0.16	0.42
Mandya	111	35.0	0.46	0.85	0.44	0.56	0.33	0.47
Mysuru	155	48.0	0.38	0.83	0.42	0.58	0.39	0.60
Raichur	244	54.0	0.58	0.83	0.40	0.60	0.19	0.39
Ramanagara	114	37.0	0.49	0.84	0.43	0.57	0.30	0.45
Shivamogga	106	24.0	0.41	0.83	0.49	0.51	0.28	0.45
Tumakuru	124	44.0	0.54	0.84	0.44	0.56	0.26	0.46
Udupi	50	6.0	0.39	0.78	0.45	0.55	0.35	0.55
Uttara Kannada	99	26.0	0.38	0.82	0.48	0.52	0.33	0.42
Yadgir	186	66.0	0.59	0.83	0.42	0.58	0.35	0.54

Table 2.8
Gender Inequality Index (2012)

States	GII	Rank
Bagalkote	0.4948	28
Bengaluru	0.3770	9
Bengaluru Rural	0.3630	5
Belagavi	0.4642	24
Ballari	0.5018	29
Bidar	0.4286	17
Vijayapura	0.4346	18
Chamarajanagara	0.4547	21
Chikkamagaluru	0.3757	8
Chikkaballapura	0.3925	10
Chitradurga	0.4106	14
Dakshina Kannada	0.2354	2
Davanagere	0.4068	13
Dharwad	0.4363	19
Gadag	0.4889	27
Kalaburagi	0.5037	30
Hassan	0.3546	4
Haveri	0.4389	20
Kodagu	0.2958	3
Kolar	0.4255	16
Koppal	0.4698	25
Mandya	0.3939	11
Mysuru	0.4587	22
Raichur	0.4803	26
Ramanagara	0.3960	12
Shivamogga	0.3675	7
Tumakuru	0.4115	15
Udupi	0.2077	1
Uttara Kannada	0.3653	6
Yadgir	0.4600	23

Multidimensional Poverty Index (MPI)

Multidimensional Poverty Index (MPI) identifies multiple deprivations at the household level in education, health and standard of living. Estimation of MPI requires micro data from household surveys, and unlike other indices all the indicators needed to construct the index must come from the same survey. In India District Level Household and Facility Survey (DLHS) provides information on most of the indicator required for construction of MPI. Since at State level unit DLHS survey data is not available for 9 major States MPI could not be estimated at State level. These DLHS surveys have been undertaken by the Ministry of Health and Family Welfare, Government of India. DLHS-4 i.e., round 4 pertaining to the year 2012-13, where in information was collected from 47,200 households in Karnataka is used here for computation of MPI at district level.

The dimensions and the indicators are used in the computation of MPI by UNDP in global HDR report are given in the Chart below. The three dimensions considered are health, education and living standard and each dimension is equally weighed and each indicator within the dimension is also equally weighed. Details of the indicators are presented in Table 2.9.

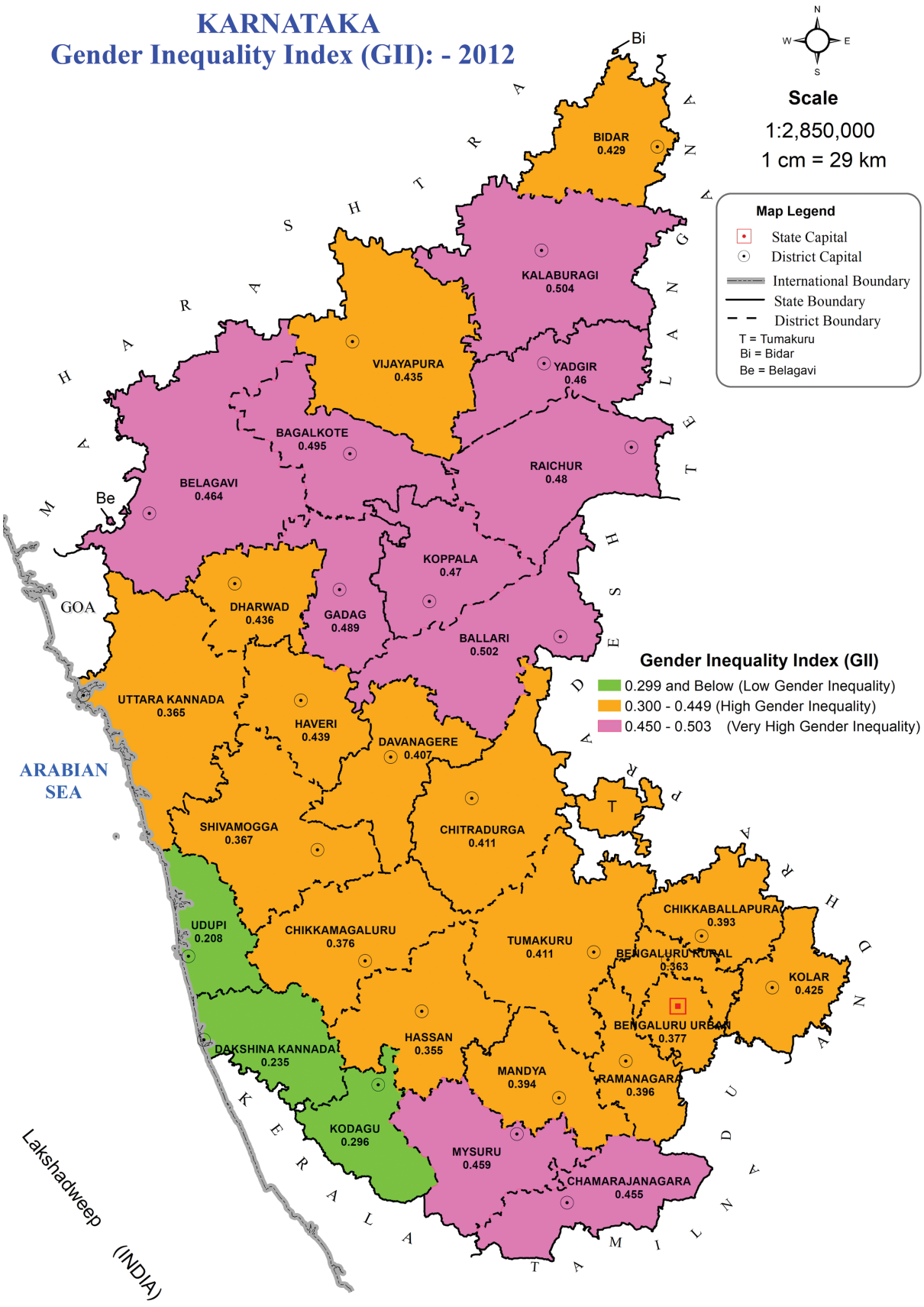

KARNATAKA
Gender Inequality Index (GII): - 2012
N
W
E
S
Scale
1:2,850,000
1 cm = 29 km
Map Legend
State Capital
District Capital
International Boundary
State Boundary
District Boundary
T = Tumakuru
Bi = Bidar
Be = Belagavi
Bi
Be
BIDAR
0.429
KALABURAGI
0.504
VIJAYAPURA
0.435
YADGIR
0.46
BAGALKOTE
0.495
RAICHUR
0.48
BELAGAVI
0.464
KOPPALA
0.47
GOA
DHARWAD
0.436
GADAG
0.489
BALLARI
0.502
UTTARA KANNADA
0.365
HAVERI
0.439
DAVANAGERE
0.407
ARABIAN
SEA
SHIVAMOGGA
0.367
CHITRADURGA
0.411
T
CHIKKABALLAPURA
0.393
UDUPI
0.208
CHIKKAMAGALURU
0.376
TUMAKURU
0.411
BENGALURU RURAL
0.363
KOLAR
0.425
BENGALURU URBAN
0.377
HASSAN
0.355
DAKSHINA KANNADA
0.235
MANDYA
0.394
RAMANAGARA
0.396
KODAGU
0.296
MYSURU
0.459
CHAMARAJANAGARA
0.455
Lakshadweep
(INDIA)
Gender Inequality Index (GII)
0.299 and Below (Low Gender Inequality)
0.300 - 0.449 (High Gender Inequality)
0.450 - 0.503 (Very High Gender Inequality)

Figure 2.2
Multidimensional Poverty Index (MPI)

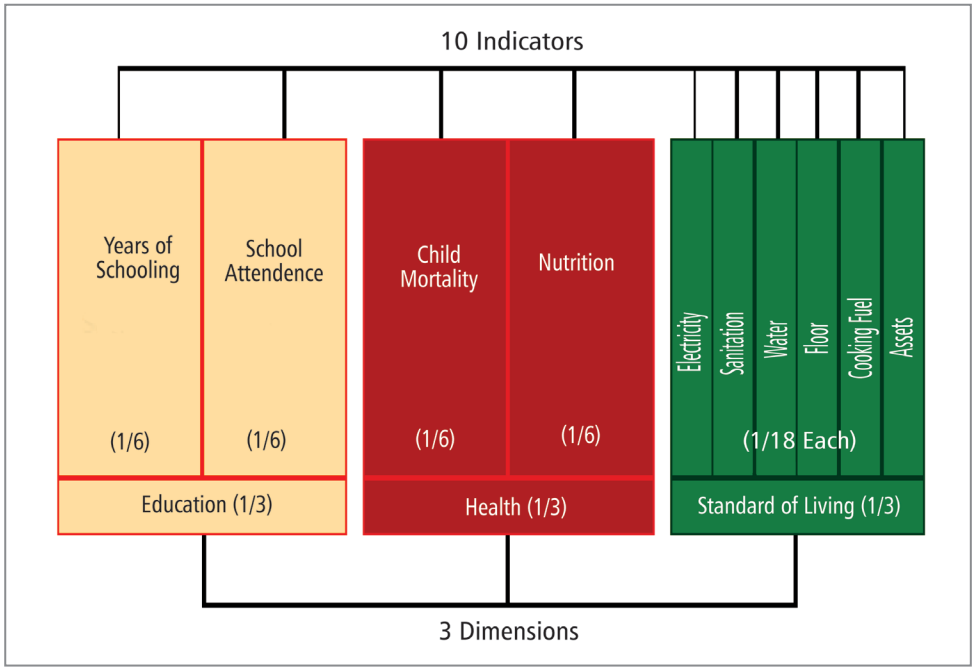


Table 2.9
Construction of Multi dimensional Poverty Index

Dimension	Indicator	Deprived if	Weight
Education	Years of Schooling	No household member has completed at least five years of schooling	1/6
	Child School Attendance	Any school age child is not attending school	1/6
Health	Nutrition	Any house hold member is malnourished for whom there is information	1/6
	Child Mortality	Any child has died in the household within the five years prior to the survey	1/6
Standard of living	Electricity	Household is not having access to electricity	1/18
	Safe Drinking Water	Household is not having access to safe drinking water	1/18
	Improved Sanitation	Household is not having access to improved sanitation	1/18
	Housing Condition	Household having a home with dirt, sand or dung floor	1/18
	Cooking Fuel	Household is using dirty cooking fuel	1/18
	Assets	Household is not having at least one asset related to information, mobility or livelihood	1/18

Let Z=(z1,...,z10) are ten indicators as mentioned in table2.9 and zi takes a value one if an household is deprived, based on the criteria mentioned in table 2.9, otherwise zero. W=(w1,...,w10) are the corresponding weights whose values are as indicated in table 2.9. Then using the above information household deprivation score ci is obtained as $c_i = \sum_{i=1}^{10} z_i \, w_i$. To distinguish an household as multi dimensionally poor or not a poverty cut off of all possible (weighted) deprivations is to be identified. Here 33.3%, as used in UNDP report is considered as the poverty cut off and all the households whose deprivation score is greater than 0.33 is identified as multi dimensionally poor and subsequently all members in that household are poor.

Then the head count ratio, H, is the proportion of the multi dimentionally poor in the population;

H= q/n, where q is the number of people who are multidimentionally poor and n is the total population. The intensity of poverty, A, reflects the proportion of the weighted component indicators in which, on the average, poor people are deprived.

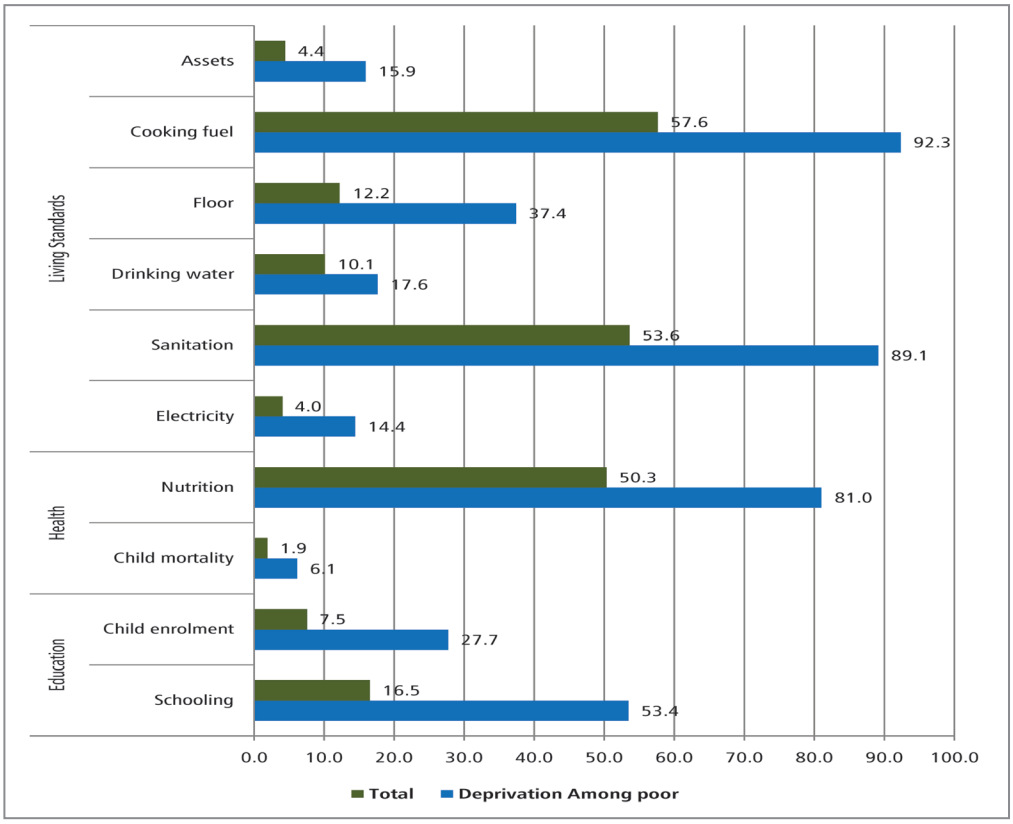
$A = \sum_{1}^{\alpha} Ci/q$ where C_i is the deprivation score. The MPI value is the product of two measures, the multidimensional poverty head count ratio and the intensity of poverty

$$MPI = H \times A$$

For the year 2012-13, Karnataka witnessed 22.1% people being multidimensionally poor and these poor people were deprived on an average in 43.3% of indicators. Figure 2.3 provide the proportion of the population deprived in each indicator for both poor and total population.

Figure 2.3

Deprivation in each indicators



From the above figure one can clearly see that 92.3% of poor are deprived of safe cooking fuel, 89% in improved sanitation and 81% are under nourished. These three indicators also fair poorly for the total population and they jointly contribute to 57% of MPI (see fig2.4). If one considers people deprived in 50% or more indicators as severe poverty then only 3% of the people are multi dimensionally severe poor. Nearly 14% of the population are deprived in 40% or more indicators (fig2.5).

If one considers people deprived in 50% or more indicators as severe poverty then only 3% of the people are multi dimensionally severe poor.

Figure 2.4
Contribution of different Indicators to total MPI

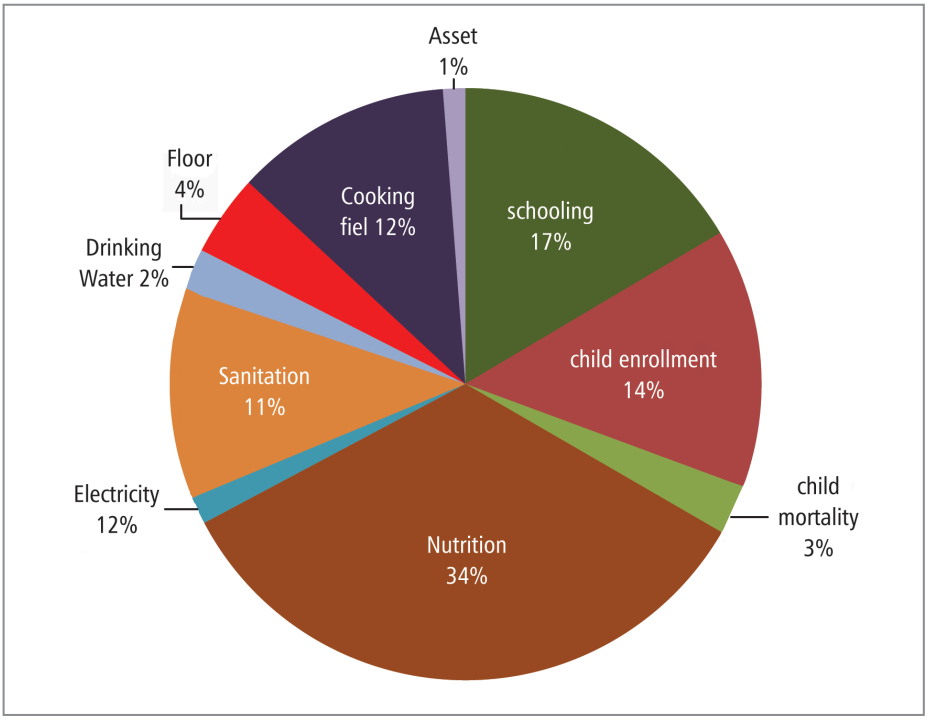
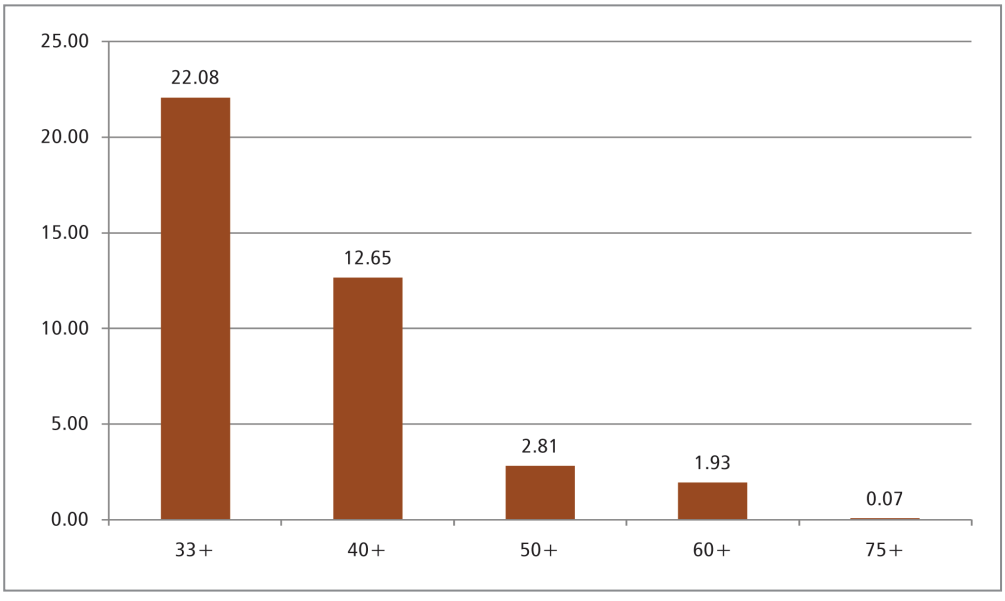


Figure 2.5
Percentage of people Deprived in (x)% or more of the MPI weighted Indicators



MPI at the district level is presented in table 2.10. One can see a wide variation across districts. In districts of Kalabuaragi, Raichur and Yadgir more than 40% of people are multi dimensionally poor (H ratio). Districts of Bengaluru (Urban), Chikkamagaluru and Dakshina Kannada are in top three positions with less than 8% multi dimentinally poor people.

This picture goes hand in hand with Human Development Index (fig 2.6) i.e., districts with high human development are the districts with low multidimensional poverty. However, such a clear picture is not seen with respect to consumption poverty. Though one would have expected the districts to fall in first and last blocks, some entries exist in second and third. A close observation indicates that Shivamogga, Belagavi, Davangere, Udupi and Uttara Kannada marginally miss their place in last block. This leaves with the concentration on the districts of first block coupled with Dharwad, Haveri and Chitradurga from third block to tackle the issue of multidimensional poverty.

Districts with high human development are the districts with low multidimensional poverty.

Table 2.10
Multidimensional Poverty Index (2012-13)

					Contribution of deprivation in		
Districts	Head Count Ratio (H) in%	Intensity of Poverty (A)	MPI in%	Rank (MPI)	Education	Health	Living Condition
Bagalkote	29.35	0.4288	12.58	24	29.69	36.94	33.37
Bengaluru	5.77	0.4164	2.40	1	35.14	43.70	21.15
Bengaluru Rural	14.91	0.4128	6.15	12	27.31	37.63	35.06
Belagavi	20.81	0.4235	8.81	19	31.40	37.90	30.70
Ballari	32.42	0.4608	14.94	26	35.74	34.92	29.34
Bidar	28.73	0.4203	12.07	23	26.18	38.43	35.39
Vijayapura	30.73	0.4351	13.37	25	26.85	38.10	35.05
Chamarajanagara	18.60	0.4186	7.78	15	29.05	38.46	32.49
Chikkamagaluru	7.89	0.3922	3.10	3	30.89	37.66	31.45
Chikkaballapura	16.31	0.3959	6.46	13	25.12	39.23	35.65
Chitradurga	20.72	0.4143	8.58	18	22.89	40.47	36.64
Dakshina Kannada	6.43	0.3946	2.54	2	30.28	41.77	27.95
Davanagere	19.52	0.4212	8.22	16	28.20	40.30	31.50
Dharwad	20.63	0.4057	8.37	17	27.13	37.14	35.73
Gadag	26.18	0.4230	11.07	22	29.20	37.75	33.05
Kalaburagi	40.96	0.4592	18.81	28	33.97	35.29	30.74
Hassan	13.86	0.3997	5.54	10	24.33	40.75	34.93
Haveri	20.92	0.4256	8.90	20	33.44	33.70	32.86

Districts	Head Count Ratio (H) in%	Intensity of Poverty (A)	MPI in%	Rank (MPI)	Contribution of deprivation in		
					Education	Health	Living Condition
Kodagu	8.24	0.4077	3.36	4	22.77	32.67	44.57
Kolar	16.53	0.4138	6.84	14	25.35	41.48	33.17
Koppal	36.09	0.4624	16.69	27	33.69	37.09	29.22
Mandya	10.55	0.4118	4.34	7	30.54	37.62	31.84
Mysuru	9.83	0.3983	3.91	6	32.62	35.56	31.82
Raichur	41.90	0.4610	19.32	29	33.09	34.26	32.65
Ramanagara	11.53	0.4135	4.77	9	32.23	35.01	32.76
Shivamogga	14.86	0.4007	5.95	11	23.06	39.10	37.84
Tumakuru	10.85	0.4140	4.49	8	29.46	38.99	31.54
Udupi	8.67	0.3968	3.44	5	24.50	37.06	38.44
Uttara Kannada	24.93	0.4041	10.08	21	20.15	38.47	41.38
Yadgir	42.98	0.4695	20.18	30	39.64	31.01	29.35
Karnataka	**22.10**	**0.4330**	**9.57**		**30.63**	**36.58**	**32.79**

Figure 2.6
Relation between HDI and MPI

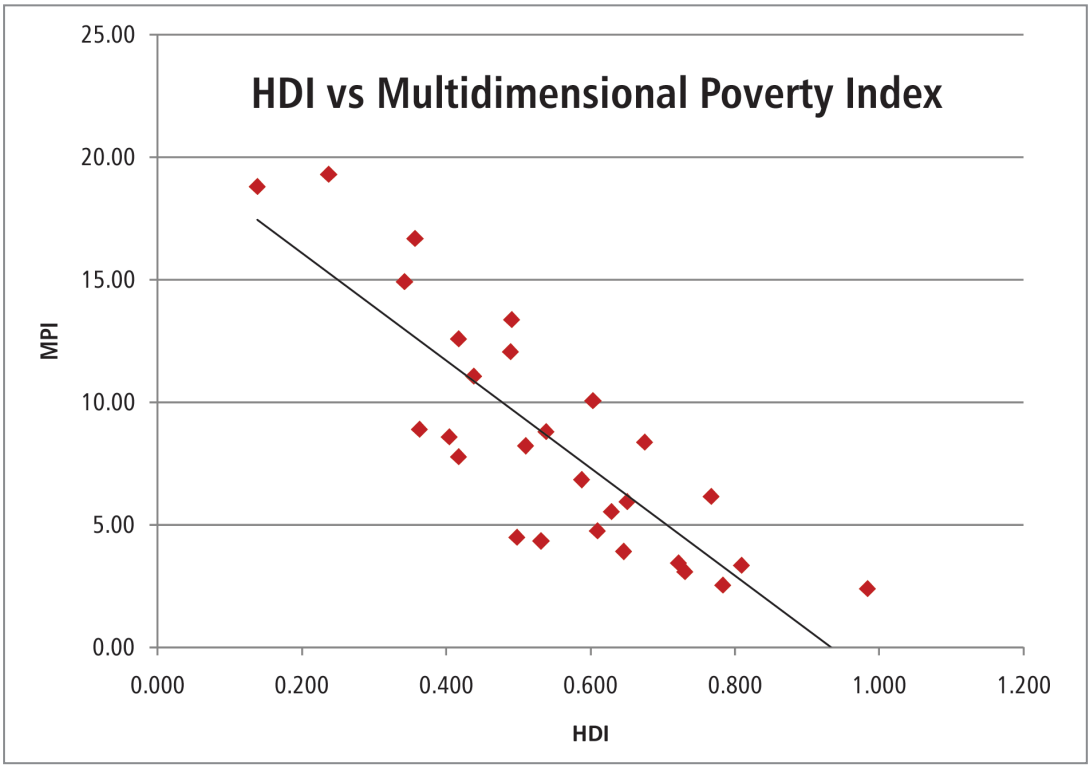


Table 2.11
Relation between consumption and multidimensional poverty

	Consumption Poverty	
	Above State Poverty Index	Below State Poverty Index
Above State Multidimensional Poverty Index	Bagalkote Vijayapura Kalaburagi Bidar Raichur Koppal Gadag Ballari	Uttar Kannada
Below State Multidimensional Poverty Index	Belagavi Dharwad Haveri Chitradurga Davangere Shivamogga Udupi	Chikkamagaluru Tumakuru Kolar Bengaluru Bengaluru Rural Mandya Hassan Dakshina Kannada Kodagu Mysuru Chamarajanagara Ramanagara

Variation in MPI is seen not only across districts but also across social groups. Nearly 34% of population belonging to socially backward group SC and ST are multi dimensionally poor.

Variation in MPI is seen not only across districts but also across social groups. Nearly 34% of population belonging to socially backward group SC and ST are multi dimensionally poor. Though there is a wide variation in proportion of poor across social groups, with respect to the intensity there is hardly any variation. Poor, irrespective of social group they belong to, are deprived in more or less same percentage of indicators.

Table 2.12
MPI across social groups

Social Groups	% of contribution to population	H	A	MPI	% contribution to MPI
SC	20.5	32.9	0.444	14.6	30.8
ST	10.2	34.7	0.447	15.5	16.3
OBC	53.3	18.7	0.425	8.0	43.7
Others	16.0	13.5	0.414	5.6	9.2
Total	100.0	22.4	0.433	9.7	100.0

Child Development Index

Children constitute the future generation of a country/region. Therefore, well being of the children is as important as the well being of adults and the old-aged people. The assessment of the status of the children in human development is therefore, essential. The Child Development Index (CDI) is the latest addition to the dimension of human development

Save the children UK, which is a member of the international save the Children Alliance, has developed the first ever global multidimensional tool which helps in monitoring the performance with respect to the well being of children –this is coined as Child Development Index.

The Child Development Index is made up of three indicators covering the three areas of child well-being i.e., Health, Nutrition and Education. The indicators adopted by "save the children UK" are used here in computing Child development index at district level. These indicators are chosen because they are easily available, commonly understood, and clearly indicative of child well-being.

Box 2.4
Karnataka: Child statistics

Across Karnataka, 3.08 lakhs of children die every year even before their fifth birthday. 38% of children are underweight. 43.7% are stunted and 17.6% are wasted. Child Sex ratio is 943 though much better than All India average, still lags by 11 points as per the goal of 11th FYP. 1.4% of primary school-age children are not enrolled in school and most of whom are girls. In terms of number of crimes committed against child is only 334 which constitutes only 1% to the total and Karnataka is one among the major States with lowest crimes against children. These figures provide some sense of the scale and distribution of deprived children.

The Child Development Index is made up of three indicators covering the three areas of child well-being i.e., Health, Nutrition and Education. The indicators adopted by "save the children UK" are used here in computing Child development index at district level. These indicators are chosen because they are easily available, commonly understood, and clearly indicative of child well-being.

The three indicators are:

Health: the under-five mortality rate (the probability of dying between birth and five years of age, expressed as a percentage on a scale of 0 to 340 deaths per 1,000 live births)

Nutrition: the percentage of under fives who are moderately or severely underweight

Education: the percentage of children who are not enrolled in school.

These three indicators are aggregated by simply calculating the average score between them for the period under review, i.e., all the three indicators have equal weights. Child Development Index (CDI) is 100 minus the average of three indicators.

Table 2.13 provides child development index across districts of Karnataka. It can be seen from the table that Bengaluru fares well with respect to

[1] *Save the Children UK has introduced the first ever globally representative, multi-dimensional tool to monitor and compare the well-being of children.*

the child development index. i.e., only 4.7% of the children in Bengaluru district are deprived with respect to the three dimensions. Raichur district had 15% of children deprived off in the three dimensions.

Going by the dimensions one can see a relative neglect of child nutrition and child death. It is a known fact that one-third of all child deaths are attributed to maternal and child under nutrition. These two factors has strongly contributed to the child development index. Raichur, Tumakuru and Chitradurga are the bottom three districts in child development.

Table 2.13
Child Development Index Across Districts of Karnataka (2012)

Districts	Index for under-five mortality rate, (per 1,000 births)	% children under weight	% children not in school	Child Depri-vation Index	Child Devel-opment Index	Rank
Bagalkote	14.4	16.9	2.0	11.1	88.9	25
Bengaluru	5.0	8.4	0.8	4.7	95.3	1
Bengaluru Rural	9.1	10.9	0.6	6.9	93.1	10
Belagavi	12.4	13.8	0.9	9.0	91.0	20
Ballari	18.5	7.0	0.9	8.8	91.2	19
Bidar	10.3	8.4	2.7	7.1	92.9	14
Vijayapura	11.5	11.1	2.2	8.2	91.8	16
Chamarajanagara	11.5	12.2	2.3	8.7	91.3	18
Chikkaballapura	11.5	7.0	1.4	6.6	93.4	7
Chikkamagaluru	7.4	6.0	1.2	4.8	95.2	2
Chitradurga	14.4	22.0	1.0	12.5	87.5	29
Dakshina Kannada	6.5	12.3	0.3	6.3	93.7	5
Davanagere	12.9	14.8	1.2	9.6	90.4	21
Dharwad	11.8	18.7	0.7	10.4	89.6	22
Gadag	16.8	6.7	2.5	8.7	91.3	17
Kalaburagi	16.5	16.9	2.1	11.8	88.2	27
Hassan	6.8	8.4	0.4	5.2	94.8	3
Haveri	12.1	10.3	1.5	8.0	92.0	15
Kodagu	9.7	9.4	0.8	6.6	93.4	8
Kolar	11.5	8.5	0.9	7.0	93.0	12
Koppal	19.4	11.7	3.2	11.5	88.5	26

It is a known fact that one-third of all child deaths are attributed to maternal and child under nutrition. These two factors has strongly contributed to the child development index. Raichur, Tumakuru and Chitradurga are the bottom three districts in child development.

Districts	Index for under-five mortality rate, (per 1,000 births)	% children under weight	% children not in school	Child Depri-vation Index	Child Devel-opment Index	Rank
Mandya	8.8	11.5	0.7	7.0	93.0	13
Mysuru	12.9	18.2	1.2	10.8	89.2	24
Raichur	22.6	19.6	3.4	15.2	84.8	30
Ramanagara	9.1	10.6	0.8	6.8	93.2	9
Shivamogga	7.9	7.9	1.3	5.7	94.3	4
Tumakuru	11.5	24.0	0.8	12.1	87.9	28
Udupi	3.8	15.1	0.4	6.4	93.6	6
Uttara Kannada	8.5	11.3	0.8	6.9	93.1	11
Yadagir	16.5	11.1	4.4	10.6	89.4	23

Comparision of HDI between 2001-02 & 2011-12

In order to compare the improvement in human development between second and third human development reports over a decade, HDI was to be computed using the same indicators as in second human development report and the dimension indices are aggregated through geometric mean. Indicators used here are Life expectancy at birth to represent health dimension, Literacy rate and Gross enrolment ratio are used to represent Knowledge and per capita income to represent level of living. All the districts showed an improvement over the decades. Position of the top five districts have not changed over a decade. Bengaluru Dakshina Kannada, Udapi are at the top three. Raichur and Kalaburagi continue to rank lowest and second lowest respectively. Koppal, Chamarajanagara and Bagalkote, which were next three lowest districts in 2001-02 showed an improvement over a decade, moving up by two ranks. Chitradurga and Ballari have been pushed to lower positions. Districts which showed greater improvements are Mysuru, Mandya, Dharwad, Haveri and Bidar. Districts of Belagavi, Ballari, Chitradurga, Davangere and Gadag showed a fall in their positions over the last 10 years.

Table 2.14
Comparison of HDI 2001-02 & 2011-12

Districts	2001-02		2011-12		Average Annual HDI growth (%)
	HDI	Rank (HDI)	HDI	Rank (HDI)	
Bagalkote	0.368	23	0.593	20	4.9
Bangaluru	0.727	1	0.958	1	2.8
Bangaluru Rural	0.506	8	0.735	10	3.8
Belagavi	0.518	6	0.657	15	2.4
Ballari	0.437	18	0.545	24	2.2
Bidar	0.408	21	0.642	17	4.6
Vijayapura	0.410	20	0.627	19	4.3
Chamarajanagara	0.343	24	0.589	22	5.6
Chikkamagluru	0.517	7	0.774	6	4.1
Chitradurga	0.464	16	0.526	25	1.3
Dakshina Kannada	0.652	2	0.866	2	2.9
Davanagere	0.474	11	0.654	16	3.3
Dharwad	0.469	14	0.755	8	4.9
Gadag	0.474	12	0.590	21	2.2
Kalaburagi	0.334	26	0.447	26	3.0
Hassan	0.486	10	0.768	7	4.7
Haveri	0.391	22	0.631	18	4.9
Kodagu	0.596	4	0.817	4	3.2
Kolar	0.465	15	0.671	13	3.7
Koppal	0.342	25	0.556	23	5.0
Mandya	0.421	19	0.690	12	5.1
Mysuru	0.463	17	0.698	11	4.2
Raichur	0.252	27	0.420	27	5.3
Shivamogga	0.560	5	0.786	5	3.4
Tumakuru	0.469	13	0.668	14	3.6
Udupi	0.649	3	0.861	3	2.9
Uttara Kannada	0.493	9	0.752	9	4.3

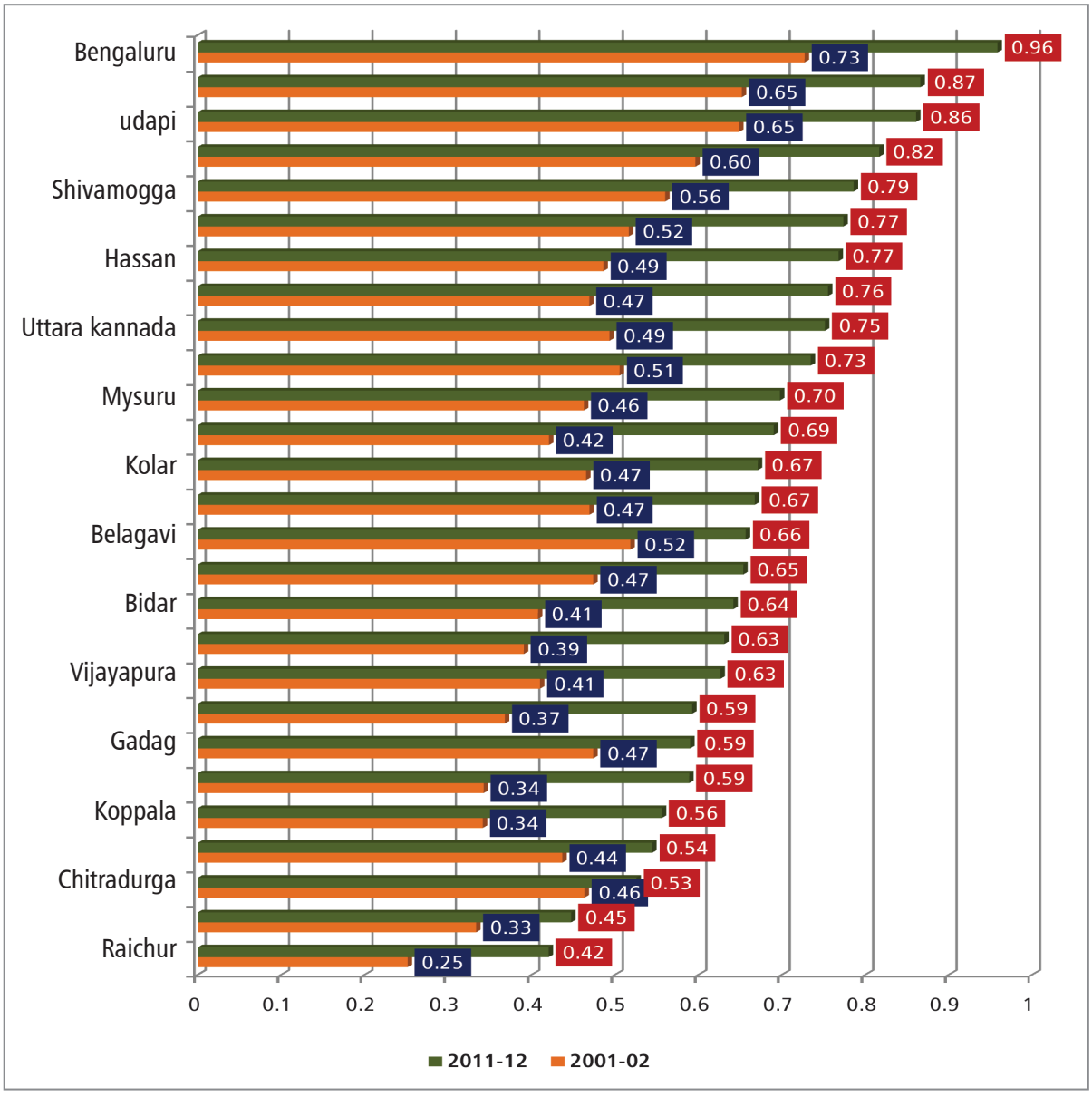
Table 2.15
HDI for the year 2001-02 using Second Human Development Indicators

Districts	Life ex-pectancy index	Literacy rate index	Gross Enrolment Ratio index	Education index	Income index	HDI	Rank (HDI)
Bagalkote	0.317	0.300	0.484	0.392	0.401	0.368	23
Bengaluru	0.657	0.875	1.000	0.938	0.625	0.727	1
Bengaluru Rural	0.615	0.465	0.335	0.400	0.525	0.506	8
Belagavi	0.678	0.454	0.593	0.524	0.393	0.518	6
Ballari	0.594	0.302	0.360	0.331	0.424	0.437	18
Bidar	0.448	0.381	0.668	0.525	0.289	0.408	21
Vijayapura	0.411	0.293	0.535	0.414	0.405	0.410	20
Chamarajanagara	0.458	0.155	0.331	0.243	0.361	0.343	24
Chikkamagluru	0.443	0.633	0.529	0.581	0.536	0.517	7
Chitradurga	0.516	0.460	0.616	0.538	0.359	0.464	16
Dakshina Kannada	0.662	0.883	0.571	0.727	0.576	0.652	2
Davanagere	0.578	0.526	0.532	0.529	0.348	0.474	11
Dharwad	0.375	0.620	0.658	0.639	0.431	0.469	14
Gadag	0.417	0.497	0.838	0.667	0.383	0.474	12
Kalaburagi	0.427	0.136	0.381	0.259	0.336	0.334	26
Hassan	0.547	0.553	0.595	0.574	0.365	0.486	10
Haveri	0.390	0.535	0.439	0.487	0.314	0.391	22
Kodagu	0.448	0.763	0.867	0.815	0.581	0.596	4
Kolar	0.495	0.424	0.740	0.582	0.350	0.465	15
Koppal	0.458	0.228	0.233	0.230	0.378	0.342	25
Mandya	0.427	0.384	0.618	0.501	0.349	0.421	19
Mysuru	0.526	0.438	0.432	0.435	0.433	0.463	17
Raichur	0.479	0.109	0.129	0.119	0.279	0.252	27
Shivamogga	0.662	0.685	0.583	0.634	0.419	0.560	5
Tumakuru	0.552	0.517	0.567	0.542	0.346	0.469	13
Udupi	0.683	0.836	0.782	0.809	0.494	0.649	3
Uttara Kannada	0.427	0.732	0.587	0.660	0.427	0.493	9

Table 2.16
HDI for the year 2011-12 using Second Human Development Indicators

Districts	Life ex-pectancy index	Literacy rate index	Gross Enrolment Ratio index	Education index	Income index	HDI	Rank (HDI)
Bagalkote	0.644	0.558	0.568	0.563	0.574	0.593	20
Bengaluru	0.953	0.980	0.868	0.924	1.000	0.958	1
Bengaluru Rural	0.821	0.664	0.652	0.658	0.734	0.735	10
Belagavi	0.713	0.662	0.667	0.665	0.598	0.657	15
Ballari	0.513	0.526	0.428	0.477	0.660	0.545	24
Bidar	0.782	0.595	0.803	0.699	0.484	0.642	17
Vijayapura	0.746	0.520	0.735	0.628	0.526	0.627	19
Chamarajanagara	0.745	0.392	0.682	0.537	0.511	0.589	22
Chikkamagluru	0.877	0.791	0.885	0.838	0.630	0.774	6
Chitradurga	0.650	0.466	0.387	0.427	0.524	0.526	25
Dakshina Kannada	0.911	1.000	0.815	0.907	0.786	0.866	2
Davanagere	0.697	0.713	0.668	0.691	0.581	0.654	16
Dharwad	0.728	0.808	0.861	0.834	0.709	0.755	8
Gadag	0.569	0.699	0.607	0.653	0.553	0.590	21
Kalaburagi	0.575	0.323	0.300	0.312	0.500	0.447	26
Hassan	0.901	0.720	0.991	0.855	0.588	0.768	7
Haveri	0.727	0.750	0.561	0.655	0.527	0.631	18
Kodagu	0.798	0.867	0.936	0.901	0.758	0.817	4
Kolar	0.746	0.631	0.779	0.705	0.575	0.671	13
Koppal	0.476	0.541	0.717	0.629	0.575	0.556	23
Mandya	0.834	0.593	0.859	0.726	0.543	0.690	12
Mysuru	0.690	0.647	0.779	0.713	0.691	0.698	11
Raichur	0.374	0.350	0.466	0.408	0.487	0.420	27
Shivamogga	0.857	0.818	0.993	0.906	0.626	0.786	5
Tumakuru	0.742	0.699	0.707	0.703	0.570	0.668	14
Udupi	1.000	0.948	0.763	0.856	0.746	0.861	3
Uttara Kannada	0.844	0.899	0.747	0.823	0.612	0.752	9

Figure 2.7
Comparison of HDI between 2001-02 to 2011-12



Gender Inequality Index is highest in Karnataka with the value being 0.598, reflecting 60% loss in achievement across the three dimensions due to gender inequality.

Conclusion

Human Development Index Computed using Global goal posts classified Karnataka as medium human development State. Inequality adjusted HDI showed that potential loss due to inequality is 26%. The loss due to inequality is highest with respect to education dimension (40%) followed by health dimension (22%) and least by income dimension (12%).

Gender Inequality Index is highest in Karnataka with the value being 0.598, reflecting 60% loss in achievement across the three dimensions due to gender inequality. Main reason for such a high gender inequality is due to very low female political participation. In the absence of Political participation indicator, Karnataka would be in the middle range ranking 10th position out of 20 major States.

Analysis of human development at the district level reveals that Bengaluru urban district belongs to High Human Development status and Kodagu is on the verge of entering High Human Development status range. On the contrary districts like Bagalkote, Ballari, Chitradurga, Kalaburagi, Koppal, Raichur and Yadgir are in the category of Low Human Development districts.

Districts of Udupi, Dakshina Kannada, Chickmagalur and Kodagu fare quite well with respect to Gender Inequality Index.

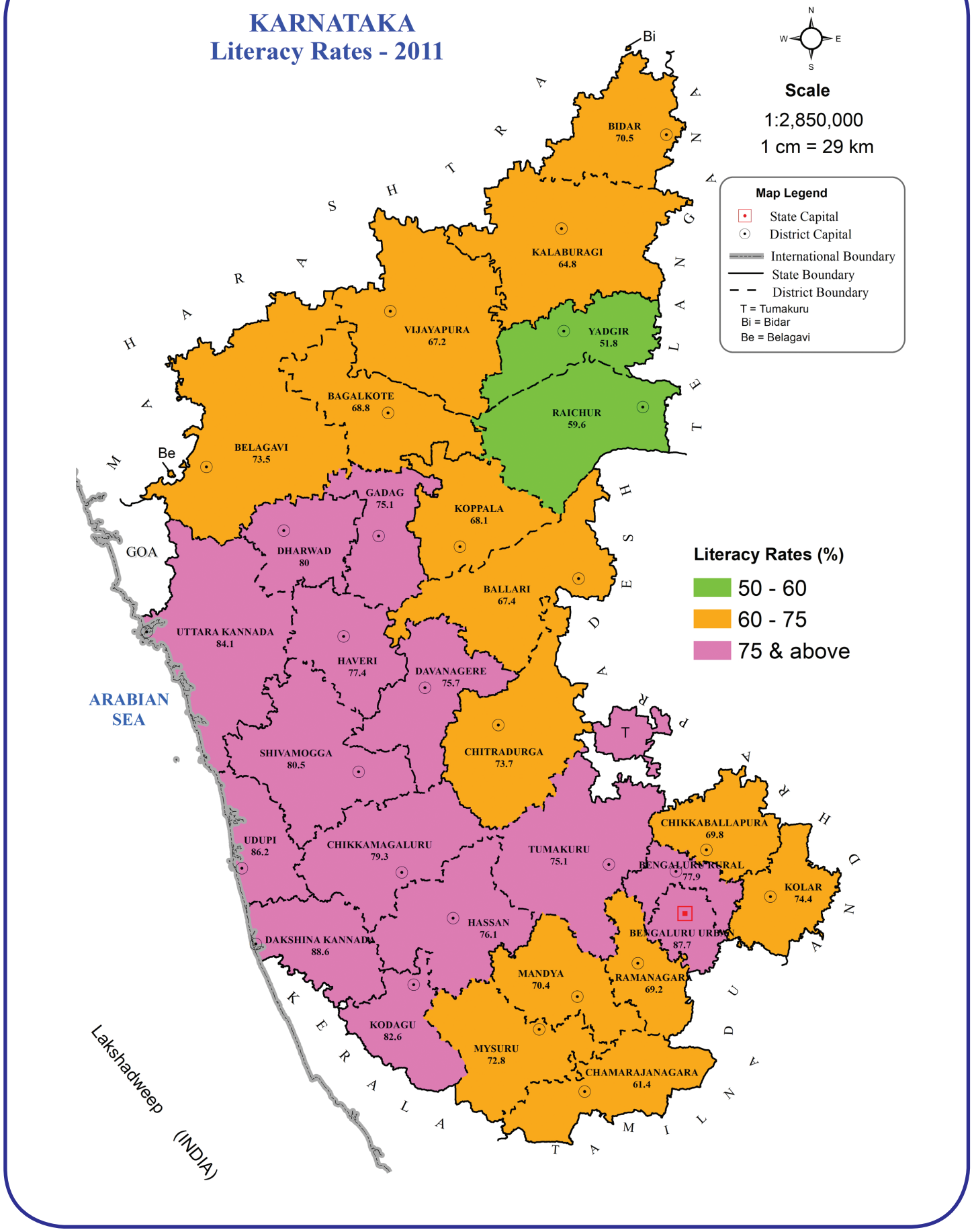
All the districts showed improvement in Human development between 2001-02 and 2011-12. However,, a clear regional disparity is seen in all dimensions i.e., human development, gender inequality and poverty.

Table 2.17
GII (without Political Participation) across States in India(2012)

States	GII	Rank
Andhra Pradesh	0.3670	7
Assam	0.4802	20
Bihar	0.4691	18
Chattisgarh	0.4167	11
Gujarat	0.3934	9
Haryana	0.3775	8
Himachal Pradesh	0.3101	3
Jammu & Kashmir	0.2711	1
Jharkhand	0.4496	17
Karnataka	**0.3948**	**10**
Kerala	0.2912	2
Madhya Pradesh	0.4290	13
Maharastra	0.3230	5
Orissa	0.4407	16
Punjab	0.3317	6
Rajasthan	0.4314	14
Tamil Nadu	0.3135	4
Uttar Pradesh	0.4748	19
Uttaranchal	0.4373	15
West Bengal	0.4175	12
All India	**0.4120**	

Analysis of human development at the district level reveals that Bengaluru urban district belongs to High Human Development status and Kodagu is on the verge of entering High Human Development status range.

Education


KARNATAKA
Literacy Rates - 2011
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District Boundary
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Literacy Rates (%)
50 - 60
60 - 75
75 & above
BIDAR
70.5
KALABURAGI
64.8
VIJAYAPURA
67.2
YADGIR
51.8
BAGALKOTE
68.8
RAICHUR
59.6
BELAGAVI
73.5
GADAG
75.1
KOPPALA
68.1
DHARWAD
80
BALLARI
67.4
UTTARA KANNADA
84.1
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CHITRADURGA
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SHIVAMOGGA
80.5
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TUMAKURU
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BENGALURU RURAL
77.9
KOLAR
74.4
HASSAN
76.1
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Chapter-3

Education

Introduction

Economic growth does not translate itself into the lives of the people automatically; it has to be consciously engendered into their lives through progressive public policy designed to create an enabling environment in which people are enabled through appropriate education and training to transform their potential capabilities into kinetic capabilities and then promote their well-being. It is predicted that like the revolutionary change in the industrial sector during the nineties, India is poised for a similar revolution in the field of education during the coming decades. The key drivers of change according to UGC, the National Knowledge Commission and the National Planning Commission are expansion, equity and excellence (3Es) and Karnataka has been striving hard to play a key role in initiating and accelerating the process of human development through higher education.

Inclusive education, among other things, is necessary for making development more and more inclusive and inclusive development is necessary for making development participatory, humane and human. Unlike the growth-centered mono-dimensional development paradigm whose exclusive focus is on the economic dimension of life, human development as a concept encompasses all aspects of life. It accords priority to people in the process of development and in sharing the outcomes of development. Not only that, it puts people, and among them, the most deprived at the centre of interventions. And education, with its intrinsic as well as instrumental role in development, is capable of promoting people's capabilities and thereby their well-being.

With this brief introductory note on the functional relationship between education and human development, this chapter, reviews the performance, potential and prospects of Education in Karnataka in transforming the present not-so-inclusive and equitable development process into a relatively inclusive and equitable process.

This chapter focuses on the status of education as an instrument of human development; the basic objectives are:

a) to identify the key indicators of performance in education;

b) to examine the key human development issues in education with special focus on spatial and social equity; and

c) to identify the strategies for achieving inclusive growth and human development.

With such objectives in view, the section A in this chapter makes a relatively detailed inquiry into matters such as literacy rates, elementary and secondary education, vocational education, expenditure on education and so on. An attempt is also made to identify the relative positions of the

Inclusive education, among other things, is necessary for making development more and more inclusive and inclusive, development is necessary for making development participatory, humane and human.

districts in school education within the State. It also throws light on the place of Karnataka among the South Indian States. More than anything else, the problem is viewed in terms of region, gender, social category and religious groups. Above all, it carries a number of recommendations which would be useful to the Government in making school education and development more and more inclusive and equitable.

Section A: School education

3.0 Literacy and Primary Education

Literacy rates in the State are all along marginally higher than the all India average rates from 1961 to 2011. The State has recorded 9th rank in literacy rates among major States, in 2011. Sex, social and spatial inequities are observed in literacy rates all along

Literacy rates in the State are all along marginally higher than the all India average rates from 1961 to 2011. Sex, social and spatial inequities are observed in literacy rates all along.

Table 3.1
Literacy Rates in State

	1961	1971	1981	1991	2001	2011
Persons (in millions)	235.87	292.99	371.36	449.77	528.51	610.95
Literacy Rates (%) (1)	25.39	31.52	38.46	56.04	67.04	75.60
(%) (2)	25.39	31.52	38.46	46.72	57.58	66.53
Decadal Gain (%) (1)	-	6.13	6.94	17.58	11.00	8.56
(%) (2)	-	6.13	6.94	8.26	10.86	8.95

1. 'C' means Crude Rates for 0 to n population;
2. 'E' means Effective Rates for 7 years to 'n' age population
3. 1988-NLM set up; 1993 TLC launched

Inclusiveness in Literacy Performance in the State

Table 3. 2
Literacy By Sex (in percentage)

	1961	1971	1981	1991	2001	2011
Male	36.51	41.62	48.81	67.26	76.29	82.47
Female	14.19	20.97	27.71	44.34	57.45	66.01
Difference	22.32	20.65	21.10	22.92	18.84	16.46

Table 3.3
Literacy Rate Across Social Groups (in percentage)

	1961	1971	1981	1991	2001	2011
SCs	9.06	13.89	20.59	38.06	52.09	65.32
Gains	-	4.83	6.70	17.47	14.03	13.23
STs	8.15	14.85	20.14	36.01	48.03	62.08
Gains	-	6.70	5.29	15.87	12.02	14.05
General	25.39	31.52	38.46	56.04	67.04	75.60
Gains	-	6.13	6.94	17.58	11.00	8.56

Table 3. 4
Rural, urban Literacy rates (in percentage)

Years	1991	2001	2011
Urban	74.20	80.54	84.00
Rural	47.69	59.33	67.96
Difference	26.51	21.21	16.04

Notes: All values are for effective rates.

Table 3.5
Gaps across Literacy Religious Groups

Christians	Sikhs	Muslims	Hindus	Buddhists	Others	Religion N.A
87.38	83.70	70.07	65.62	53.16	68.15	58.56

Note: 2011 figures are not used as they are not validated.

Table 3.6
Inter-districts Variations in Literacy Rates, 2011 Census

Literacy Rates (in Percentages)				
Sl.No	Districts	2011	2001	GAIN (in Descending order)
1	Kalaburgi	65.65	50.01	15.64
2	Koppal	68.09	54.1	13.99
3	Bengaluru Rural	78.29	64.70	13.59
4	Bagalkote	69.39	57.30	12.09
5	Raichur	60.46	48.81	11.65
6	Kolar	74.33	62.84	11.49
7	Chamarajnagara	61.12	50.87	10.25
8	Vijayapura	67.20	57.01	10.19
9	Bidar	71.01	60.94	10.07
10	Ballari	67.28	57.40	9.88
11	Haveri	77.60	67.79	9.81
12	Belagavi	73.94	64.42	9.52
13	Chitradurga	73.82	64.45	9.37
14	Mandya	70.14	61.05	9.09
15	Mysuru	72.56	63.48	9.08
16	Gadag	75.18	66.11	9.07
17	Dharwad	80.30	71.61	8.69
18	Uttara kannada	84.03	76.60	7.43
19	Tumakuru	74.32	67.01	7.31
20	Davanagere	76.30	67.43	7.26
21	Hassan	75.89	68.63	7.26
22	Chikkamagaluru	79.24	72.20	7.04
23	Shivamogga	80.50	74.52	5.98
24	Bengaluru	88.48	82.96	5.52
25	Dakshina Kannada	88.62	83.35	5.27
26	Udupi	86.29	81.25	5.04
27	Kodagu	82.52	77.99	4.53
28	Chikkaballapura	70.08	-	-
29	Ramanagara	69.2	-	-
30	Yadgir	52.36	-	-
	STATE	**75.60**	**66.64**	**9.04**

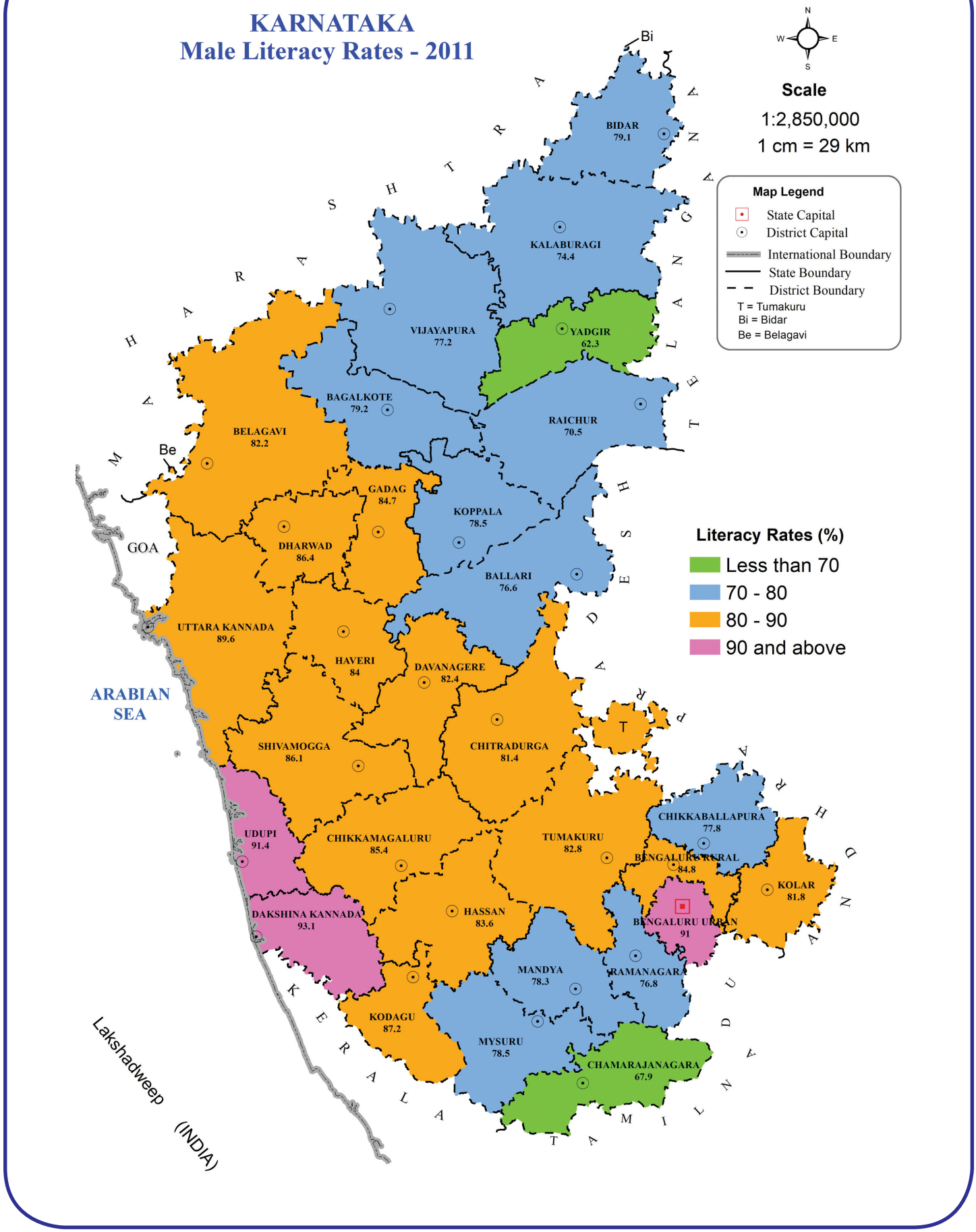
Overall State Performance	75.60	Yadgir District	52.36
Dakshina Kannada District	88.62	Range	36.26

Table 3.7

LITERACY RATES IN KARNATAKA STATE- 1991, 2001 and 2011

Years		1991			2001			2011		
Sl. No	States	M	F	GAP	M	F	GAP	M	F	GAP
	Karnataka	--	--	--	**75.10**	**56.87**	**20.13**	**82.47**	**66.01**	**16.46**
1	Yadgir	--	--	--	51.35	28.32	23.03	63.33	41.31	22.02
2	Koppal	--	--	--	68.42	39.61	28.81	78.21	56.22	21.99
3	Raichur	46.75	21.70	25.05	61.52	35.93	25.59	71.35	49.56	21.79
4	Bagalkote	--	--	--	70.88	43.56	27.32	80.16	58.55	21.61
5	Vijayapura	70.50	41.81	28.69	69.94	43.47	26.47	77.41	56.54	20.87
6	Gadag	71.63	39.68	31.95	79.32	52.52	26.80	84.89	65.29	19.60
7	Kalaburagi	--	--	--	66.18	42.06	24.12	75.11	55.87	19.24
8	Ballari	59.11	32.24	26.87	69.20	45.28	23.92	77.24	58.28	18.96
9	Bidar	58.97	30.53	28.64	72.46	48.81	23.65	79.94	61.66	18.28
10	Belagavi	66.65	38.69	27.96	75.70	52.32	23.38	82.90	64.74	18.16
11	Chikkaballapur	--	--	--	69.80	48.33	21.47	78.36	61.55	18.81
12	Mandya	59.18	36.70	22.48	70.50	51.53	18.97	78.14	62.10	16.04
13	Ramanagara	--	--	--	69.88	51.22	18.66	76.92	61.30	15.62
14	Tumakuru	66.49	41.93	24.56	76.78	56.94	19.84	82.05	66.45	15.60
15	Kolar	62.69	37.75	24.94	75.99	55.46	20.53	81.94	66.56	15.38
16	Chitradurga	64.50	39.38	25.12	74.66	53.78	20.88	81.37	66.05	15.32
17	Hassan	68.87	44.90	23.97	78.37	59.00	19.37	83.55	68.30	15.25
18	Bengaluru Rural	61.51	38.15	23.36	78.99	59.67	19.32	85.44	70.73	14.71
19	Davangere	66.82	44.41	22.41	76.37	58.04	18.33	83.02	69.39	13.63
20	Haveri	68.05	44.28	24.77	77.61	57.37	20.24	84.22	70.65	13.57
21	Chamarajnagara	--	--	--	59.03	42.48	16.55	67.88	54.32	13.56
22	Dharwad	--	--	--	80.82	61.92	18.90	86.83	73.57	13.26
23	Chikkamagaluru	70.56	51.31	19.25	80.29	64.01	16.28	85.66	72.88	12.78
24	Mysuru	51.71	41.60	18.11	70.88	55.81	15.07	78.44	66.59	11.85
25	Uttara Kannada	76.39	56.77	19.62	84.53	68.47	16.06	89.72	78.21	11.51
26	Shivamogga	73.12	54.33	18.79	82.01	66.88	15.13	86.11	74.89	11.22
27	Udupi	--	--	--	88.23	75.19	13.04	91.69	81.41	10.28
28	Kodagu	--	--	--	83.70	72.26	11.44	87.24	77.91	9.33
29	Dakshina Kannada	84.88	68.84	16.04	89.70	77.21	12.49	93.91	84.04	9.27
30	Bengaluru Urban	82.94	68.81	14.13	87.92	77.48	10.44	91.82	84.80	7.02
	Coefficient of Variation (CV)	13.08	26.71	--	11.61	22.29	--	8.29	15.28	--

* Hyderabad Karnataka districts are poor performers in regard to gender gap in Literacy rates, across all three reference years. * Progress over the years is also very slow. * 16.46 percent is the State-level gap in 2011. 11 districts record higher values. All India gender gap is 16.60 percent. * Yadgir and Raichur record less than 50 percent literacy rate for women even by 2011.


KARNATAKA
Male Literacy Rates - 2011
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Map Legend
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District Capital
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T = Tumakuru
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Literacy Rates (%)
Less than 70
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90 and above
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T
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KALABURAGI
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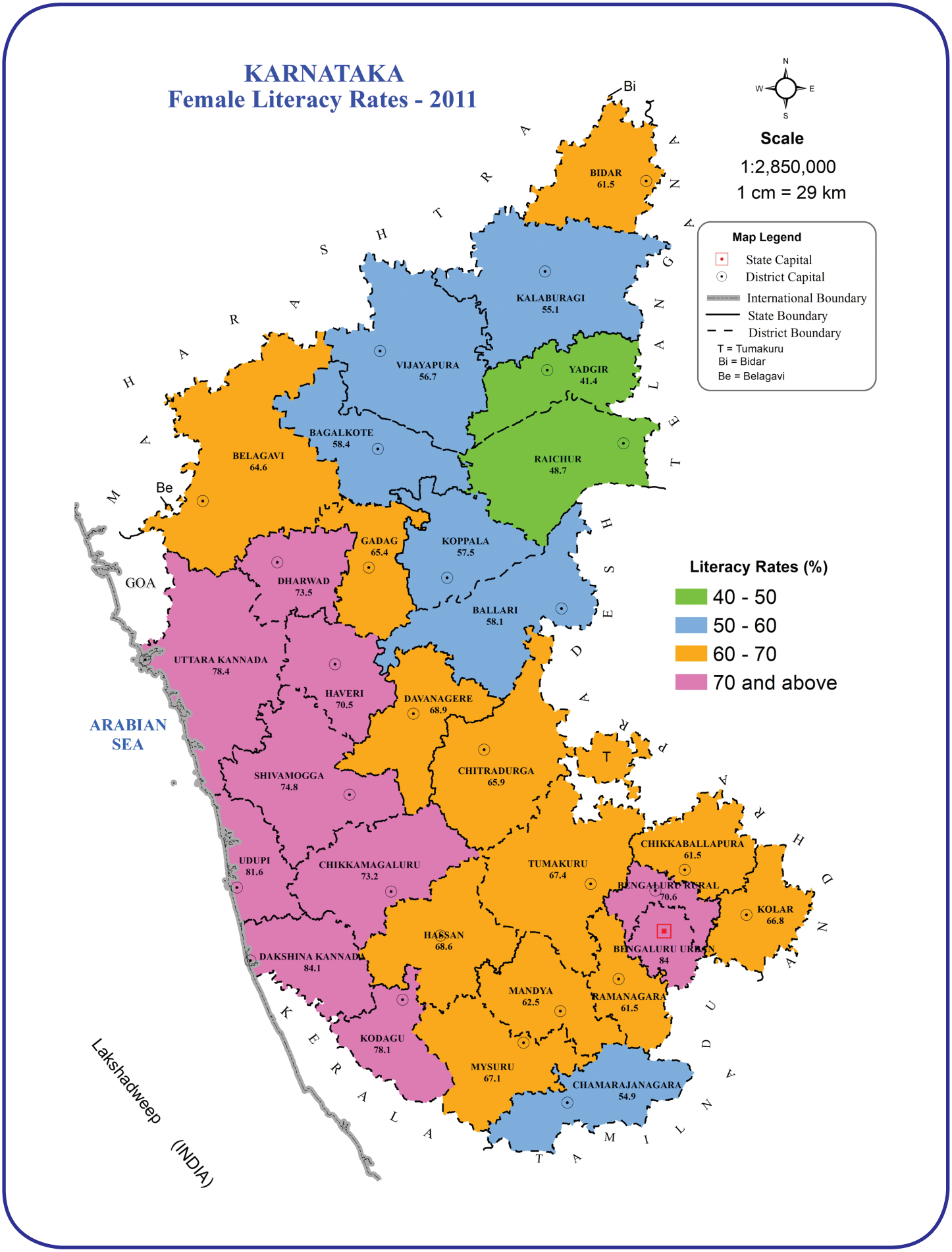
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Female Literacy Rates - 2011
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Table 3.8

DISTRICT-WISE RURAL-URBAN, LITERACY RATES, KARNATAKA, 2011 Census

Year		2001			2011			% Gap
Sl. No	Districts	Total	Rural	Urban	Total	Rural	Urban	
1	Yadgir	39.90	34.88	63.59	51.83	47.05	72.01	24.96
2	Mysuru	63.48	51.84	82.80	72.79	63.29	86.09	22.80
3	Raichur	48.81	42.49	66.86	59.56	54.11	75.12	21.01
4	Kalaburagi	54.34	46.14	71.64	64.85	58.09	78.61	20.52
5	Chamaraja Nagara	50.87	47.24	70.88	61.43	57.95	78.39	20.44
6	Vijayapura	57.01	51.97	74.59	67.15	62.81	81.33	18.52
7	Kolar	65.84	58.88	82.58	74.39	69.08	86.13	17.05
8	Belgavi	64.21	58.85	80.66	73.48	69.28	85.56	16.28
9	Ramanagara	60.71	57.15	74.42	69.22	65.26	81.54	16.28
10	Tumakuru	67.01	63.39	81.80	75.14	71.66	87.32	15.66
11	Hassan	68.63	65.23	84.43	76.07	72.79	88.36	15.57
12	Mandya	61.05	57.74	78.39	70.40	67.78	83.24	15.46
13	Chitradurga	64.65	60.72	81.14	73.71	70.68	85.89	15.21
14	Chikkaballapura	59.24	55.20	76.16	69.76	66.39	81.57	15.18
15	Bidar	60.94	56.71	75.14	70.51	66.73	81.81	15.08
16	Ballari	57.40	50.29	70.24	67.43	61.81	76.63	14.82
17	Bagalkote	57.30	51.23	71.75	68.82	64.20	78.58	14.38
18	Dharwad	71.61	60.77	80.31	80.00	72.09	85.92	13.83
19	Davangere	67.43	62.75	78.08	75.74	71.77	84.02	13.25
20	Koppal	54.10	51.01	69.14	68.09	66.05	78.03	11.98
21	Shivamogga	74.52	69.61	83.60	80.45	76.37	87.79	11.42
22	Chikkamagaluru	72.20	69.59	82.87	79.25	76.95	87.93	10.98
23	Benagaluru Urban	82.96	70.24	84.65	87.67	78.21	88.61	10.40
24	Kodagu	77.99	76.10	87.74	82.61	88.09	91.48	10.39
25	Bengaluru Rural	69.59	67.23	77.71	77.93	75.16	85.37	10.21
26	UttaraKannada	76.60	72.65	86.27	84.06	81.31	90.73	9.42
27	Gadag	66.11	61.55	74.40	75.12	71.86	80.94	9.08
28	Udupi	81.25	79.35	89.47	86.24	83.91	92.13	8.22
29	Haveri	67.79	65.91	74.98	77.40	75.69	83.39	7.70
30	Dahshina Kannada	83.35	79.72	89.10	88.57	85.33	92.12	6.79
	Karnataka State	**66.64**	**59.33**	**80.58**	**75.36**	**68.73**	**85.78**	**17.05**

- There is Yawning gap across rural & Urban Literary ratio in the three districts of HK Region viz., Yadgir, Raichur & Kalaburgi as well as in Mysuru & Charmarajanagara districts.
- The gap is low in districts of coastal Karnataka. There appears on surface an intimate relation between backwardness of districts as well as rural & urban gaps.

Figure 3.1
Literacy Rates in State

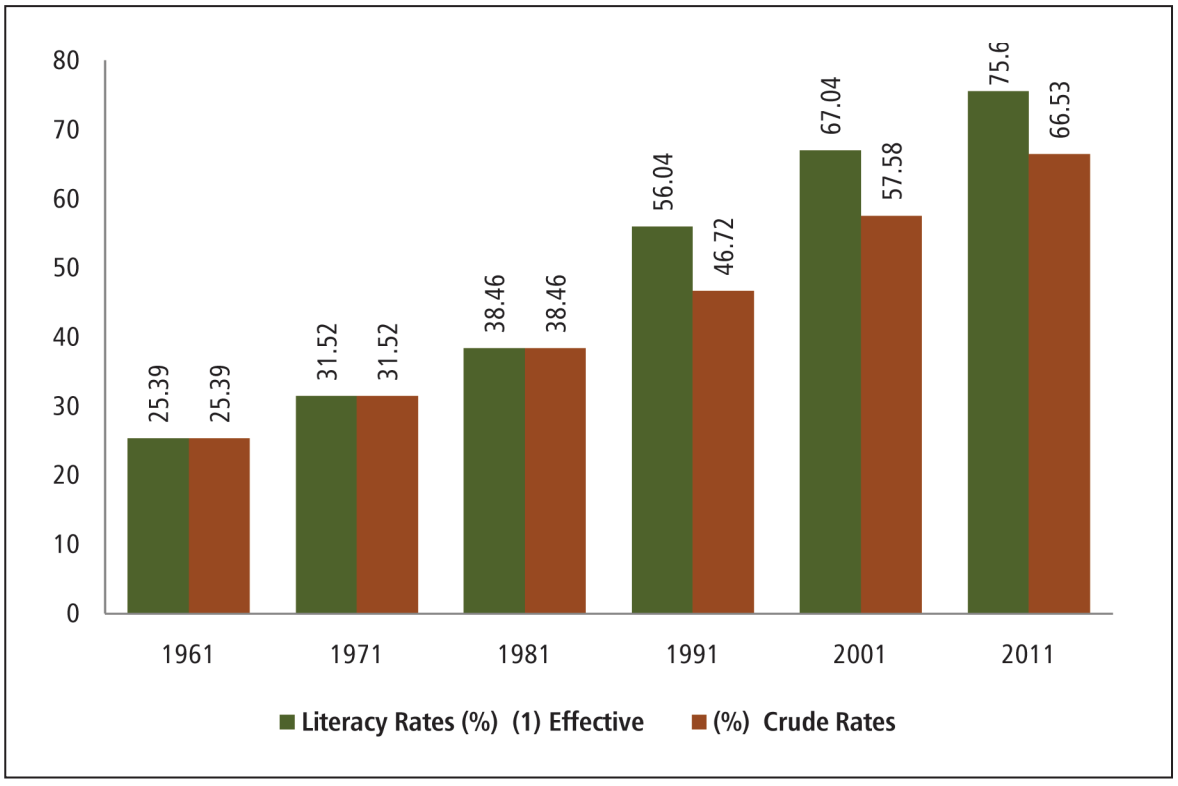


Figure 3.2
Inclusiveness in Literacy Performance In State (Male & Female)

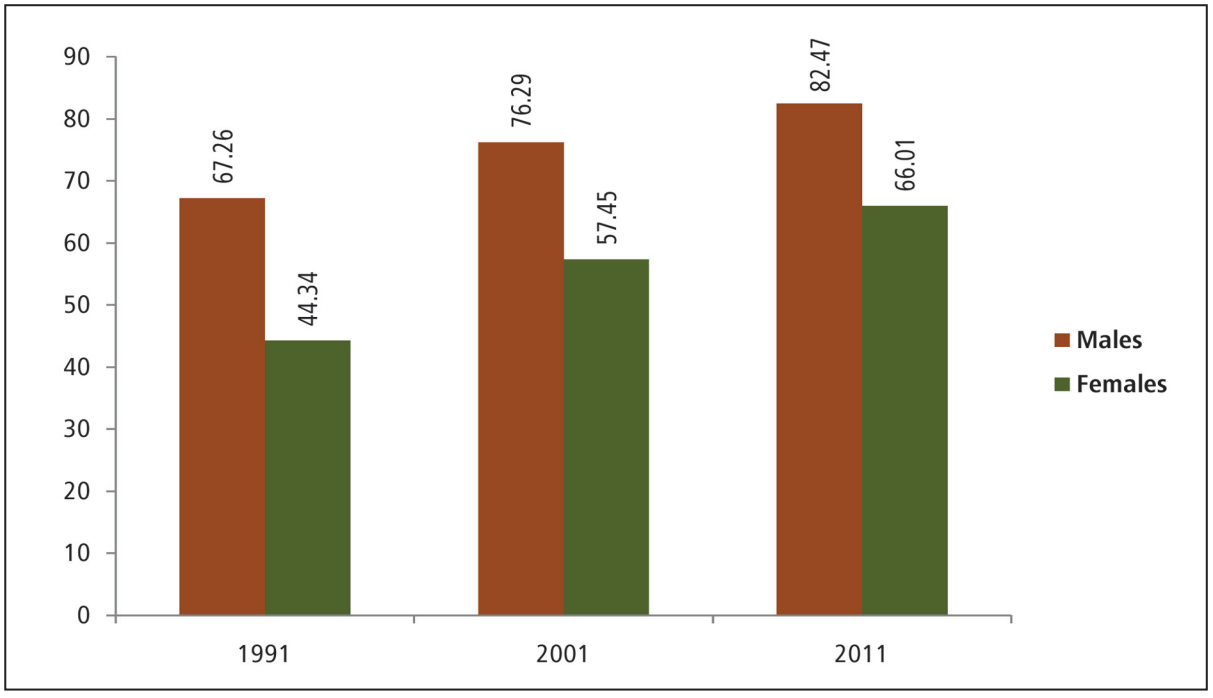


Figure 3.3

Inclusiveness in Literacy Performance in State SCs & Persons (all)

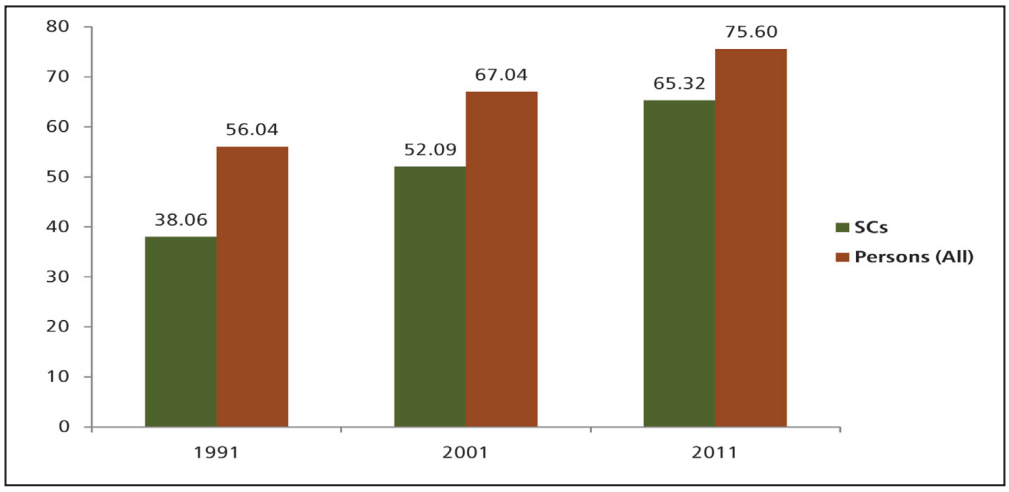
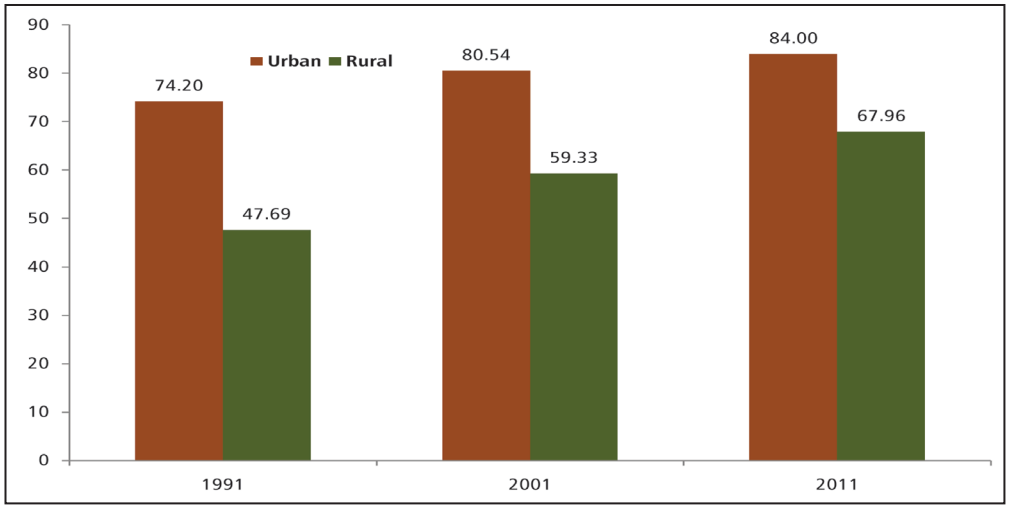


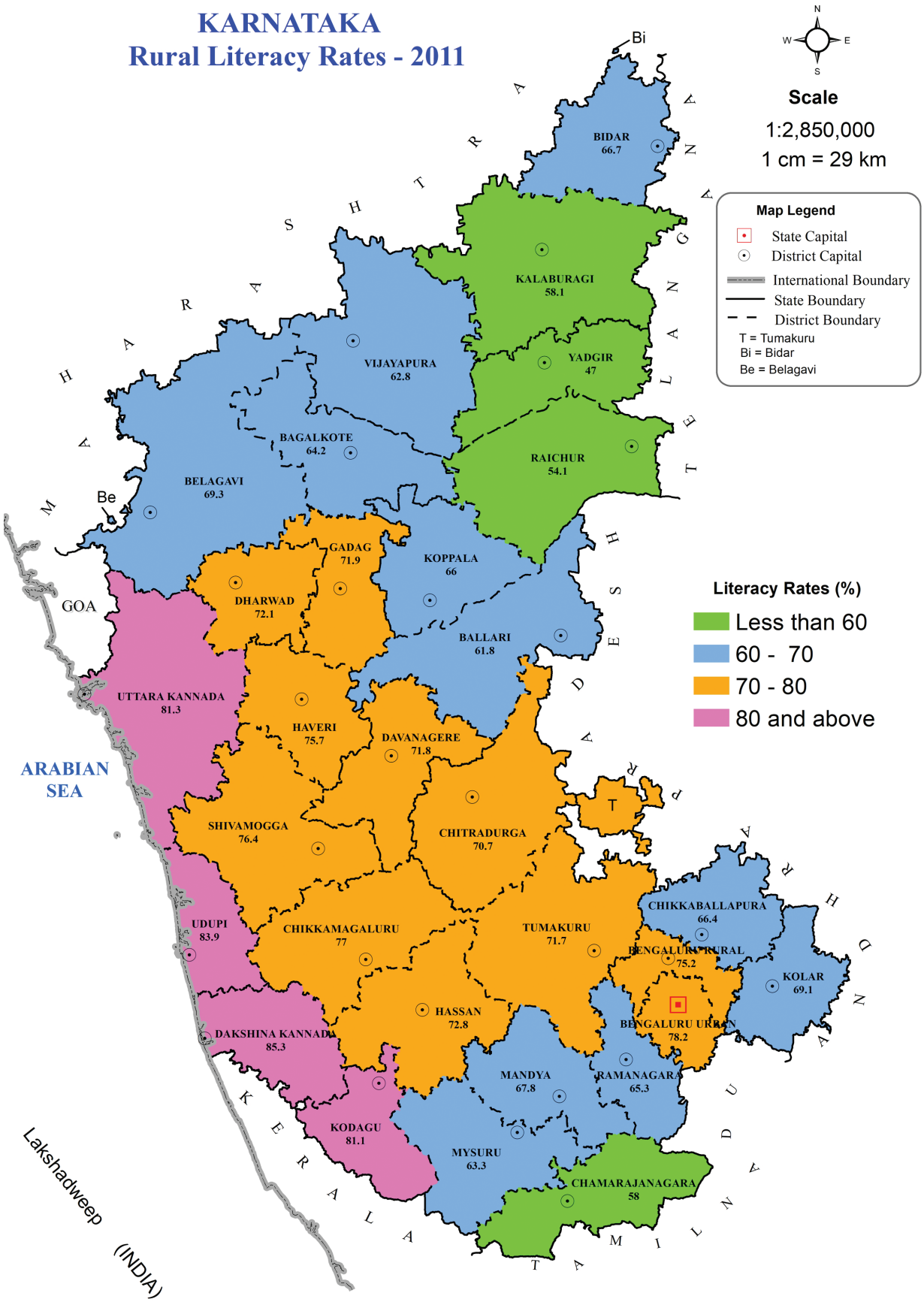
Figure 3.4

Inclusiveness in Literacy Performance in State Rural & Urban



3.1 Insights from Tables on Literacy

- Progress of literacy in the State is very slow. Average annual crude growth rate is around 1 percent in a 50-year period. There is a 25 percent gap for a centum rate (100 percent). Progress of Elementary education and Mortality Rates of Illiterates at higher age brackets may boost the speed of literacy growth rates.
- Male-Female, SC vs All, ST vs All and Urban-Rural Differences in literacy rates even by 2011 reference year are 16.46, 10.28, 13.52and 16.04 percent respectively.
- Differences in rates across various categories of analysis are narrowing over the years. Still, the gaps are considerable. The annual average differential speeds of growth rates of literacy for SCs, STs, and overall population are 1.125%, 1.079% and 0.993% respectively; SC/ST are better in a low equilibrium trap.
- The gap between urban male literacy rates, 2011, (90 percent) and rural female SC literacy rate is around 40 percent – One State, many worlds.
- The Total Illiterates in 2011 in the State was 13.25 million in a population of 61.13 million (Figures for 2001 were 15.23 million out of 52.85 million). 6 districts in the State viz; Bidar, Raichur, Koppal, Ballari, Kalaburagi and Yadgir carry 3.41 million illiterates in a population of 11.29 million. Shares of population and illiterates of the HK region are 18.47 and 25.74 percent respectively.


KARNATAKA
Rural Literacy Rates - 2011
N
W
E
S
Scale
1:2,850,000
1 cm = 29 km
Map Legend
State Capital
District Capital
International Boundary
State Boundary
District Boundary
T = Tumakuru
Bi = Bidar
Be = Belagavi
Literacy Rates (%)
Less than 60
60 - 70
70 - 80
80 and above
BIDAR 66.7
KALABURAGI 58.1
YADGIR 47
VIJAYAPURA 62.8
BAGALKOTE 64.2
RAICHUR 54.1
BELAGAVI 69.3
GADAG 71.9
KOPPALA 66
DHARWAD 72.1
BALLARI 61.8
UTTARA KANNADA 81.3
HAVERI 75.7
DAVANAGERE 71.8
SHIVAMOGGA 76.4
CHITRADURGA 70.7
CHIKKABALLAPURA 66.4
UDUPI 83.9
CHIKKAMAGALURU 77
TUMAKURU 71.7
BENGALURU RURAL 75.2
KOLAR 69.1
HASSAN 72.8
BENGALURU URBAN 78.2
DAKSHINA KANNADA 85.3
MANDYA 67.8
RAMANAGARA 65.3
KODAGU 81.1
MYSURU 63.3
CHAMARAJANAGARA 58
GOA
ARABIAN SEA
Lakshadweep (INDIA)
MAHARASHTRA
TELANGANA
ANDHRA PRADESH
KERALA
TAMIL NADU

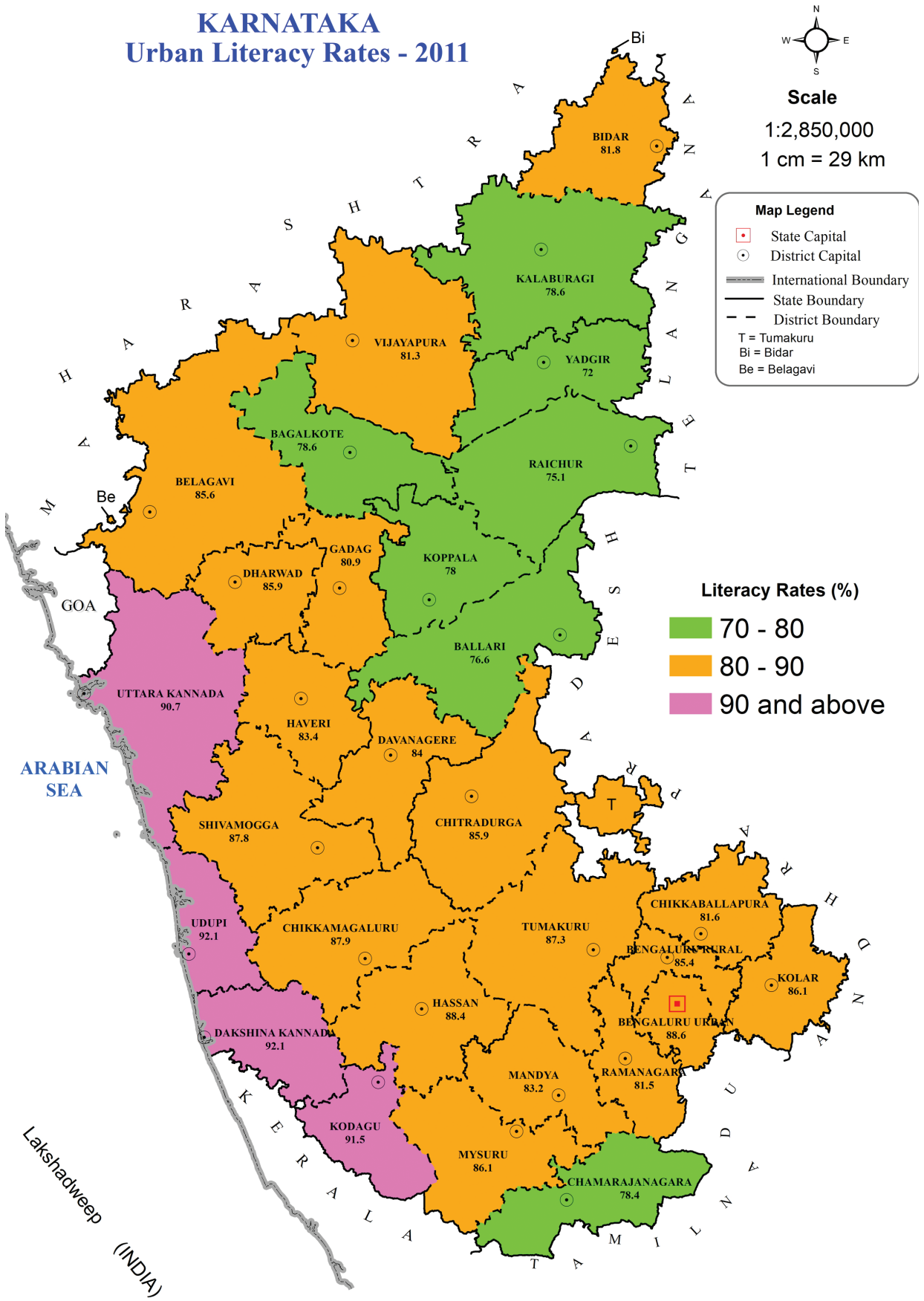

KARNATAKA
Urban Literacy Rates - 2011
N
W
E
S
Scale
1:2,850,000
1 cm = 29 km
Map Legend
State Capital
District Capital
International Boundary
State Boundary
District Boundary
T = Tumakuru
Bi = Bidar
Be = Belagavi
Literacy Rates (%)
70 - 80
80 - 90
90 and above
Bi
Be
BIDAR
81.8
KALABURAGI
78.6
VIJAYAPURA
81.3
YADGIR
72
BAGALKOTE
78.6
RAICHUR
75.1
BELAGAVI
85.6
GADAG
80.9
DHARWAD
85.9
KOPPALA
78
BALLARI
76.6
GOA
UTTARA KANNADA
90.7
HAVERI
83.4
DAVANAGERE
84
ARABIAN
SEA
SHIVAMOGGA
87.8
CHITRADURGA
85.9
T
CHIKKABALLAPURA
81.6
UDUPI
92.1
CHIKKAMAGALURU
87.9
TUMAKURU
87.3
BENGALURU RURAL
85.4
KOLAR
86.1
HASSAN
88.4
BENGALURU URBAN
88.6
DAKSHINA KANNADA
92.1
MANDYA
83.2
RAMANAGARA
81.5
KODAGU
91.5
MYSURU
86.1
CHAMARAJANAGARA
78.4
Lakshadweep
(INDIA)
MAHARASHTRA
TELANGANA
ANDHRA PRADESH
KERALA
TAMILNADU

Table 3.9
Literacy in State – A comparison across South Indian States.

Census	Karnataka	Tamil Nadu	Andhra Pradesh	Kerala	India
1991	56.04	62.66	44.09	89.81	51.63
2001	66.64	73.45	60.47	90.86	64.83
2011	75.60	80.33	67.70	93.91	74.04
Gains 1991 to 2011	19.56	17.67	22.61	4.10	22.41
& 2001 to 2011	8.96	6.88	7.23	3.05	9.21

1. Karnataka State literacy rates are all along, marginally higher than all India rates
2. Higher the base values (1991 values), lower the gain
3. In order of performance among south Indian States Karnataka follows Kerala and Tamil Nadu but ahead of Andhra Pradesh

Table 3.10
Decadal Literacy Rates by Sex, Southern States

States / Years	Andhra Pradesh			Tamil Nadu			Kerala			Karnataka			India		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1991	55.1	32.7	44.1	73.8	51.3	62.7	93.6	86.1	89.8	67.3	44.3	56.0	64.1	39.3	52.2
2001	70.3	50.4	60.5	82.4	64.4	73.5	94.2	87.9	90.9	76.1	56.9	66.6	75.3	53.7	64.8
2011	74.9	58.1	67.0	86.8	73.4	80.1	96.1	92.1	94.0	82.50	68.10	75.4	82.1	65.5	74.0

Table 3.11
Southern States, Male & Female Gaps, 1991, 2001 and 2011 (Percentage)

States / Years	Andhra Pradesh	Tamil Nadu	Kerala	Karnataka	India
1991	22.4	22.5	7.5	23.0	24.8
2001	19.9	18.0	6.3	19.2	21.6
2011	16.8	13.4	4.0	14.4	16.6

- It is observed that The position of Kerala has all along been good and relatively far better than all other States and the national scenario. Position of the three States viz; Tamil Nadu, Andhra Pradesh and Karnataka in regard to Male / Female gaps was similar in 1991. In order of performance in bridging the gaps during 1991 to 2011, Tamil Nadu is better than Karnataka while Karnataka is better than Andhra Pradesh. Andhra Pradesh falls in line with the national scenario. Overall gain in the two decades is low in Kerala because of a higher base value. This is relatively true for both Karnataka and Tamil Nadu.

Table 3.12
Inter-State Differentials in Literacy Rates, by Social Category (Southern States only)

India	1991			2001			2011		
	F	M	T	F	M	T	F	M	T
SC	23.76	49.91	37.41	43.35	63.51	53.52	56.5	75.2	66.1
ST	18.19	40.65	29.60	34.76	59.17	47.10	49.4	68.5	59.0
AP	**F**	**M**	**T**	**F**	**M**	**T**	**F**	**M**	**T**
SC	20.92	41.88	31.59	53.52	63.51	53.52	54.4	70.2	62.3
ST	8.68	25.25	17.16	26.11	47.66	37.04	40.00	58.3	49.1
TN	**F**	**M**	**T**	**F**	**M**	**T**	**F**	**M**	**T**
SC	34.89	58.36	46.74	64.55	82.33	73.47	65.6	80.9	73.3
ST	20.23	35.25	27.89	32.78	50.15	41.53	46.8	61.8	54.3
Kerala	**F**	**M**	**T**	**F**	**M**	**T**	**F**	**M**	**T**
SC	74.31	85.22	79.66	87.86	94.20	90.92	85.1	92.6	88.7
ST	51.07	63.38	57.22	58.11	70.78	64.35	71.1	80.8	75.8
Karnataka	**F**	**M**	**T**	**F**	**M**	**T**	**F**	**M**	**T**
SC	25.95	49.69	38.06	57.45	76.29	67.04	56.6	74.0	65.3
ST	23.57	47.95	36.01	36.57	59.66	48.27	53.0	71.1	62.1

The Follwing observations are made here

- SC Literacy rates have all along been higher than ST rates, everywhere.
- There has been phenomenal growth during 1991 to 2001, the decade of Total Literacy Campaigns, everywhere, across M/F/T. Such a growth is not observed during 2001 to 2011, may be due to declining tempo of the 1990s and also may be due to increasing life-expectancy in higher age-brackets.
- States with lower base rate have gained more during 1991 to 2011, e.g., AP, while States like Kerala and Tamil Nadu, with a higher base rate in 1991 have gained less during the 20-year period. *AP has performed at a lower level than all India performance, every time for both SC and ST.

3.2 Future Strategy

The Department of Mass Education needs to be restructured. It has to complete the residuals in basic literacy just as it needs to diversify its canvass to include concerns of culture health and hygiene, environment, development, legal awareness, family management, women's empowerment and especially digital literacy for the youth (18 to 25 age group).

Observing the in Panchayath-wise literacy rates information from Census 2011, the DME has to concentrate in Hyderabad Karnataka districts viz; Bidar, Kalaburagi, Raichur, Ballari, Yadagir and Koppal who carry 3.37 million (25.43 percent) of a total of 11.29 million literates in the State.

3.3 Early Child-hood care and Education (ECCE)

There are over 29000 revenue habitations, 65000 school access habitations in the State which together carry 64518 (61187 AWCs + 3331 Mini AWCs) Centres, benefitting 57.66 lakh children in 204 ICDS Project, (2014 – 15). These are the government equivalent of Nursery, Kindergarten, Montessori and other forms of poor kid's heaven.

3.3.1 ISSUES The basic issues are 6.5 percent (4169) AWCs are either within or near the elementary school premises. 64.92 percent AWCs own the buildings while 17.78 percent are in rented buildings. The rest have no buildings. They are run in Panchayath buildings (1803), Community Halls (3825), Yuvak/ MahilaMandals (294), while the Rest have alternative arrangements. It is easy to relocate AWCs in rented buildings and set them up in nearby school premises.

Box 3.1
Mass Education and literacy

Six Hyderabad Karnataka Districts carry 25.43 percent of 3.37 million illiterates in 2011. DME has to use Panchayath-wise Literacy Rates data from Census 2011 and strategise its literacy

The other issues are

Distance between AWCs and lower primary schools that affects siblings care, working hours that are inconvenient to the agricultural labour and working class, curriculum that is non-competitive with private sector schools, low incomes and job-status of Anganwadi workers, problems of residence at the place of work to marginal numbers of Anganwadi teachers, are certain abiding concerns in ECCE.'School readiness' from AWCs is low as compared to urban elite pre-schools who teach reading, writing and numeracy at LKG/UKG apart from English communication skills. AWCs are run on scientific principles. The State should adopt the elite, nursery model that fits into a competitive society or alternatively, regulate nursery curriculum across all schools. The second option is difficult and challenging.

3.3.2 Future Strategies

- Relocate ECCE centres in the premises or nearby LPS Government schools.
- Render competitiveness to curriculum.

The Department of Mass Education needs to be restructured. It has to complete the residuals in basic literacy just as it needs to diversify its canvass to include concerns of culture health and hygiene, environment, development, legal awareness, family management, women's empowerment and especially digital literacy for the youth (18 to 25 age group).

3.4 School Education

In School Education the basic concerns are Access– enrolment, retention, transition and completion, in sum, participation ; quality – learning, co-scholastic curriculum, community inclusrve, infrastructure, teacher development ; equity-sex, spatial and social equity ; governance – SDMC and Gram Panchayath Connect, ZP quality of involvement, vision-sharing among educational administrators ; and outcomes of schooling are of significance in school education. Justice and equity are undercurrents in this significance.

3.5 Access to Schooling

Physical access to schools was a problem in 2001 when there were a large number of 'Children without Schools'. An aggressive policy of opening of schools by the government, 'on demand' by communities, led to a State of 'Schools without Children' by the year 2009. Fertility effects in general, improvements in rural roads and transport, marginal growth of private sector schools, migration of people to larger habitations were reasons for the phenomenon of 'small schools'. Provision of qualified / trained teachers even to small schools at the initial stages (early 2000 AD) and infrastructure facilities thereon prevented the merger of schools at later stages. School is a community asset. Communities and their leaders are unwilling to surrender them.

This was not the case in States like UP, MP, HP, Bihar, Rajasthan and Chattisgarh. To meet the similar problems of access, they engaged 'contract' teachers, known as para-teachers, on a 'hire and fire' basis. They followed a low-cost and low-quality policy. Karnataka adopted a better quality, economically inefficient policy. In effect, by 2013-14, there are 858 elementary schools (469 LPS) which are Single Teacher Schools. 469 of 858 schools carry an enrollment which is less than 10 children in 1 to 5 standards. They experience exclusivity in regard to peer-learning, sports and games activities, social life of the school and an educational milieu. In effect, these children lose out on human development concerns. In all, including, multi-teacher schools, there are 1151 schools with less than 10 children where there are 3394 working teachers.

The Right to Education (RTE) norm is 'access' within 1 km for a LPS and within 3km for a HPS. The norm has been more than satisfied in the State. The issue of access is limited to 'Social Access' which refers to inter- caste, inter-religious, integration of children with the school. To some extent, the Mid-Day Meal scheme addresses this concern, though it is not adequate. Private un-aided schools who provide 25 percent RTE quota seats to disadvantaged children do not have Mid-Day Meal scheme.

The Right to Education (RTE) norm is 'access' within 1 km for a LPS and within 3km for a HPS. The norm has been more than satisfied in the State. The issue of access is limited to 'Social Access' which refers to inter- caste, inter-religious, integration of children with the school.

3.6 Future Strategies

- Maintain 1 to 8, 1 to 10, 1 to 12 large schools that are brimming with full, adequate and complete infrastructure and other support facilities.
- Maintain good rural roads. Provide transport to children of smaller habitations along with security.
- Let these large schools be located,

at the end of the spatial continuum, in Gram Panchayath villages.

- Adopt soft but aggressive media and publicity (including folk media) measures to take rural households into confidence to send their wards to schools.
- Provide / utilize (existing) hostel facilities of the Departments of SW / BCM / Others to needy children / families, to girls / SC / ST / Minorities / CWSN / especially at HPS / HS / HSE hse stage. Maintain a hostel at hobli level as a norm.
- Increase the ratio of Urdu medium HPS to LPS and high schools to hps. Current ratios are 22 hs to 100 HPS for Urdu schools while it is 37 is to 100 for Kannada medium schools. Open Urdu medium teacher training institutions for ensuring the supply of Urdu medium teachers.
- Schedule Tribes living in forest areas have problems of access. Access to land to open new schools is a HS stage to hostels. Provide 'tribal identity' teachers at LPS stage by incentivizing the services.

Box 3. 2
Future Strategies

In future, the Education Department has to maintain 1 to 8, 1 to 10 and 1 to 12 large schools at Panchayath / Hobli / Taluq Head Quarters. Maintain good rural roads, transport as well as provide hostel facilities. Small schools are academically un-productive. Peer-learning is a casualty

3.7 RTE Admissions in State

Section 12(c) of the RTE Act mandates 25 percent seats to children of disadvantaged communities in non-minority private unaided and all aided schools. More than one lakh seats are available. The demand for seats is in the range of 1 is to 4 in 2014-15. 85 percent seats were filled up, based on eligibility, in 2014-15. State government reimburses Rs.11848/- per child to these schools, which constitutes, by and large, the unit cost of elementary schooling in the State.

There is a need to monitor the social, emotional and physical inclusiveness of children admitted under RTE in unaided / aided private schools, in future. Civil Society Credible organizations can be co-opted for this purpose.

There is a need to monitor the social, emotional and physical inclusiveness of children admitted under RTE in unaided / aided private schools, in future. Civil Society Credible organizations can be co-opted for this purpose.

3.8 Schooling Facilities in the State

There are 75,849 schools in the State (2014-15), of which 60,912 schools are at the elementary and 14,937 are at the secondary stage. At LPS stage, there are 26,308 and at HPS stage, there are 34,604 schools. Proportions of elementary schools under Department of Education, Social Welfare, Local Body, Aided, Unaided and Central + Other categories are: 64.49, 1.69, 8.97, 24.61 and 0.23 respectively. Rural-urban break-up is 73.08 to 26.92 percent. 84.55 percent of rural elementary schools are with the Department of Education.

Similar proportions at secondary stage are : 30.88, 25.20 and 39.54 percent respectively under DoE, Aided and Un-aided category schools.

Table 3.13
Growth of Schools

Mgmt/ Years	Pvt. Aided		Pvt. Unaided		Government	
	Elementary	Secondary	Elementary	Secondary	Elementary	Secondary
2006-07	2499	2633	8711	4133	45138	3693
2014-15	3041	3765	12764	5906	45011	5180
Difference	542	1132	4053	1773	-127	1487
In(%)	21.68	42.99	46.53	42.90	-0.28	40.26

Observations :

1. Proportion of Private Schools, especially unaided schools has increased substantially
2. Government (all types) schools have grown at the secondary stage
3. 84.55 percent rural elementary schools are with the Department of Education (not in the table).

Table 3.14
Government vs Private Schools in Neighboring States (Elementary)

States: Government and privete school	Karnataka	Tamil Nadu	Andhra Pradesh
2006-07 (%)	80.99	67.61	80.09
2013-14 (%)	75.01	53.16	71.38
(Government) single tr school			
2006-07	7.09	4.40	15.62
2013-14	7.11	2.35	15.62
(Government) Enrolments (lakhs) 2013-14	51.39	41.06	53.81
(Government) PTR (2013-14)	22	18	19

1. Private enterprise is lower in Karnataka State. It is relatively higher in Tamil Nadu
2. Enrolments are comparable in Karnataka and Andhra Pradesh. It is low in Government schools in Tamil Nadu
3. PTR is comparable in all the three States

Private schools grow at a faster pace as they give primacy to English (as a language and as a medium of instruction) as well as provide Computer education. The following table reveals the preference to English medium schools in Karnataka State.

Table 3.15
Growth of English medium schools in State

Year	2006-07	2010-11	2014-15
Total (all groups)			
Elementary	56348	59428	60912
High School	10537	13447	14937
Total (DOE)			
Elementary	44354	45677	44295
High School	3452	4278	4614
English medium			
Elementary	3328	5357	6824
High School	2705	4421	5464
[1to10] Enrolments			
Kannada	82.1	74.1	72.1
English	10.93	18.41	22.57

1. All the management schools grew by (2006 to 2014) 8.09 percent at elementary and by 41.75 percent at secondary (HS) stages. Corresponding growth for English Medium Schools at elementary and Secondary levels are 105 percent and 102 percent respectively.
2. Kannada Medium Enrolments fell (2006 to 2014) by 10 percent while English medium enrolments grew by 11.64 percent. It implies non-kannada regional media of instruction has also declined marginally.

3.9 Insights

- In regard to spread of schools and spatial equity at elementary stage,it is the Government that meets the needs. Commercial designs outweigh concerns of equity in provision of schools, by private sector.
- Private unaided schools have experienced a fast growth in State. Total schools in State has grown from 62,541 in 2005-06 to 75,849 in 2014-15, a net growth of 13,308 schools, 21.27 percent growth in 10 years from base year. The growth in case of schools of the Department of Education is from 46,503 in 2005-06 to 48,809, a net growth of 2306 schools, 4.96 percent. In case of private unaided schools, the growth is from 10,609 in 2005-06 to 18,670 schools in 2014-15, a net growth of 8061 schools, 75.98 percent from base year.Such a phenomenal growth of private unaided schools in the State does not augur well for the interests of public school system. Inclusiveness gets affected.

In regard to spread of schools and spatial equity at elementary stage,it is the Government that meets the needs. Commercial designs outweigh concerns of equity in provision of schools, by private sector.

3.10 Growth of Private schools: Some issues

A significant section of society in the State promotes, supports and patronises private enterprise in school education. Government schools are criticised and rejected for want of quality, English medium education, fostered by private schools is in demand. What is the issue in such a demand and advocacy.

The issue is one of a choice across 'Market' and the 'State' in provision of basic public services such as elementary education and health. Even liberal, market supportive economists, right from Adam Smith, J.S.Mill and quite recently, Joseph Stiglitz and A K Sen have strongly voted for public provision of basic services.

The issue is one of a choice across 'Market' and the 'State' in provision of basic public services such as elementary education and health. Leftist, Marxist intellectuals and economists have always been votaries of public education. There is no need for their reference. Even liberal, market supportive economists, right from Adam Smith, J.S.Mill and quite recently, Joseph Stiglitz and A K Sen have strongly voted for public provision of basic services. Inclusiveness, human development, justice and equity get their due in a State organised, governed 'good quality' basic education. As of now, private, self-financing institutions are believed to be the levers of social, economic and political mobility. However,, they falter on inclusiveness, even the 25 percent RTE quota of seats in private schools is only a diluted shock absorber. The solution lies in the provision of a given quality of basic education from 1 to 12 standards of schooling. This is a tall order. Analysis of expenditures on school education has revealed that as of now, the State governments and the union government (0.259 percent of GDP in 2014 – 15) hardly spent 3.0 percent of GDP. Quality schooling requires doubling of this level of expenditure as specified by National Policy of Education (NPE), 1986 and also as per various estimates for quality schooling. A strong, self-reliant public education that ensures inclusiveness in human development deserves this level of expenditure. Will the State in India/ Karnataka State measure up to this challenge?

Next issue is one of preference for English medium school education. This is not about English as a language of study from standard 1. It is a misconception to consider that English medium is the ideal route to excel in a globally competitive society. The medium of instruction in Japan, Russia and the European Countries like France, Germany, Holland and Switzerland is their regional / National language. The issue is one of 'quality' and not 'medium'. Quality schooling includes digital learning, connectivity, self-learning facilitation, promotion of creativity, innovation, diversity and flexibility in curriculum. Ensuring such a quality brings inclusiveness and guarantees human development across all sections of society. Will there be a game-changer in school governance and public education in the State?

3.11 STUDENT-FORCE (Participation)

- Enrolments, Sex-wise and Social category-wise enrolments, retention of children, completion rates, transition rates, attainment levels constitute the basic information on students. Here is an update.
- Enrolments in general, across all managements, are falling over the years even though 'non-enrolment' disappeared since 2006-07 (all

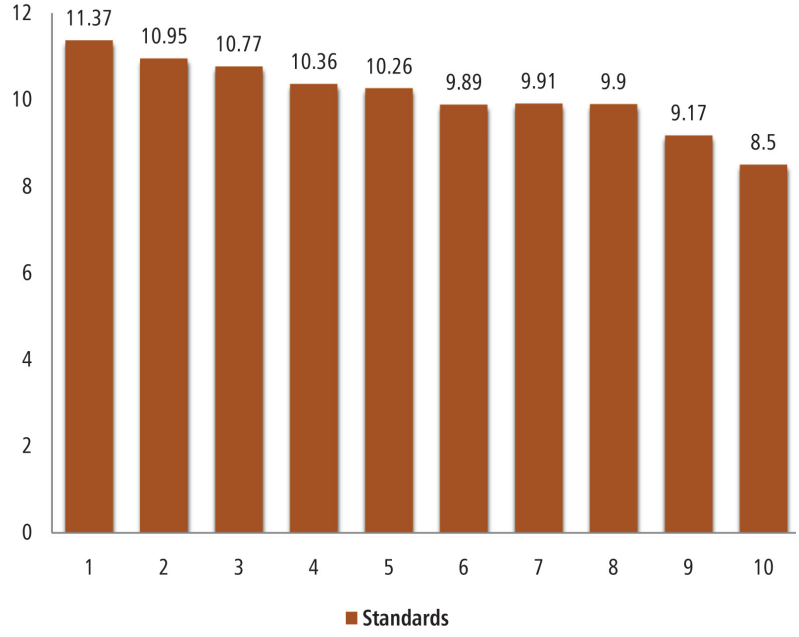
children are enrolled to school). The fall is from 11.90 lakh to 11.37 lakhs (I standard) 57.24 lakhs to 53.73 lakhs (I to v), 29.96 lakhs to 29.72 lakhs (VI to VIII), 102.37 lakhs to 101.12lakhs(I to X), during the reference years 2006-07 to 2014-15.

- Loss of enrolments is quite high for DoE schools, while gain is the highest for private unaided schools.
- Gender parity in enrolments, has been appreciating every year. The GPI has gone up from 0.93 in 2007-08 to 1.00 in 2012-13 (State plan of SSA, 2015-16).
- The GER in State (DISE, 2014-15) is 102.36 (1 to 5), 90.47 (6 to 8) and 75.34 (9 to 10) while the NER in State is 93.56 (1 to 5), 81.70 (6 to 8) and 53.33 (9 to 10) respectively. Enrolment of under-aged and over-aged children is netted out in NER. During 2013-14 there were 8.58 percent (Primary) and 9.72 percent (upper primary) students outside 6 to 14 range in elementary schools (State plan SSA, 2015-16)
- Enrolments experienced a steep fall after 7th standard. A snapshot of enrolments in the State down the line from 1st to 10th standards would reveal this phenomenon, which is observed every year

Gender parity in enrolments, has been appreciating every year. The GPI has gone up from 0.93 in 2007-08 to 1.00 in 2012-13 (State plan of SSA, 2015-16).

TABLE 3.16 & Figure 3.5
ENROLMENT OF STUDENTS (2014-15)

ENROLMENTS (2014-15)	
Stds.	(In lakhs)
I	11.37
II	10.95
III	10.77
IV	10.36
V	10.26
VI	9.89
VII	9.91
VIII	9.90
IX	9.17
X	8.50

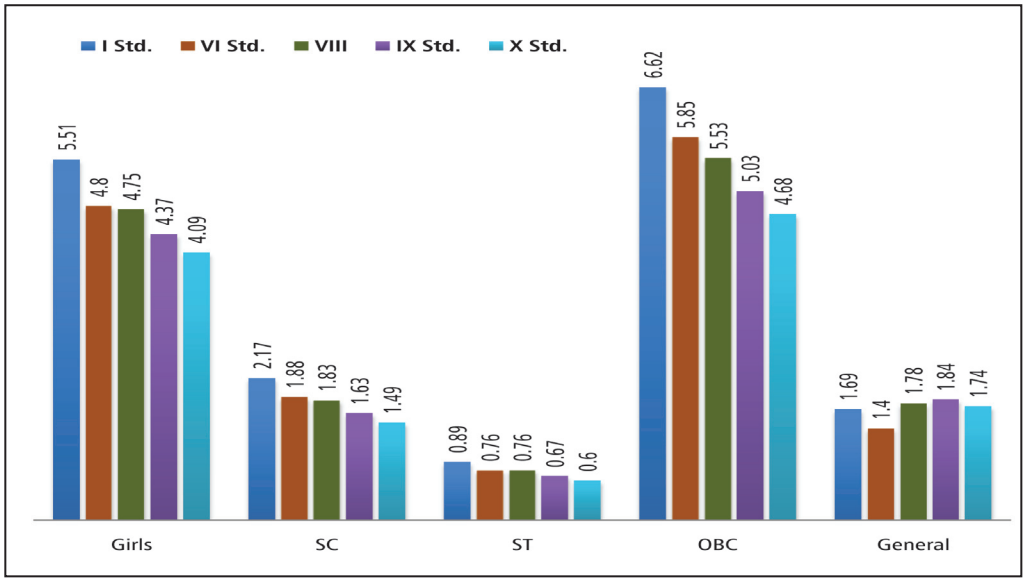


The rates of fall in enrolments are steeper in case of girls, SC, ST and OBC categories.

Table 3.17
Enrolments girls in Primary Schools - SC, ST, OBC and General Categories (in lakhs) (2013-14, DISE)

	Girls	SC	ST	OBC	General	Total
I Std.	5.51	2.17	0.89	6.62	1.69	11.37
VI Std.	4.80	1.88	0.76	5.85	1.40	9.89
VIII	4.75	1.83	0.76	5.53	1.78	9.90
IX Std.	4.37	1.63	0.67	5.03	1.84	9.17
X Std.	4.09	1.49	0.60	4.68	1.74	8.50

Figure 3. 6
Cross-sectional Data, Completion Rates, DISE 2013-14



Completion rates, even going by cross-sectional data (which is crude), for Girls, SC, ST, OBC, General categories and overall total students are 69.10, 61.76,57.61, 65.43, 100.00 and 69.49 percent respectively.

LPS is a stage (1 to 5), significant chunk of children do not go to HPS schools which will be at a distance.By and large, the transition losses are due to 'CLD' – Cumulative Learning Deficit syndrome. Children do not learn the basics, find the syllabus more and more difficult as they go up the ladder.

- Completion rates, even going by cross-sectional data (which is crude), for Girls, SC, ST, OBC, General categories and overall total students are 69.10, 61.76,57.61, 65.43, 100.00 and 69.49 percent respectively.
- Promotion rate will not merit analysis as after RTE Act, 2009 (adopted in the State in 2010) there is a policy of 'No Detention', upto 8th standard.
- Reliable drop-out rates (DoR) are not available for the State (true of retention rates). This low reliability is an all India phenomenon. Selected Educational Statistics (SES) / MHRD is one set of data.

It adopts True Cohort analysis. DISE / NUEPA / MHRD is another set of data. It uses year-to-year cross-sectional data. For example, SES, 2009-10, had reported 1 to 8 drop-out rate for State as 25.86 percent. The same year, DISE had reported a drop-out rate of 7.11 percent. This limitation needs to be in view while accepting DoR for the State, based on DISE. Two years cross-sectional DoR data for the State is as follows.

Box 3.3
Fall in Enrolments

Enrolments experience a steep fall after the 7th standard. The fall is sharper in case of girls, SC, ST, Minorities and OBC categories.

Table 3.18
Drop out Rates and Retention Rates

Variable	Stages	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
DoR	Primary	-	-	-	-	2.56	2.96	2.37
	Upper Primary	-	-	-	-	5.40	5.05	2.54
Others	Primary	-	-	-	93.75	92.31	93.15	-
Retention Rates	Upper Primary	88.40	91.90	94.53	93.32	92.87	91.58	-

Source : State plan for SSA, 2015-16. Retention Rate is not an obverse of D.o.R. Retention Rate recognizes Repetition Rates and Re-Entry Rates.

- Transition Losses are reported to be (DISE 2014-15) 3.05 and 1.88 respectively from 5th to 6th and 7th to 8th standards. Losses are highest in case of Muslims and ST Children.

- Attendance to schools by students and attention in classroom are concerns of significance. Learning outcomes depend on these behaviours.Irregular attendance leads to drop out behaviour.

  Student Attendance used to be quite low at around 60 percent a few years ago [R1]. During recent years attendance has picked up. As per the latest available study by SSA, a routine activity under QMT programme (Quality Monitoring Tool / NCERT / MHRD), attendance in 2012-13 in schools of the State was over 95 percent. This was validated by a research agency [R2] which observed less than 2 percent negative variation.

- In an enumeration study of schools (all schools of DoE in State), a first-ever, highly significant study reported 87.5 percent students Attendance [R3]. Concerns were expressed about districts of North Karnataka.

  The State Government has nominated the Education Co-ordinators of the Department at cluster level as 'Attendance Officers' since, 2013. One week absence is tolerated. Beyond this

Student Attendance used to be quite low at around 60 percent a few years ago [R1]. During recent years attendance has picked up. As per the latest available study by SSA, a routine activity under QMT programme (Quality Monitoring Tool / NCERT / MHRD), attendance in 2012-13 in schools of the State was over 95 percent.

period, the State Government becomes active in retrieving the attendance of students.

- The Mean Level of Education (MLE as estimated by Lee and Barro for 15+ population), in 2012-13, was 5.2 years. It must be within 6 years for Karnataka State. India is bracketed with Pakistan, Bangladesh, Afghanistan and Nepal in this score. Sri lanka and China are better with a score which is more than 8. The position would be brighter in future owing to the waning away of a large chunk of non-literate elderly population, success of SSA and RMSA.

- Education Development Index: This is a rating and an index of quality that comprises scores on Access, Infrastructure, Teachers and outcomes. It indicates relative performance across States and UTs. It is generated by NUEPA using DISE. Karnataka; performance / Composite Index score of Primary and Upper Primary and for all management schools is given here.

Box 3.4
Education Development Index

Year	2005-06	2007-08	2008-09	2009-10	2010-11	2013-14
EDI score	0.674	0.743	0.708	0.656	0.732	0.710
Rank	6	10	12	16	15	5

3.12a Loss of Enrolments: A Cohort Analysis

Table 3.19
Enrolments and Attrition, 2005-06 to 2014-15 A cohort Analysis

Year	Standard	Enrolments (In lakhs)	Attrition (In lakhs)	Cummulative attrition (in lakhs)	Cummulative attrition from I std (%)
2005-06	I	12.19	-	-	-
2006-07	II	11.72	0.47	-	3.86
2007-08	III	11.22	0.50	0.97	7.96
2008-09	IV	11.05	0.17	1.14	9.35
2009-10	V	10.84	0.21	1.35	11.07
2010-11	VI	10.42	0.42	1.77	14.52
2011-12	VII	10.25	0.17	1.94	15.91
2012-13	VIII	9.68	0.57	2.51	20.59
2013-14	IX	8.96	0.72	3.23	26.50
2014-15	X	8.50	0.46	3.69	30.27

- In the table The Cumulative attrition rates are given in a Cohort from 2005-06 to 2014-15 from I to X standards. Attrition rate after V standard is 14.52 percent, after VII, it is 20.59 percent and by X, it is 30.27 percent. Effects of multiple enrolments (one child enrolled in more than one school), repeaters and veracity of data across the years are not considered here for want of data.

Figure 3.7
Cohort Attrition Graph I^{std} to X^{std} 2005-06 to 2014-15

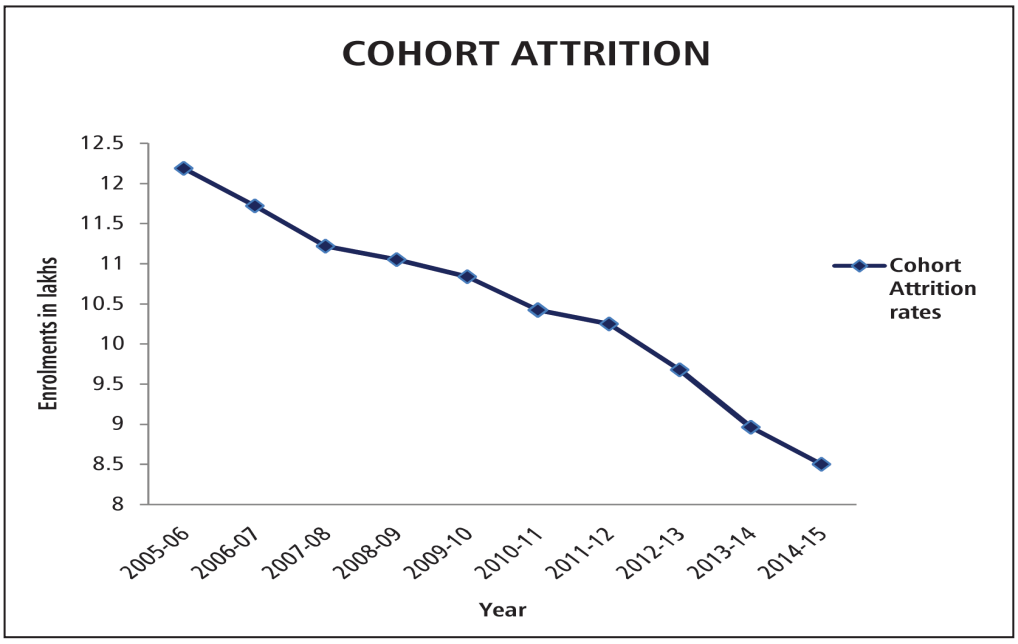


Table 3.20
IStd Enrolments over the years

Year	Standard	Enrolments (In lakhs)	Increase/ Decrease (Number in lakhs)	Change in %
2005-06	I	12.19	-	-
2006-07	I	11.90	-0.29	-2.38
2007-08	I	11.64	-0.26	-2.18
2008-09	I	11.39	-0.25	-2.15
2009-10	I	11.07	-0.32	-2.81
2010-11	I	11.19	+0.12	+1.08
2011-12	I	11.19	0	0
2012-13	I	11.48	+0.29	+2.59
2013-14	I	11.34	-0.14	-1.21
2014-15	I	11.37	+0.03	+0.26

Note: I std enrolment across 2005-06 to 2014-15 are given here. There is steady reduction from 2005-06 upto 2009-10, may be due to fertility effects. 2009-10 was the year of adoption of RTE Act. 2010-11 to 2011-12 experienced marginal gains. Intensive efforts were made to bring out-of-school children to schools, during this period. The tempo must have been slowed down thereafter.

Caution: Again factors of multiple enrolments and repetition are not accounted in this analysis.

Mid-day meals to all children from 1st to 10th standard in all government and private aided schools, AkshayaPatra Foundation, AdamyaChetnana and a few religious mathas are also involved. There are 94.92 lakh beneficiaries across 55882 schools.

3.12 b Government Initiatives for Inclusive Universal Elemenery Education (UEE)

Several incentives are being given by the Government of Karnataka for Universal Elemenery Education (UEE). Some of the them like uniforms date back to 1961. As of now, the following incentives are in operation.

1. Free text books from 1st to 10th standards.
2. Free uniforms; 2 sets are given to children from 1st to 8th standards.
3. Work books for textbooks from 1st to 8th standards (discontinued now).
4. School bags for SC/ST from 5th to 8th standards.
5. Notebooks from 5th to 8th standards.
6. Bicycles to 8th standard children.
7. Mid-day meals to all children from 1st to 10th standard in all government and private aided schools, Vitamin 'A' tablets, folic acid tablets and De-worming tablets are given along with MDM regularly. There is NGO participation in organisation of MDM. AkshayaPatra Foundation, AdamyaChetnana and a few religious mathas are also involved. There are 94.92 lakh beneficiaries across 55882 schools.
8. KsheeraBhagya – Distribution of milk to children from Anganwadi and standards I to X of government and private aided schools, on three days of a week. More than 100 lakh children are covered under KsheeraBhagya. There is convergence across RDPR, Revenue, KMF, FCS, Health and Family welfare, WCD and Department of Education in organization of MDM and KsheeraBhagya schemes.In HK districts except Bellary, egg/milk is given for 3 days and milk is given for another 3 days, for AWC kids. There are over 10 Million beneficiaries across Anganwadies (4 million), elementary and secondary schools.
9. Under 'VidyaSiri' Scheme, minority and OBC poor children are given Rs.1500/- per month scholarship, if they do not get hostel facilities (Post-Matric Courses).

3.13 Teacher Force

The State Government has been steady in maintaining a comparable level of teacher force.

Table 3.21
Elementary Teachers Sanctioned and Working

		Department. of Education	LB + Department. of Social Welfare	Pvt. Aided
No. of teachers 2006-07	Sanctioned	187788	3013	19387
	Working	171473	2547	16031
	Gap	16315	466	3356
	% Gap	8.69	15.47	17.31
2013-14	Sanctioned	2,04,035	4846	20746
	Working	1,79,054	2723	17194
	Gap	25981	2123	3552
	% Gap	12.73	43.81	17.12
% Gap Secondary 2013-14		1.38	52.13	12.77
2013-14 (Working Teachers)		11150	1045	6756

- Government pays salaries to 2,09,002 teachers every year. Are so many teachers required? Why does the Government sanction teachers regularly even while keeping a gap across Sanctioned and Working teachers? A Comparative picture of Pupil-Teacher Ratios across managements reveals that the private sector works perhaps with greater efficiency, with lower force of teachers.

Table 3.22
2013-14 Teacher-Pupil Ratios across Managements

Managements →	DoE	SW + LB	Aided (Pvt)	Pvt. Unaided	Central + Others	State
PTR →	23.03	32.36	42.42	31.81	51.63	27.03

Source : ANR, SSA, 2013-14 [R4]

(1) small schools contribute to lower PTR in DoE.

(2) RTE norm is 1: 30 at LPS and 1 : 35 at HPS

- Inspite of a State level average of 23.03 PTR in Government (DoE), a number of schools at ground level face teacher shortage. 13 districts enjoy PTR of less than 20, while it is lowest in Chikkamagalur district:1 teacher for every 13 children (the phenomenon not even in the US or Europe), 6.74 percent schools in State experience 'adverse' PTR (violate RTE A norm). It is 33.62 percent adversity in Yadagiri district. 7 districts experience higher than 10 percent adversity. Rational deployment and strict enforcements of such deployments is the answer to this problem.

3.14 Teacher Quality

Teachers are recruited through competitive tests since 2003 in the State. They are provided both Induction and In-service training. In-service training has also been systematized to oversee that no teacher misses any training and teachers do not absent from school-work on the pretext of training. However, the qualifications and training of Government school teachers (read as Department of Education) does not conform to RTE A expectations or match with that of Central school teachers. The RTE expects higher primary teachers to be graduates with D.Ed while that of secondary schools to be post-graduates with B.Ed, 38 percent of elementary teachers, at the moment, are Arts graduates and 13 percent are Science graduates.

Teachers are recruited through competitive tests since 2003 in the State. They are provided both Induction and In-service training. In-service training has also been systematized to oversee that no teacher misses any training and teachers do not absent from school-work on the pretext of training.

In future, it is ideal to advertise for graduates with appropriate training in recruitment of teachers for elementary and secondary stages. At the same time, teachers at higher secondary stage should be drawn from among those who have completed sandwich training courses to teach students 16 to 18 years.

- There are 4120 clusters which network 45000 + elementary schools and manned by Cluster Resource Co-ordinators. The CRC organizes cluster sharing meetings on a regular basis to cover, minimum 08 in a year. These meetings need to be more and more systematized, by focusing on teaching-learning issues, treatment of slow learners, facilitation of learning for CWSN and concerns of digital learning. Similar cluster sharing subject teachers meeting should be organized and systematized at the secondary stage with the utilization of the existing Block Resource Centres and DIETs. A secondary education wing, large enough, should be located in the DIET.

  School- based in- serviceTraining by teams of subject specialists on a peripatetic mode should be adopted.

Box 3.5
Pupil teacher ratio

In-spite of a State level average of 23.03 Pupil teacher ratio in schools of the DoE, a number of schools at ground level face teacher shortage. Rational deployment and strict enforcement is the answer to this problem. Pulls and pressures should be kept out of schooling dynamics.

3.15 Teacher Absenteeism

Regularity of teachers in work promotes retention and learning among children. A study in 2009 by K.B.Praveen [R4] reported that teachers do not find adequate time to teach / facilitate learners as they have to attend to organization of Mid-Day Meals, co-curricular activities and attend to non-educational duties [Research Abstracts, 2006 to 2012, SSA]. [R5] study by Public Affairs Centre, 2009, Bengaluru [Research Abstract, SSA] reported that on the days of their surprise visits, 92 percent teachers were present in school.

A State-wide study by Catalyst Management Services in 2010 on Teacher Absenteeism [R6] SSA,

Research Abstract reported that 84 percent teachers were present in school during their repeated unannounced visits. Only one percent teachers are under unauthorized absence, Teachers' average attendance as per 'records' is 87 percent in Aided schools and 78 percent in Government schools. The attendance of Females is better than that of male teachers, STs attendance is better than that of SCs and Muslims, and of single teacher schools are better than multi-teacher schools in teachers regularity to school.

3.16: Quality of Schooling:

For various reasons, both academic and meta-academic, quality of learning in Government schools (read as DoE) is perceived to be 'poor'. Base-line Assessment survey (BAS / SSA) test results, Annual Survey of Education Reports (ASER), Shalegagi NavuNivu (Departmental Survey), NCERT surveys reveal this in a converging way.

- ASER reports that children of 5th standard cannot read a simple passage and children of 7th standard fail to do four fundamental operations, specifically division. [cf : ASER Reports since 2009]
- BAS has been completed by SSA for 2/4/6 ; 3/5/7 ; and 9th standard in various years since 2009-10. BAS are large scale surveys sponsored by SSA and organized by KSQAAC. Overall performance across all standards is well within a range of 52 to 58 percent, on an average, across standards. Inter – district variations are there wherein districts of North Karnataka fare badly. An alternative Statement would be, 42 to 48 percent students could not pass. Angle of vision matters 3rd> 5th> 7th. Females > Males. Average for 9th Std. is 48 to 52 percent.
- Shalegagi Navu Nivu tests (DoE / SSA, 2011-12) reported 75.03 percent performance in learning, across LPS / HPS / HS stages, crude average. 17 districts were below State average while Davanagere and Chitradurga districts record the lowest performance.
- Section 29 of the RTE Act defines the framework of quality of a school. Activity / Discovery based learning, compliance to Constitutional values and concerns for equity and justice in schooling are the contours of this framework. Schools in the State need to restructure teaching-learning process in this direction. All teaching is facilitation and motivation. Emphasis should shift towards self-learning by students. The non-scholastic curriculum is a platform for realization of Constitutional values. Classrooms organization and co-curriculum needs to be democratized to address individual choices and individual differences.

Box 3.6
Quality of Schooling-1

Quality of learning in Government schools is 'poor'. Schools need to restructure teaching-learning process so as to facilitate 'self-learning' by students as per Section 29 of the RTE Act.

large scale surveys sponsored by SSA and organized by KSQAAC. Overall performance across all standards is well within a range of 52 to 58 percent, on an average, across standards. Inter – district variations are there wherein districts of North Karnataka fare badly.

Teaching should be understood as facilitation and motivation, Nali-Kali at lower levels and activity-based learning plus active learning Methodology (ALM as in Tamil Nadu) should be strengthened.

School clubs are a platform for peer learning and socialization. Variety of clubs (Science, Mathematics, Environment, Adventure, Literary, Scouts and Guides, etc) were listed for incidence in schools. Shalegagi Navu Nivu recorded 55.54 percent average score on school clubs. Nine districts recorded < 50 percent score.

- Following ASER / BAS / NCERT reports, the DoE launched a Abhiyan (Movement) for basic reading, writing and numeracy skills in schools of the State (Spashta Odu, Shuddha Barah, Sarala Ganitha), in 2009-10. The movement lost its momentum after two years. This was a good move that suffered from sustainability problems.
- There is a need to promote constructivist classrooms as visualised under section 29 of the RTE Act. Teaching should be understood as facilitation and motivation, self learning, Discovery learning, Experimentation, Project-work, Field Trips, Laboratory Techniques and Virtual learning opportunities should be promoted. Nali-Kali at lower levels and activity-based learning plus active learning Methodology (ALM as in Tamil Nadu) should be strengthened. Curricular load should be pruned.
- Assessment procedures should be continuous and comprehensive. Variety of co-scholastic activities to individual differences should be organized, assesed and documented.
- Reading corners were set up in schools during 2013-14 in all classrooms, by and large to promote reading skills, interests and habits. This programme needs stability and momentum. Library grant to every government school was given in 2010-2011. There is a need to provide an annual library renewal grant.
- Computer laboratories are there in all secondary schools. Hardly 22 percent HPS possess such labs. There is a need for 100 percent coverage of HPS. Computer literacy is not adequate. Computer learning that includes surfing for information, project management and 'graphics' skills should be promoted.

BOX 3. 7
Quality of Schooling-2

There is an opinion in significant circles that the curricular load, especially in science and mathematics is quite heavy, as substantial unwanted content is dumped on children. Curricular needs and capacity of students need to be in view while pruning the curriculum.

NTS and NMMS : National Talent Search (NTS) and National Merit-Cum- Means (NMMS) scholarships : performance of Karnataka is given here.

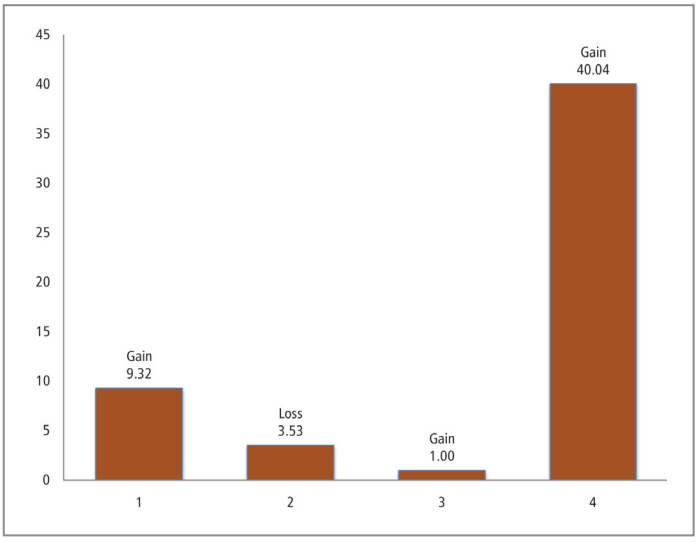
Karnataka received a quota of 881 NTS scholarships between 2009-10 to 2012-13 (General Merit -656 + SC -131 + ST – 67 + 27 CWSN). All the scholarships were used as 917 students passed the tests. Utilization was 100 percent every year across GM, SC, ST and CWSN.

Karnataka received 22136 NMMS scholarships from 2009-10 to 2012-13. Only 62.81 percent were utilized. GM – 57.28%, SC – 81.35% and ST-100%. Thus SCs and poor among GM need special coaching arrangements for NMMS scholastic tests.

3.17 Secondary Education

- The first and foremost issue in secondary education is that of the legal status of 8th std. as per RTE Act mandates. The State has carried on with 05+02+03+02 structure. RTE Act advocates 05+03+02+02 structure. Up-gradation of 20 percent HPS 1 to 7 to include 8th standard has met with several problems. All the problems in restructuring are 'logistic' in nature. Recommendations of a committee on structural reorganization, set up by the Government is waiting approval since 2012-13. [N4]. Secondary and Higher Secondary Education need to be merged under a single Board of Management.
- Secondary education is by and large managed by private unaided (39.54 percent), Aided (25.21 percent) and the DoE (30.89 percent), There are a total of 14,937 secondary schools, in 2014-15.

Figure 3.8
Secondary enrolment Gains by 2014-15



Secondary education is by and large managed by private unaided (39.54 percent), Aided (25.21 percent) and the DoE (30.89 percent), There are a total of 14,937 secondary schools, in 2014-15.

Table 3.23
Secondary Education Enrolments (in lakhs)

8 to 10 Stds	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2008-09 to 2014-15 % Gain/ Loss	2014-15	% Gain/ Loss
All Managements	25.22	25.78	26.04	26.07	26.35	26.47	2.35	27.57	+9.32
Education	11.06	11.03	10.63	10.23	10.42	10.33	-0.39	10.67	-3.53
Aided	8.00	8.26	8.34	8.10	7.99	7.81	0.08	8.08	+1.00
Unaided	5.62	5.91	6.40	6.96	7.09	7.41	2.25	7.87	40.04

- Enrolments have picked up from 25.22 lakhs in 2008-09 (8th to 10th, High Schools) to 27.57 lakhs in 2014-15, a gain of 2.35 lakhs in 7 years. Percentage gains/ losses across managements, are+9.32, -3.53, +1.00, +40.04 under All Managements, Department of Education, Aided and Private unaided. Trends are very clear. RMSA has not been able to break the Jinx of preference to unaided schools.

- The Department of Social Welfare manages 566 schools (2014-15) which are schools from 6th to 10th standard with hostel facility. A study of Morarji Desai Residential Schools (MDR) sponsored by DSW and completed by Institute of Social Studies Trust (ISS), Bangalore in 2012-13 [R7] revealed several concerns. Competition of MDR schools with DoE schools for enrolment, dependence on contract teachers, heavy attrition of students (42 percent overall), sub-optimal capacity utilization, unfamiliarity of teachers with latest trends in school education, unfamiliarity with digital learning transactions even though possessing computer laboratories, absence of teacher capacity building structures are the highlights of these concerns.

Enrolments have picked up from 25.22 lakhs in 2008-09 (8th to 10th, High Schools) to 27.57 lakhs in 2014-15, a gain of 2.35 lakhs in 7 years.

3. 18 Performance of students in Public Examination

- Students of Government schools appear for State Board of Examination, the KSSEEB. Students from private unaided/aided institutions appear not only for KSSEEB but also at other Boards such as CBSE, ICSE, IGCSE and IBE. The State Government adapted the CBSE Curriculum and Text books since 2009.

- Overall pass percentage in 2014 was 81.91 percent. Chikkodi (91.70 percent) and Sirsi (90.73 percent) are on top. Ballari, Vijayapura, Bidar and Kalaburagi are at the bottom (75 to 80 percent).

- How can Chikkodi, a backward district, be on top?. Yes this is true. It is validated by a school grading exercise of 1064 schools by KSQAAC wherein, in 2013, Chikkodi was on top of all districts. Only 5 schools in the State were in 'A' grade bracket. There were no schools within A+, D and E brackets.

3.19 Higher Secondary Education

- There were 4107 pre-university (+2 stage) institutions in the State (2011-12 E.S / GoK) with an enrolment of 10.06 lakh students. Attrition from 1st to 2nd PUC (XI to XII) was 87554 students, 16.90 percent. This is the attrition trend from 2005-06 to 2011-12.

- Enrolments across Arts, Science and Commerce streams are 42.68, 29.77, and 27.56 percent (Ist PUC, 2011-12, ES / GoK) respectively.

- Pass percentage during 2011-12 for Arts, Science and Commerce streams are 63.03, 77.15 and 69.34 percent respectively.

- Pass percentages have been steadily increasing since 2004 April (48.99 percent) after a fall in 2008 March (41.31 percent) to reach a figure of 60.47 percent (in 2014 March) PUE, GoK].

- Inter-district imbalances are common every year in PU results. Five districts, namely Koppala (49.46%), Chitradurga (48.04 percent), Kalaburagi (46.71%), Raichur (46.11%) and Bidar (44.95%) recorded less than 50 percent results. Such results have long-term implications for human development concerns in these districts. A trend analysis by the commissionerate of PU Education to plan remedial actions would be of value.

Table 3.24 and Figure 3.9
Growth of PU results for 10 years

Year	Result
2004 April	48.99
2005 April	52.77
2006 April	53.97
2007 April	50.70
2008 March	41.31
2009 March	43.07
2010 March	49.27
2011 March	48.93
2012 March	57.03
2013 March	59.36
2014 March	60.47

Source : C of PUE, GoK

- The P.U. results recorded 48.99 percent in 2004 April examination, experienced gains during 2005 and 2006. There was a marginal fall in 2007 and a substantive decline in 2008 March examination. The fall was of the magnitude of 9.39 percentage points in a single year. There was a structural change in the pattern of examination during 2007-08 March examination that tilted towards objective-based testing. Thereafter, the results steadily picked up during the following years except for a small hiccup during 2011 March. As of, 2014, the overall results are recorded at 60.47 percent.
- Pre-University results carry bearings on supply-demand calculations in the realm of professional colleges and courses as well as in general graduate colleges.

3.20 Vocational Education

- Vocational Education (VE) enrolments are hardly around 10 percent of total +2 enrolments.Of late, the Union Government, in 2012, has set up the National Skill Development Corporation (NSDC) to facilitate +2 vocational education with the involvement of NGOs.
- Non-availability of adequate stock of VE faculty to offer diversity of courses, non-use of computers (Graphics) for teaching – learning transactions, low remuneration for VE faculty, absence of modernization of courses, lack of relevance of courses to field needs are problems in vocationalization of +2 education.

3.21 Expenditures on School Education

Analysis of expenditures on education in this section is based on basic data available in Economic Survey of the GoK, specifically the 2013-14 document.

Table 3.25
Proportions of Plan Vs Non-Plan expenditures across levels of Education, 2009-10 to2013-14 (in percentage)

Years	Elementary		Secondary		Higher Education	
	Plan	Non-Plan	Plan	Non-Plan	Plan	Non-Plan
2009-10	18.53	81.47	16.46	73.54	18.80	71.20
2010-11	23.84	76.16	19.35	80.65	25.06	74.94
2011-12	20.47	79.53	23.74	66.26	19.10	80.90
2012-13 (BE)	32.22	67.78	15.62	84.32	19.95	80.05
2013-14 (BE)	35.70	64.30	24.66	76.24	24.81	75.19

- Plan proportion of expenditures across all levels – elementary, secondary, higher–education are not uniform.
- Plan expenditures of elementary education have picked up since 2012-13, may be due to RTE expectations.
- Pattern of expenditures reveals an absence of an integrated physical cum financial vision of school development.
- Non-plan expenditures are considerable.

Table 3.26
Proportion of expenditures across levels of education and growth over a five year period (Rs. in Crores)

YEARS	Total Expenditures	Elementary	%	Secondary	%	Total School Education	Higher Education	%
2009-10	8455.62	4488.37	53.08	3215.04	38.02	91.10	752.21	8.90
2010-11	10087.10	5350.40	53.04	3096.96	30.70	83.74	1440.55	14.28
2011-12	11305.10	6052.46	53.54	3648.69	32.27	85.81	1603.95	14.19
2012-13	14404.30	8415.94	58.43	4090.29	28.40	86.83	1898.07	13.18
2013-14	16978.39	9417.93	55.47	5170.51	30.45	85.92	2389.95	14.08

- Proportions of expenditure across levels appear to be in order.
- In five year period, from 2009-10 to 2013-14 the expenditure on education has more than doubled. RTE and RMSA initiatives have triggered State expenditure levels. Appreciation is considerable at elementary level due to RTE.

Table 3.27
Expenditure on education as a proportion of various parameters(Rs. In crores)

Sl. No.	Years	2009-10	2010-11	2011-12	2012-13	2013-14
i	Exp.on Education	8455.62	10087.10	11305.10	14404.30	16978.39
ii	GSDP	337559	410703	458894	524502	593811
iii	i as % of ii	2.50	2.46	2.46	2.75	2.86
iv	Dev + Non Dev. Exp.	61917	70971	84463	102406	118016
v	i as % of iv	13.66	14.21	13.38	14.07	14.39
vi	Dev. Exp.	-	-	60929	73503	83372
vii	Social Services	-	-	29413	36419	42186
viii	Edn./YS/Sports/Culture	-	-	12564	16164	19114
ix	i as % of vi	-	-	18.55	19.60	20.36
x	i as % of vii	-	-	38.44	39.56	40.27
xi	vii as % of vi	-	-	48.27	49.55	50.60
xii	viii as % of vii	-	-	42.72	44.38	45.31

1. Expenditure on education in the State as a percent of State GDP is in the range of 2.46 to 2.86 percent during the last 05 years. Incidentally it is observed that as a proportion of GDP, expenditure on education by the Union Government is 0.254 percent, for the whole country in 2014-15. Together, expenditures are far below the dream figure of 6 percent.
2. As a proportion of total government expenditures, the proportion on education hovers around 14 percent.
3. Nearly 20 percent of development expenditure of the State is on education.
4. Nearly 50 percent of development expenditure is on social services that includes education.
5. Nearly 40 percent of expenditure on social services constitutes expenditure on education.
6. Education sector includes youth services, sports and culture. When they are considered together, expenditure from social services goes up by another 4 to 5 percent.

3.22 Private expenditure on education

Ignoring income differentials in the population, it is observed that as per NSSO and other sources, private expenditures on education add upto over 30 percent of per-capita expenditures of the State on government school children. Opportunity costs are not calculated. Given figures are direct costs.

The State average percapita NSDP in 2011-12 (current prices) is Rs. 68,227. Bengaluru urban

records Rs.1,83,607 while Bengaluru rural records Rs. 94,124 p.c.i., 17 districts record less than Rs.50,000 p.c.i, They are :Yadagiri (lowest record Rs.34,000), Raichur, Koppal, Kalaburagi Bidar, Vijayapura, Bagalakote, Belgavi, Gadag, Chamarajanagar, Chikkaballapur, Haveri, Tumakuru, Mandya, Hassan, Davanagere and Chitradurga. They need special treatment, positive discrimination in expenditures on education in future. Per Capita Income is a proxy for purchasing capacity.

There is a need for an 'Integrated Vision' of School Education for inclusive Human Development. It should be developed in an integrated way involving Departments of Government – Planning, Education, Social Welfare, Urban Affairs (LSG Schools), Labour, WCD, RDPR, Infrastructure, BCM and other stakeholders.

3.23 Governance for Quality Schooling and Inclusive Human Development

- There is a need for an 'Integrated Vision' of School Education for inclusive Human Development. It should be developed in an integrated way involving Departments of Government – Planning, Education, Social Welfare, Urban Affairs (LSG Schools), Labour, WCD, RDPR, Infrastructure, BCM and NGOs, educationists and other stakeholders.
- The vision document should be shared in workshop mode across all stakeholder officers of all departments, across departments and down-the-line.
- Department of Mass Education needs to be restructured as has been discussed under sub-section 3.2.
- The CPI and specifically the DSERT needs to develop a vision document detailing the R and D needs of the Department. It should carry an Assessment and Accreditation Research Cell in Collaboration with the Directorate of Examinations and KSQAAC. 'Failure Analysis' should be engaged in on a continuous basis. DSERT needs a Governing Council [R8].
- Tracer Analysis of 10+ and 12+ students should be engaged in. This is highly essential after 10+ because +2education is currently organized by several Departments of Government (PUC + VE + ITI trades) and NGOs (APTECH, DAVARS, NIIT). Universalisation of education from 4 to 18 years should be the goal by 2020.
- To the extent possible, RTE A compliance should be struck in infrastructure provision at elementary schools of the DoE. PTR and SCR need to be rationalized through school level planning, especially in backward regions.
- Recruitment policy and Transfer Act needs a revisit. There is no need for any more recruitment of teachers in the near future. The State Transfer Act should

Box 3.8
Governance for Quality of Schooling-1

There is a need for fresh recruitments of teachers in the near future. State Recruitment policy and Transfer Act needs to be revisited. In the long term trained graduates and post-graduate teachers should be located at higher primary and secondary stages.

be revamped to allow for inter-district transfers on a high scale, especially to benefit backward regions.

- Recruitments, if any in future, should be from among trained graduate teachers at elementary stage, with balance across language and humanities, Arts and Science streams. At secondary level, there should be trained PG teachers.
- Teachers on part-time basis or full time for every 3 schools should be appointed (on contract basis) to transact part-B of curriculum as well as Physical Education.
- All In-service Training should be School-based (SBT). Logistics of SBT needs to be worked out by the CPI.
- All HPS need to be provided with a full-fledged computer library (as of today, it is 20 percent provision). Teacher and student capacities for digital learning discovery learning should be pursued. These should be developed. Demonstrations, project work, laboratory work, activity learning discovery learning should be pursued. There should be a blend of both physical and digital technology.
- Panchayath level large schools should be set up. By improving rural roads, rural transport and networking hostel facilities large schools should be maintained by the year 2020. This kind of re-organisation will ensure economies of scale, quality, equity and peer learning.
- Kannada / Mother Tongue ought to be the medium of instruction from 1 to 5 standards, in all the schools of the State. Enrichment of milieu for learning of English, Kannada and Hindi (from 6th standard onwards) should be designed.
- All Anganwadis should be relocated near lower primary schools (as of today, 07 percent are located this way).
- Increase the number of Urdu medium HPS and High Schools (balance in Ratios).
- Locate / appoint tribal background teachers for tribal areas.
- Monitor, with the collaboration of Civil Society Organizations, the physical, social, emotional and cognitive integration of children admitted to private schools under section 12(c) of RTE.
- Upgrade the quality of government schools as per RTE Act norms so as to arrest the trends of flow of students to private unaided schools. Engage in a review of the load of scholastic curriculum in school education.
- District / Block / Cluster level TASK FORCES to assist 'Differentiated Learners', CWSN and Schools for mentally challenged children Schools or Centurs should be set

Box 3. 9
Governance for Quality of Schooling-2

Monitor, with the collaboration of Civil Society Organizations, the physical, social, emotional and cognitive integration of children admitted to private schools under section 12(c) of RTE.

Monitor, with the collaboration of Civil Society Organizations, the physical, social, emotional and cognitive integration of children admitted to private schools under section 12(c) of RTE.

up to facilitate Learning, Retention, Transition and Completion Rates.

- Current arrangement in government to monitor Attendance (in DoE) should be strictly enforced.
- There is over-saturation and under-utilization of residential facilities created by the Government for school students. A co-ordinated plan of utilization needs to be evolved.
- Per-pupil expenditures across districts should be linked to per capita incomes thereon. There should be 'positive discrimination' in per pupil expenditures in favour of disadvantaged groups of children.

3.24 Epilogue

As of now, in a hidden way, the Government and the DoE are engaged in planning and development of education that addresses concerns of inclusiveness. What is missing is Financial and Social Audit on Inclusiveness for human (students) development. Such exercises will step up the internal vigilance in the Departments of Education.

Historically, the State and particularly the capital city of Bangalore has been a pioneer in establishing science and technology institutions that have been comparable to international standards.

Section B- Higher Education

Introduction

This section inquires into the status as well as inter-temporal trends in higher education. It analyses the status and trends of higher education in Karnataka in comparison with those of India and other South Indian States in matters pertaining to the geographical distribution of Universities and Colleges, enrolment of students, categorisation of staff by gender; a region-wise and district-wise analysis of higher education in Karnataka is also done. And Above all, the chapter carries a number of recommendations to make higher education more and more inclusive and equitable with a view to making development people-cantered and participatory.

The findings of the inquiry would be of immense use to the government in formulating measures to ensure Expansion, Equity and Excellence in higher education, so that in course of time development becomes inclusive across regions, gender, caste- categories and religious minorities.

3.25 Institutions of National Importance

The State of Karnataka is poised to play a key role in leading this transformation. Historically, the State and particularly the capital city of Bangalore has been a pioneer in establishing science and technology institutions that have been comparable to international standards. The Indian Institute of Science and other national research institutions like the National Centre for Biological Sciences (NCBS), Raman Research Institute (RRI), Indian Institute of Astrophysics (IIA), Indian Space Research Organisation (ISRO), National Aeronautics Laboratory (NAL), Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), National Law School of India University (NLSIU), Indian Institute of Science (IISc), Bangalore, Indian Institute of Management Bangalore (IIMB), National Institute of Advanced Studies(NIAS) and International Institute of Information Technology, Bangalore (IIITB), are among the best research and teaching institutions in the country. These institutions have the State of art facilities in terms of laboratory and libraries that can be an envy of other Universities and institutions in the country. It is unfortunate but critical to point out that the growth in higher education in Karnataka and for

that matter India has been extremely uneven with regard to several dimensions.

3.26 Distribution of Higher Educational Institutions Universities in India and Karnataka

As on January 2016, there were 46 Universities in the State of Karnataka. Table 3.28, below illustrates the break-up by type of Universities along with total number of Universities across India.

Table 3.28
List of Universities in Karnataka and India (2016)

Sl. No.	Universities by Type	India	Karnataka
1	State Public	348	23
2	State Private	197	06
3	Private Deemed	79	11
4	Government Deemed	43	04
5	Institution of National Importance*	75	01
6	Central University	44	01
7	others	13	-
8**	Colleges	38056	3075
	Total	**799**	**46**

Source: *AISHE (2015-16)*
*1.*The newly added IIT in Dharwad will increase the number of Institutions of National Importance to*
*2.** The Table also contains the total number of colleges in India and Karnataka*

Karnataka is home for 46 Universities out of the total 799 Universities in the country (1 Central university; 22 State Universities, 06 Private Universities; 15 Deemed Universities (private and public) and 1[2] Institution of National importance. The State claims about diversity of higher education institutions across various specializations: 02 Agriculture, 06 medical, 02 Law, 03 Technical, 01 Veterinary, 34 general/ other institutions (AISHE, 2016). Karnataka has the 3rd highest number of Public State Universities (22) in close succession to Uttar Pradesh (24) and Gujarat (25) which occupies the 2nd and first position respectively.

In addition to the large number of Universities, Karnataka is a hub for independent/ autonomous research or specialized institutions like the Raman Research Institute; Institute for Social and Economic Change (ISEC); National Institute of Advanced Studies (NIAS); National Centre of Biological Sciences (NCBS) and other specialized institutions totalling to more than 25 institutions. These institutions not only contribute to specialized research but also to the larger social development within and outside the State. The form and spectrum of higher education institutions in the State of Karnataka is wide and varied, ranging from

[2]The Union Finance Minister announced the establishment of IIT in Karnataka in the Budget Session March 2015 (The Hindu, 2015). The IIT located in Dharwad. Retrieved from http://www.thehindu.com/news/national/karnataka/finally-an-iit-for-karnataka/article6948219.ece on April 16, 2015

independent research institutions to social and scientific research institutions.

Apart from these, Karnataka has over 3,075 colleges (2451 private and 624 government colleges), out of the total 38,056 colleges in India (AISHE, 2015).

Similar to the national pattern, majority of the Universities i.e., over 50 percent of the Universities are State Universities. The National Institute of Technology in Dakshina Kannada (NITK) is the only institution of national importance located outside Bengaluru. The lone central university which came into existence in 2010 is located in Kalaburagi. In 2015, an Indian Institute of Technology (IIT) was established at Dharwad after years of lobbying. Seventeen of the Universities are classified as Private, Deemed, State Private and Government Deemed Universities. The only State Open University is located in Mysore.

The form and spectrum of higher education institutions in the State of Karnataka is wide and varied, ranging from independent research institutions to social and scientific research institutions.

The distribution of these Universities across the different districts of Karnataka clearly indicates that the majority of the Universities are located in and around Bangalore. It is of particular interest to note that several of the progressive districts like Hassan, Chikkamagaluru, Uttara Kannada and Mandya do not have a single university. Except for the State Universities that show some presence in the northern districts of Karnataka, majority of the State Universities, deemed Universities and private Universities are distributed among the southern districts. It is surprising to note that all the private Universities except one in Ramanagar, adjacent to Bangalore are all located in Bangalore district.

Despite the fact that colleges as part of higher education are relatively better distributed across the State, the skewed distribution of Universities as centres of higher learning in and around Bangalore and the southern districts create an inherent disadvantage to students from the northern districts of Karnataka that are relatively underdeveloped in relation to access to university education in the form of distance, additional costs in terms of housing, invisible costs etc., One of the significant factors for the low representation of students from these districts in higher education could be the result of this skewed geographical distribution of Universities. Till more recently, post graduate and doctoral degree courses were offered only by Universities in Karnataka. In addition, the location of Universities in urban areas can be a possible factor for the increased migration to cities and urban areas by aspiring students. In this scenario, mobility is a key factor to access higher education, where girls from rural areas appear to face a severe disadvantage due to associated reasons of physical security and control over her sexuality that impact the decisions of family regarding higher education of the girls. In the circumstance, dispersion of Universities and Colleges equitably among the Districts in Karnataka merits attention.

3.27 Distribution of Colleges and Student Enrolment Across Colleges in Karnataka

Karnataka with a total of 3,075 colleges has a share of 8% of all colleges in India and ranks 4th on total number of colleges in any State in India (AISHE, 2015-16). In terms of access, Karnataka ranks second highest among all States in India with 47 colleges per lakh population as compared to the all India average of 27 colleges per lakh population. In terms of average enrolment per college, Karnataka records 451 students as against an all India average of 764 students per college. (Ibid).

Table 3.29
Enrolment Across Colleges Per Lakh Population in Major South Indian States

State	No. of colleges	Colleges/lakh population	Ave. Enrolment per college
Karnataka	3075	47	451
Andhra Pradesh	2591	46	558
Kerala	1240	40	558
Tamil Nadu	2531	34	846
Telangana	2328	57	613

Source: *AISHE (2016)*

Among the southern States, Karnataka has the highest number of colleges, while Kerala records the lowest number of colleges. Among the southern States, Telangana records the highest number of colleges per lakh population indicating relatively better access. However,, Tamil Nadu records the highest average enrolment figures per college (846) while Karnataka records 451 which is the lowest average enrolment figure per college among the southern States.

The total number of stand-alone institutions in Karnataka is 1677. There are 820 teacher training institutes; 565 nursing institutes; and 292 polytechnics (AISHE, 2016). Out of the total 3075 colleges in the State, 90 percent are affiliated to Universities, and the remaining are constituent/ university colleges and autonomous colleges. In terms of management, Karnataka colleges are dominated by the Private Aided (420) and Unaided (2023) colleges. In other words, 77 percent of all colleges in the State come under private management, while only 21 per cent of them are government colleges. (AISHE, 2016).

3.28 Gross Enrolment Ratio/ Student Enrolment

Karnataka has been a pioneer in establishing science and technology institutions that are comparable to international standards. Karnataka has now been globally acclaimed for its achievement in the high technology manufacturing service sector, particularly the IT sector, which has been recognized as the second largest in the world. Given this status, Karnataka should now emerge as a global centre of excellence in education. For this to happen, it is essential that the State not only envisions achieving an education level which is the best in India, but one which is also competitive with countries of comparable size/system.

The Karnataka Vision Document 2020 envisions the transformation of Karnataka into a vibrant knowledge society by 2020 which will witness an increase in student enrolment with the actual numbers increasing from 12, 60,038 (18.1 percent GER) 2012-13 to 21,58,000 in 2020, reaching a GER

The Karnataka Vision Document 2020 envisions the transformation of Karnataka into a vibrant knowledge society by 2020 which will witness an increase in student enrolment with the actual numbers increasing from 12, 60,038 (18.1 percent GER) [2012-13] to 21,58,000 in 2020,

of 35 percent. [2]The vision document recommends that this transformation should be entirely student-centric, where the nature of expansion will reflect the student aspirations.

As a point of departure, the higher education institutions in the State should design courses in accordance with the demand of students and match them appropriately to the dynamic work space that reflects employment opportunities both at the national and global level. Students need flexibility in choosing courses to prepare themselves for their careers and aspirations, which vary, especially at the extremes. It is increasingly being realised that India is fast moving to a situation where students will have to develop skills and capabilities that help them to move into more than one career that can be different requiring a completely new set of skills during their lifetime.

In the drive for healthy competition, higher education institutions should continuously innovate and align with contemporary changes to be able to attract the best students. Opportunities should also be provided for continuing higher education and training in order to create a notion of citizenship and responsibility.

In the drive for healthy competition, higher education institutions should continuously innovate and align with contemporary changes to be able to attract the best students. In other words, students should no longer be limited by the choice of conventional courses offered by colleges that do not prepare them for a smooth transition into the world of work. Opportunities should also be provided for continuing higher education and training in order to create a notion of citizenship and responsibility. Lifelong learning becomes increasingly relevant in this fast changing world.

3.29 Gross Enrolment Ratio for India, Karnataka and Leading States

According to the 12th Five Year Plan, the Gross Enrolment Ratio (GER) in Universities and colleges has touched 20 percent, [3] translating into about 20 million students in the 18 to 22 years age cohort entering the portals of higher learning annually. Currently, the GER in 2016 for India is 23.6 percent. The total student enrolment for Karnataka for the year 2015 is 17,80,239 with 9,19,914 men and 8,60,325 women (AISHE, 2015-16). The GER in higher education in India has increased from 0.7 percent in 1951 (12th Five Year Plan) to 23.6 percent in 2015 (AISHE, 2015-16).

It is to the advantage of Karnataka to move away from comparisons with national figures to comparisons with neighbouring southern States that have had a more impressive trajectory of growth in the field of higher education. The table below represents the percentage enrolment across leading States in Southern India and in India for a comparative analysis of the status of higher education in Karnataka. According to Table- 3.30, percentage enrolment across categories in the country continues to represent the gap between men and women, with the latter being at the lower end. Such a

[2]Deloitte (2012). Higher education GER projections for Karnataka (report prepared for the Karnataka Janna Aayoga (KJA), GOK.

[3]The average GER for the world is at 23.2 percent further dived to 36.5percent for developing countries and 45 percent for developed countries. For example, GER in Canada is around 82 percent and USA it is around 80 percent. See: ***http://www.highereduforum.org/14grossenrolmentratioinhighereducation251010.pdf*** *accessed on August 11, 2012*

trend is similar across all other States in Southern India, expect Kerala, which claims an advantage in favour of women (56.3%) in terms of enrolment in higher education.

Based on the enrolment figures of AISHE 2015-16, the gender difference between men and women of Karnataka with respect to overall enrolment in 2015-16 is better when compared to national figures. When one compares the gender difference in enrolment of Karnataka with select southern States of India, Kerala is way ahead of Karnataka. The gender difference for Tamil Nadu is comparable to Karnataka. The highest gender difference in the enrolment for over all figures is Andhra Pradesh followed by Telangana.

There is nearly no gender difference for the scheduled castes and scheduled tribes for India as in the case of Karnataka and Andhra Pradesh. There is relatively higher enrolment among scheduled caste girls from Kerala, Tamil Nadu and Telangana when compared to the scheduled caste boys indicating a trend that favours SC women in these States. Among the scheduled tribes, the gender difference is absent or miniscule for India and all other southern States.

Table 3.30

Percentage of Enrolment State and Category-wise Across Leading States in India

Unit	All Categories		Scheduled Caste		Scheduled Tribe	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
India	16179840(53.7)	14091021(46.5)	2273706(14.1)	1952227(13.9)	792611(4.9)	681006(4.8)
Karnataka	919914(51.7)	860325(48.3)	119314(13.0)	108005(12.6)	42813(4.7)	36623(4.3)
Andhra Pradesh	897635(56.8)	684049(43.2)	131984(14.7)	101567(14.8)	34875(3.9)	27946(4.1)
Tamil Nadu	1523600(52.8)	1362006(47.2)	272381(17.9)	274254(20.1)	14505(1.0)	11553(0.8)
Kerala	375612(42.8)	502457(57.2)	21361(5.7)	37735(7.5)	2929(0.8)	4492(0.9)
Telangana	655201(53.8)	561762(46.2)	98580(15.0)	89013(15.0)	56629(8.6)	42204(7.5)

Source: *AISHE (2016)*

Note: Data compiled and converted to percentage by the Education Programme, NIAS, Bangalore.

3.30 Student Enrolment in Higher Education

It is critical to highlight the fact that there is a steep decline in the overall enrolment from under graduate to the post graduate and doctoral level. This decline is not specific to gender. One of the prominent reasons for this decline can be traced to the concentration of Universities in certain geographical areas Thus, eluding the access of several students who are located in districts away from the Universities. The enrolment of students at the Under-Graduate level constitutes the major proportion of the enrolment in higher education. Table 3.31 maps the percentage of enrolment across PhD, Post-Graduate, Under-Graduate and Diploma levels, by gender in India and leading States in South India.

According to AISHE (2015-16), the gender gap at the diploma level is the highest when compared to the Undergraduate, Postgraduate and PhD levels indicating very low enrolment of women in the

A little more than half of the student enrolments at the post graduate level are women in Karnataka. A close to about 40 % of the Doctoral students are women in Karnataka.

diploma courses. Tamil Nadu records the highest gender gap at the diploma level with 82.8 percent for men as against 17.2 % for women. Though Karnataka records a higher percentage of women in diploma when compared to the national figures, it ranks second highest among the southern States with 66.3 % for men and 33.7 % for women. As expected, Kerala records the lowest gender gap at the diploma level.

Karnataka records equal enrolment of men and women at the undergraduate level. The numbers indicate that it is higher than the national average. However,, Kerala records an advantage for women enrolment at the undergraduate level with 56.4 %. Andhra Pradesh records the highest gender gap with 13% in favour of men.

A little more than half of the student enrolments at the post graduate level are women in Karnataka. A close to about 40 % of the Doctoral students are women in Karnataka. Kerala leads with the highest percentage of women enrolment at the postgraduate and doctoral levels. Tamil Nadu has a higher percentage of women at the postgraduate level when compared to men but the trend reverses with the men at a relative advantage when compared to women at the doctoral level.

Unlike other countries in the world, the participation of women in higher education is impressive, However, this is not reflected at the faculty level.

Table 3.31
Gender Distribution across Levels of Education in India and Select States (2015-16)

	PhD		Post Graduate		Under Graduate		Diploma	
State	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Andhra Pradesh	1830(68.8)	828(31.1)	128915(56.6)	98594(43.3)	688806(56.3)	532816(43.6)	63074(62)	38621(38)
Karnataka	7358(62)	4329(38)	91370(48.6)	96513(51.3)	679843(50)	679711(50)	125915(66.2)	64220(33.7)
Kerala	1796(41.1)	2572(58.8)	29084(30.8)	65091(69.1)	296840(43.5)	385522(56.4)	32103(56.1)	25059(43.8)
Tamil Nadu	19170(60)	12730(40)	180837(40.9)	260765(59)	1114550(49.8)	1120079(50.2)	324622(82.8)	67359(17.2)
Telangana	2703(65.8)	1403(34.1)	88620(53)	78327(47)	511638(53)	452306(47)	38069(64.3)	21156(35.7)
All India	69061(59.1)	47778(40.9)	1479839(46.1)	1727518(53.8)	12548651(52.7)	11231703(47.2)	1533857(71.5)	609812(28.5)

Source: *AISHE (2015-16)*
Note: Numbers in the parentheses indicate percentage share.

The Department of Collegiate Education oversees the collegiate education in the State, an important component of higher education. The Department is entrusted with the responsibility of administrating 411 Government First Grade Colleges and 321 Private aided colleges affiliated to 14 State Universities, through its 6 regional offices located at Bengaluru, Mysuru, Mangaluru, Shivamogga, Dharwad and Kalaburagi. The average strength in government and aided degree colleges is 738.59 and 700.42 respectively.

Table 3.32
Enrolments in Collegiate education in Karnataka

Year	Boys	% growth	Girls	% growth	Total	% growth	M:F Ratio
2007-08	174729	-	154584	-	329313	-	53:47
2008-09	179380	2.66	163731	5.92	343111	4.19	52:48
2009-10	181779	1.34	176226	7.63	357975	4.33	51:49
2010-11	181018	-0.42	186790	3.28	367605	2.69	49:51
2011-12	226785	25.28	235313	25.98	457097	24.34	49:51
2012-13	229681	1.28	235471	0.06	465152	1.76	49:51
2013-14	247140	7.60	282867	20.14	530007	13.94	47:53
2014-15	251078	1.56	283986	1.21	535064	0.89	47:53
2015-16	234655	-6.54	293739	3.43	528394	-1.24	44:56

Source: *Economic Survey of Karnataka, Department of Planning, Programming and Monitoring, 2015-16, Government of Karnataka (Chapter-14).*

According to the Economic Survey of Karnataka 2015-16, enrolments for degree courses have not registered a steady increasing trend in the State. In fact, negative growth has been observed in the growth of overall enrolments during 2015-16. It is surprising to point out that the negative growth is contributed by the enrolment of boys (-6.54%) while the girls still record a growth of 3.43% for the year 2015-16. The ratio of boys to girls, which was in favour of boys during 2007-08 to 2009-10 has reversed during 2010-11. The same trend with more girls entering the echelon of higher education has been noticed till 2015-16, where the enrolment ratio is 44:56 for boys to girls. It may be useful to read this data with enrolment in engineering and medicine to better understand the changing trend.

3.31 Gender Parity Index

Distribution of enrolment by social category and gender is an important measure to examine the aspects of inclusiveness and equity. According to AISHE (2016), Gender Parity Index(GPI) in higher education in Karnataka (0.91) is higher than the all-India figures of 0.84 in 2015-16. However, in comparison to neighbouring States, Karnataka stands third with Tamil Nadu recording 0.92 and Kerala still ahead with a GPI of 1.30. The same trend continues with regard to GPI of the scheduled castes with Kerala leading with a figure of 1.72 and Tamil Nadu following closely with a GPI of 1.02. The corresponding figure for Karnataka for the scheduled castes is 0.88. The GPI for the scheduled castes show that Kerala leads with 1.40 followed by Karnataka at 0.83 which is above the national average of 0.78. Karnataka takes the second position with regard to GPI of the OBC recording 1.00 while Kerala records 1.36 continuing to lead in the GPI among the OBCs. Karnataka stands second among the southern States for the GPI of people with disability(PWD)

Distribution of enrolment by social category and gender is an important measure to examine the aspects of inclusiveness and equity. According to AISHE (2016), Gender Parity Index(GPI) in higher education in Karnataka (0.91) is higher than the all-India figures of 0.84 in 2015-16.

while Kerala leads among the southern States in PWD with 1.10. Among the Foreign students Karnataka leads in the GPI with 0.71 among the southern States. The possible reasons being, Bangalore the IT city has a large number of higher education institutions and Bangalore must be viewed as a progressive city. Overall, Kerala has invariably established an overall lead over other States. Gender disparity is a concern mitigating the need for more inclusive policies and practices across the other southern States.

Table3.33

Comparative Representation of GPI of Higher Education among leading States in India in Higher Education (18-23 years), 2015-16

	Category						
State	All	SC	ST	OBC	PWD	Muslim	Foreign Students
Andhra Pradesh	0.75	0.77	0.78	0.70	0.62	0.68	0.19
Karnataka	0.91	0.88	0.83	1.00	0.74	0.90	0.71
Kerala	1.30	1.72	1.40	1.36	1.10	1.17	0.42
Tamil Nadu	0.92	1.02	0.69	0.98	0.74	0.70	0.69
Telangana	0.83	0.88	0.70	0.83	0.69	0.83	0.50
All India	0.84	0.84	0.82	0.87	0.82	0.87	0.53

Source: *AISHE, 2015-16*

Note: A GPI equal to 1 indicates parity between females and males. In general, a value less than 1 indicates disparity in favour of male and a value greater than 1 indicates disparity in favour of female.

3.32 District-wise Analysis of Higher Education Across Regions and Districts in Karnataka

The Human Development Report for the first time has attempted to collate actual student enrolment data at the district level to study the variation between the districts in Karnataka. The Government of Karnataka has organised its district governance into four sub-divisions - Bengaluru, Dakshina Kannada, Belagavi and Kalaburagi regions. Based on this geographical division, district-level enrolment data are presented in the table below.

Table 3.34
Distribution of Student enrolment in Higher Education across Educational Regions in Karnataka (2010- 2013)

Regions	2010-11	2011-12	2012-13
KALABURAGI REGION	174313	154883	180758
DHARWAD REGION	311756	277600	308084
SHIVAMOGGA REGION	174337	208211	143877
DAKSHINA KANNADA REGION	155605	161953	170432
MYSURU REGION	291312	282337	301998
BENGALURU REGION	577141	590117	630265

Source: *Compiled by Education Programme, NIAS, Bangalore Data provided by the Department of Higher Education GOK.*

The data in the table reveal that the lowest student enrolment is recorded in the Kalaburagi division characterized by its low development indicators. This is further coupled with the fact that these regions have the lowest number of colleges and Universities in the State. In contrast, Dakshina Kannada has been earmarked as a separate region due to the terrain and is high on development indicators despite smaller students' enrolment in higher education. The fact that student enrolment in higher education in this region is low could be due to the size of the population and the reduced number of colleges and Universities in this region. On the other hand, Bengaluru and Belagavi regions which has historically established themselves as seats of higher learning (particularly Dharwad) have over a period developed of time a greater number of higher educational institutions and Universities. Bengaluru region has the highest number of colleges (924) among all other districts in the country. Thus, the data on student enrolment across the regions is reflective of the distribution of higher educational facilities in different parts of the State. The declining number of student enrolment in the Kalaburagi and parts of Bengaluru and Dakshina Kannada region, is a reason for serious concern for the State.

The total enrolment of students in higher education in Karnataka for the year 2015-16 is 17,82,954. Out of this, 9,21,857 are men and 8,61,097 are women for the year 2015-16(AISHE 2015-16). Figure- 3.10 gives the enrolment figures of men and women district wise for the year 2015-16.

Figure 3.10
Student Enrolment in all districts in Karnataka by Gender

Districts	Enrolment	
	Male	Female
BAGALKOTE	25585	20201
BENAGALURU	263968	211641
BENGALURU RURAL	9223	10103
BELAGAVI	59429	47239
BALLARI	28234	20181
BIDAR	18060	19287
VIJAYAPURA	25700	19887
CHAMARAJANAGARA	5461	5890
CHIKKABALLAPURA	12316	11577
CHIKKAMAGALURU	9473	10799
CHITRADURGA	13894	14244
DAKSHINA KANNADA	71298	72709
DAVANAGERE	22460	24012
DARAWAD	33152	31233
GADAG	13798	10891
KALABURAGI	41452	38629
HASSAN	18245	22833
HAVERI	12761	12465
KODAGU	4666	4921
KOLAR	15212	16765
KOPPALA	7877	7042
MANDYA	17454	19363
MYSURU	65077	78391
RAICHUR	19201	12425
RAMANAGARA	13777	12226
SHIVAMOGGA	19668	25121
TUMAKURU	33936	36577
UDUPI	24506	25794
UTTARA KANNADA	13933	17106
YADAGIR	2041	1545

Source: *AISHE (2015-16). Illustration by the author.*

The district-wise data of student enrolment reveal that the districts of Bengaluru (urban), Dakshina Kannada, Mysuru and Belgavi have the highest enrolment of students in higher education respectively. These four districts also take the 1st four positions in terms of enrolment of boys and girls separately. In the close proximity of Bengaluru, Bengaluru rural district records very low enrolment figures. This is also true for the Yadgir, Kodagu, Chamrajnagar and Koppal respectively. The trend is similar for boys and girls.

3.33 Student Enrolment Across various streams

Karnataka prides itself of being home to a large number of colleges, Universities and associated institutions of higher learning. The table below, examines the student enrolment across various streams of Arts, Science, Commerce and Professional courses as well as the different levels of higher education namely, the under grduate and postgraduate levels. for the years 2009- 2015. According to the data for the year 2009-10, out of the total students enroled in the under graduate courses, over 40 percent are in the Arts stream, and 27.5 percent are enroled in professional courses indicating that they are popular courses. It is surprising to note that the science stream attracts a mere 12.1 percent. At the postgraduate level, the arts stream attracts around 40 percent followed by the professional course which are a little over one third of the total. There is marginal increase in student enrolment in the science stream recording 15.2 percent while the enrolment in the commerce stream at the post graduate level drops to 9.2 percent. Over the years, from 2009 to 2014, science continues to attract the least number of students(12.9 %) at the under-graduate level. In the commerce stream for 2014-15, the drop in the percentage of students opting for post graduate courses continues and is recorded as 8.4 percent as against 21.4 percent in the same year for under graduate course in commerce.

Table 3.35

Student Enrolment by level and type of courses in Karnataka

Year	Under Graduate				Post Graduate			
	Arts	Science	Commerce	Professional	Arts	Science	Commerce	Professional
2009-10	40.1	12.1	21.2	27.5	40.4	15.2	9.2	35.2
2010-11	38.2	14	23.2	24.6	39.2	16.1	8.6	36.1
2011-12	37.4	13.9	20.2	28.5	38.1	16.3	8.4	37.2
2012-13	37.1	13.3	21.2	28.7	38.6	16.8	8.7	37.1
2013-14	36.3	12.7	22	29	37.1	17	8.5	37.4
2014-15	36.1	12.9	21.4	29.6	37.2	17.1	8.4	38.3

Source: *MHRD Select Statistics (2009-2010, 2010-2011, 2011-12) and AISHE (2012-13, 2013-14 and 2014-15). Note: Arts includes – Education and Law; Professional includes – MBA, Engineering, and Medicine.*

Further, it is critical to note the slow decrease in enrolment percentage in the Arts stream across Undergraduate and Postgraduate level in 2014-15. This points to the need to critically evaluate the content of the Arts course and its relevance in the contemporary world.

3.34 Gender-wise Distribution of Staff

To further the inquiry in relation to representation of the different groups across higher education in accordance to their share of the population, the following table is used. The representation of men in relation to the share of population was higher. In contrast the representation of women against the share of population was lower. Men were relatively better represented when compared to women in the teaching faculty as well as the non-teaching staff. What is striking is the representation of the SC with respect to student enrolment (difference of 6%) is way below when compared to women (difference of 3%) showing a higher level of inequality among the SC community when compared to men or women overall. Continuing the trend, the SCs are poorly represented among the faculty. This is true among the STs too. In contrast the OBC fare much better than the SC and STs in their representation among students, teaching and non-teaching faculty.

The share of women among faculty decreases as one moves up in the hierarchy of faculty in higher education institutions. In Karnataka there is one woman professor for every four men professors.

Table 3.36
Percentage Share of Population, Enrolment and Teaching Staff

Indicator	Male	Female	SC	ST	OBC
Share of population	50.70	49.30	18.40	6.80	41.10
Share of enrolment	53.80	46.20	12.0	4.40	38.40
Share of teaching staff	59.20	40.80	6.50	1.90	21.0
Share of non-teaching staff	65.20	34.80	10.90	3.30	25.0

Source: *Share of population – Census 2011 & India Human Development Report 2011; Teaching and Non-teaching staff from AISHE (2012) (cited in Deloitte report on Higher Education, 2013)*

3.35 Gender Distribution of Faculty across designation

It is for the first time there is data on the gender break-up of faculty across levels in higher education. The table clearly indicates that women faculty form the bulk of the non-permanent/ contract teachers (53%) in Karnataka. However,, when one compares the figures of non- permanent/contract faculty among the select southern States, Kerala leads with a whopping 75.3% followed by Tamil nadu(60.1%) and Telangana(58.4%). In this case, Karnataka fares much better recording the least percentage of women non-permanent/contract faculty.

The share of women among faculty decreases as one moves up in the hierarchy of faculty in higher education institutions. In Karnataka there is one woman professor for every four men professors. Kerala has relatively the highest share of professors for women. The difference between Karnataka and Kerala in this respect is indeed

small. Telangana records the lowest proportion of women professors and is less than one woman professor for every five men professors. Among the women Assistant Professors, Kerala has a higher proportion of women when compared to men. For all the other southern States the proportion of women Assistant Professors is lower when compared to men.

Table 3.37
Percentage of Gender wise distribution of Faculty across levels in South India (2015-16)

State	Professor		Associate Professor*		Assistant Professor		Non-permanent	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Andhra Pradesh	3942 (83.7)	766 (16.2)	6363 (75.8)	2028 (24.1)	44317(67.4)	21406(32.5)	3575(45.2)	4333(54.7)
Karnataka	8344 (75.3)	2727 (24.6)	13428 (65.5)	7059 (34.4)	41768(57)	31381(43)	10801(47)	12144(53)
Kerala	1577 (69.1)	705 (30.9)	3356 (53.3)	2936 (46.6)	12131(40)	18248(60)	1465(24.7)	4454(75.3)
Tamil Nadu	10263 (72.4)	3901 (27.5)	12557 (59.4)	8560 (40.5)	78461(53.1)	69149(46.8)	50912(39.9)	7531(60.1)
Telangana	3770 (83.2)	761 (16.8)	6124 (68.5)	2813 (31.5)	38925(63.7)	22132(36.3)	2224(41.6)	3119(58.4)

Source: *AISHE (2016)*
Note: **Data for Associate Professor and Reader categories are merged under the Associate Professor category*

3.36 Recommendations for Making higher Education inclusive and Equitable in Karnataka

The following recommendations, if implemented properly, would go a long way in making education a potent instrument of augmenting people's capabilities and thereby making development people-centered and participatory. Here it is pertinent to point out that some recommendations are based on and derived from the findings of the preceding two sections and some from the findings of other related studies:

- Recreate/amend the Karnataka State Universities Act 2000 with regard to autonomy, fostering creativity and nurturing talent among students, creating a knowledge State by 2020. In particular, focus and nurture talent from rural areas to encourage and support their participation in higher education and research (Kurup, A Et .al, 2011).
- Institutions of higher education should be encouraged to adopt a needs-blind admissions policy. This would make it unlawful for educational institutions to take into account any financial factor while deciding whether or not to admit a student (NKC, 2009).
- To recognise and incentivize colleges and Universities that focus beyond providing opportunities to retaining and building capacities among the special disadvantaged groups--- /

To recognise and incentivize colleges and Universities that focus beyond providing opportunities to retaining and building capacities among the special disadvantaged groups-- /SC/ ST/ Women/ Differently-abled / gifted population. (Students and Faculty).

While the government funding for higher education has increased several folds, it must be realized, that this cannot meet the demands of the sector. Alternative resources need to be raised along with set mechanisms to ensure that education is made affordable to all sections of the Indian population. Student funding needs to be given great attention

SC/ST/ Women/ Differently-abled / gifted population. (Students and Faculty).

- Need for Universities to develop broad-based recruitment policy that articulates a transparent and an attractive career path (with teaching and research) for faculty in higher education to attract the best talent to the Teaching Profession ((Kurup, A, 2006; Kurup, A.,et .al, 2011).
- Higher education institutions should provide flexible and customized work options to its scholars, in order to ensure the teaching/research workforce continue to work across multiple institutional and professional contexts. Teaching profession should be respected as well as rewarding as this will encourage the best of the minds with passion to become teachers (Karnataka State Higher Education Council, n.d.m).
- In planning to expand the sector, the government, could choose some of the promising institutions in India/Karnataka from different geographical locations and develop them into institutions which can be considered the best in the world (Kurup, A Et .al, 2011).
- Proactive recruitment of students and faculty from less represented geographical areas, castes, classes and communities to make research and teaching/education institution/or Universities more inclusive (Kurup, A, 2006).
- The huge rush for professional courses like engineering, IT, and Medicine needs to be curbed and talent has to be diverted to other areas like basic sciences, humanities and liberal arts (Kurup, A Et .al, 2011) (Karnataka State Higher Education Council, n.d.m).
- Against the target set for the increase in the enrolment of higher education (GER) from about 12-15 % to 30% by 2020, Karnataka has very little option but to explore innovative financial solution to support a large number of students aspiring to enter the higher education system (Kurup, A Et .al, 2011).
- The budget of the Department of Higher Education must be enhanced to an annual spending of 2% of the GSDP and must be at least 30% of the overall education budget.
- While the government funding for higher education has increased several folds, it must be realized, that this cannot meet the demands of the sector. Alternative resources need to be raised along with set mechanisms to ensure that education is made affordable to all sections of the Indian population. Student funding needs to be given great attention (Kurup, A et .al, 2011)
- To set up Karnataka Student Scholarship and Loan Authority to co-ordinate, disburse and manage the scholarships and loans to students who pursue higher education in Karnataka. Merge schemes, use a single window to identify and mentor deserving/ needy students in a transparent and user-friendly manner based on AADHAAR identification.

The initial fund can be created by levying a surcharge of 5% on excise duty on liquor which will amount to about Rs. 500 crore per year (Karnataka Higher Education Vision Document, 2012).

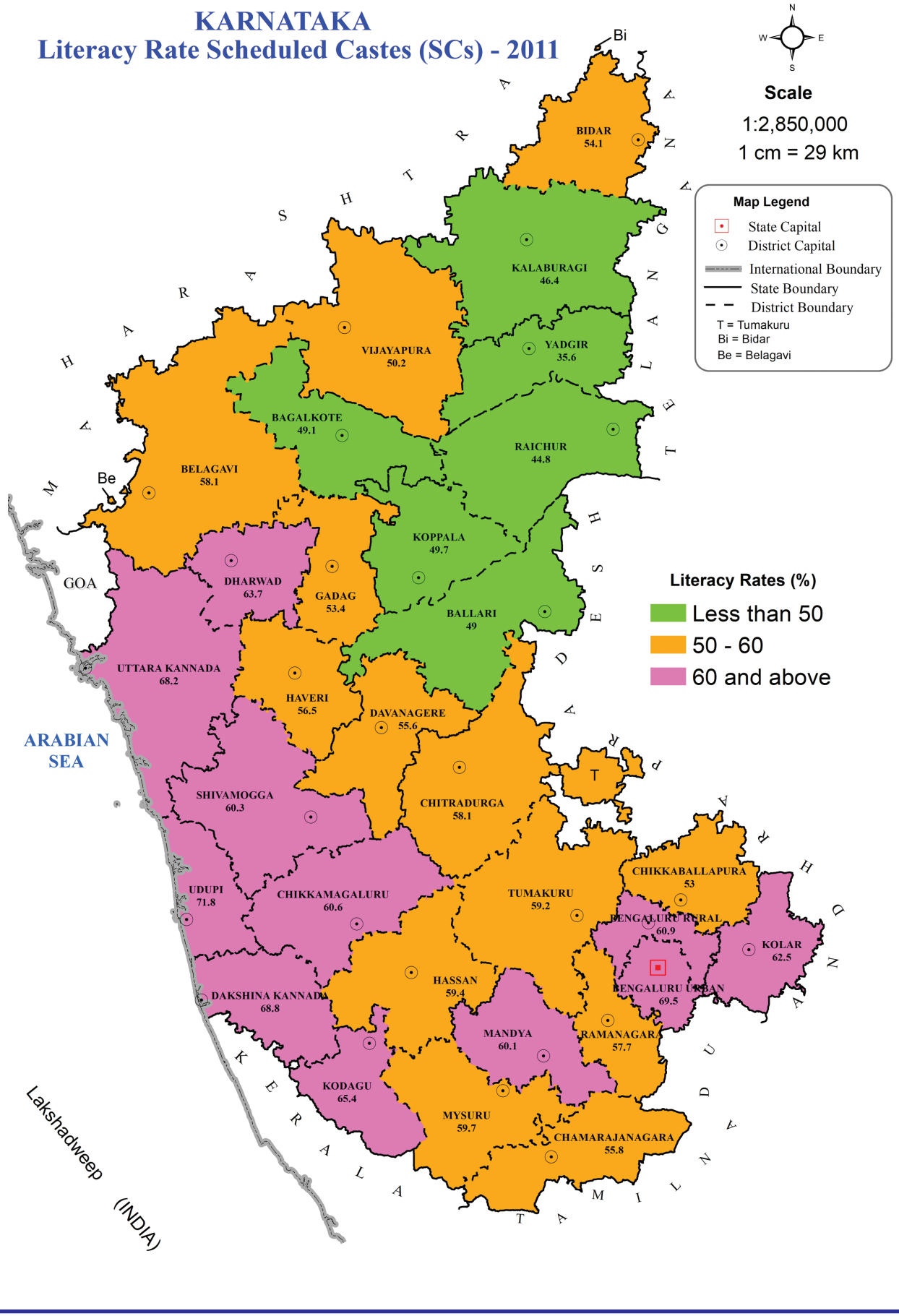
- Allow Universities to float long term, 10 years + bonds for creating necessary academic and hostel infrastructure, labs, libraries etc. These bonds should be guaranteed by the State. The interest on the bonds should be paid by the Universities from their fee collection and internal funds while the principal upon maturity should be paid by the State. A sum of Rs 5000 crore in the form of bonds over the next 5 years may be allocated for this purpose. This would bring the infrastructure on par with the best in India. Many Universities have various funds invested in bank deposits and these may be invested in such bonds Thus, recycling of these funds(Karnataka Higher Education Vision Document,2012).
- Facilitate mobility between VET and mainstream education through a system of credit transfer (FICCI, 2009).
- Developing lateral entry into the higher education system that allows students who have taken a break in education to join the industry/ or enter the employment sector, to re-enter with ease and added advantage of industry experience (Lavakare, Et. Al, 2008).
- Develop a National and or State Framework for Vocational education. Existing vocational education has to be revamped and redefined to make it attractive. There is a need to accord prestige and respect to vocational education and plan for the long term development of the sector. Need to develop a framework which is competency- based and is in tune with the fast changing employment opportunities that are emerging both for the domestic and international job markets. Portability of qualifications with due accreditation is integral to the creation and sustainability of mobile workforce (Kurup, A.et .al, 2011).
- Support private sector vocational education through accreditation and recognition mechanisms (Delloite, 2012). The growth and expansion of the vocational sector rests on a symbiotic interaction of the sector with the industry in a continuous manner where responsibilities are shared between them to ensure the efficiency of the workforce created through this mechanism (Kurup, A Et .al, 2011).
- Improve oversight structure for VET, facilitating greater industry involvement and providing greater alignment with market needs (FICCI, 2009).
- Be creative and innovative to design courses that will not only increase the employment opportunities but will in more ways than one contribute substantially to the growing Indian economy (Kurup, A Et .al, 2011).
- There is a need to develop innovative financing mechanisms to support students especially those coming from the weaker sections of the society. More importantly, there is a need to develop and update comprehensive information and

Develop a National and or State Framework for Vocational education. Existing vocational education has to be revamped and redefined to make it attractive. There is a need to accord prestige and respect to vocational education and plan for the long term development of the sector.

Establish mandatory industry institution interaction cell with effective guidelines at each technical institution to close the gap of the industry skills with those that students are trained as part of the technical courses.

communication systems to connect the employers, workers and the trainers. Vocational Education needs an ecosystem which is employer and industry-driven. Vocational education needs financial resources, infrastructure, faculty, curricula developers and assessment experts which are essential building blocks (Kurup, A Et .al, 2011).

- Identify appropriate mechanisms for public private partnerships (PPPs) in higher education and skill development (Delloite, 2012).
- To establish District Universities (linked to community colleges) in Karnataka with appropriate funding and an autonomous governance structure to address skill gaps in the districts. Interlinking these Universities to State Universities.
- The Right to Education should be extended to Grade 11 and 12 which will mean that every child is assured 12 years of schooling.
- Establish an independent Teachers' Academy at the State level on a public-private partnership model to address recruitment, foundation/induction training, periodic capacity building, performance assessment, professional development, ethics, research and database management.
- The present State Council for Higher Education must be restructured to play the role of a Think-Tank. Experts with fresh thinking and new ideas need to be drawn from across the State, country and the world.
- Establish a Centre of Excellence / Skill Development Centre at all Technical Institutes to impart skill-based training to the technical students to enhance employability and entrepreneurial skills among students. Ideally these centres should work with the technical institutions to incorporate these skills into the revised curriculum of the technical courses.
- Establish mandatory industry institution interaction cell with effective guidelines at each technical institution to close the gap of the industry skills with those that students are trained as part of the technical courses.
- Establish a policy for the time bound restructuring of technical programmes as per the changing needs of the industries by redesigning curriculum, pedagogy and assessment methods through a more structured internship programmes.


KARNATAKA
Literacy Rate Scheduled Castes (SCs) - 2011
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1 cm = 29 km
Map Legend
State Capital
District Capital
International Boundary
State Boundary
District Boundary
T = Tumakuru
Bi = Bidar
Be = Belagavi
Literacy Rates (%)
Less than 50
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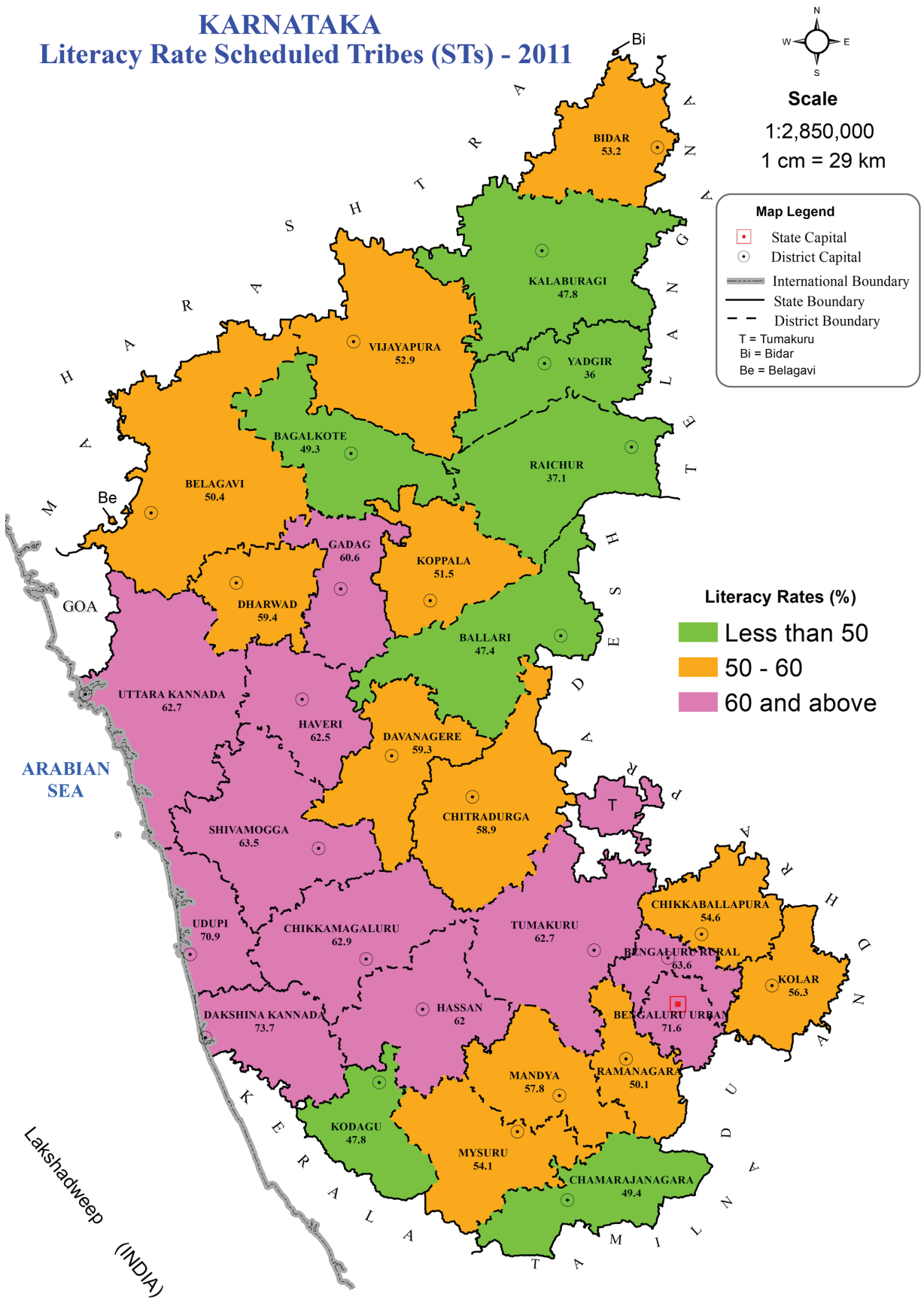
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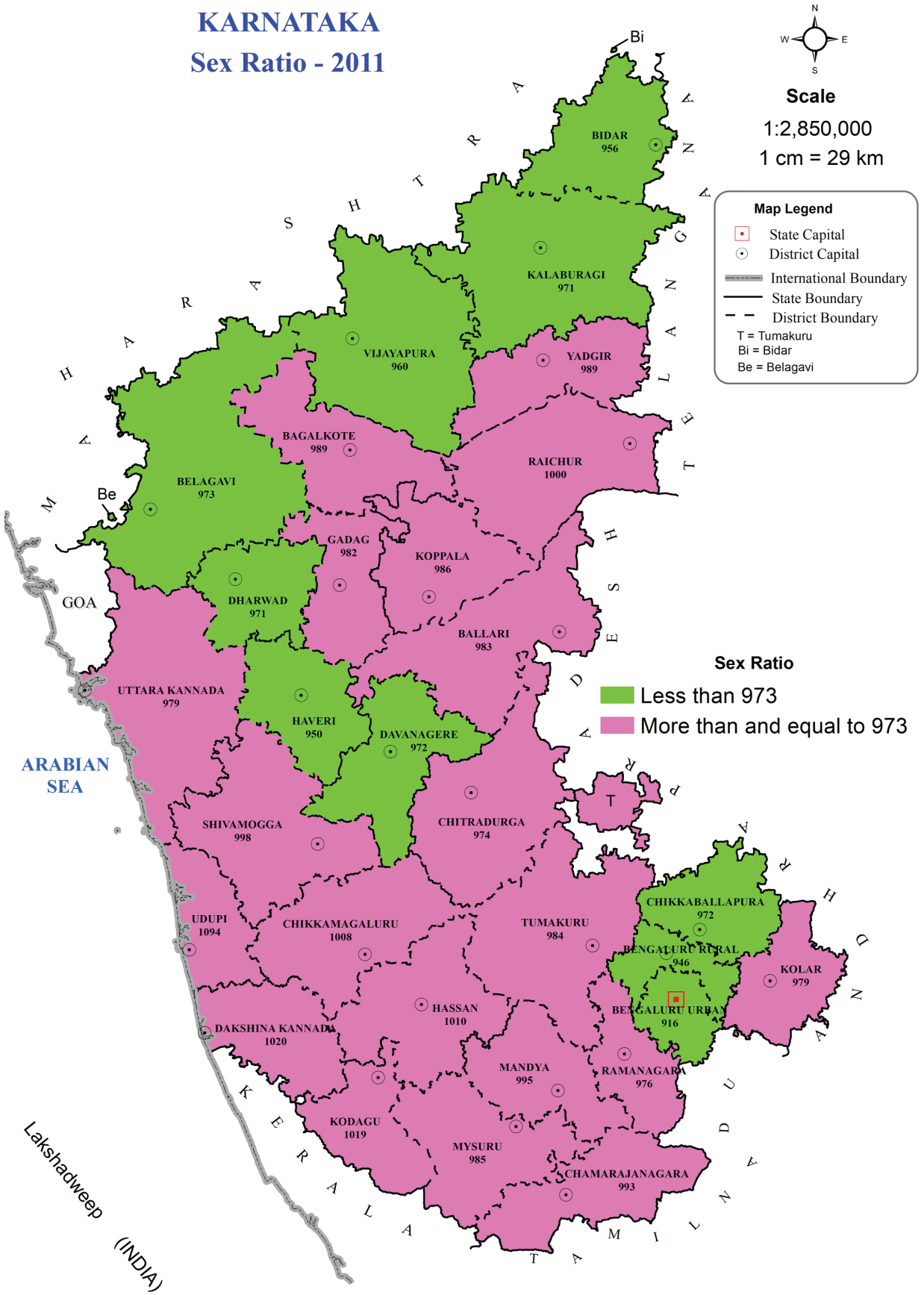
Gender and Human Development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Sex Ratio - 2011
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BENGALURU URBAN
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RAMANAGARA
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KODAGU
1019
MYSURU
985
CHAMARAJANAGARA
993
ARABIAN SEA
Lakshadweep (INDIA)
Sex Ratio
Less than 973
More than and equal to 973
MAHARASHTRA
TELANGANA
ANDHRA PRADESH
KARNATAKA
KERALA
TAMILNADU

Chapter-4

Gender and Human Development

Introduction

Taking forward the initiative begun in the year 1999, the Human Development report of Karnataka 2005, sought to review the achievements and challenges facing the government in altering the dehumanizing situation of women and reducing gender inequality in the State. Obviously, the focus of the report was primarily on women who were the worst victims/survivors of class, caste and gender based discrimination and at assessing change in the situation of social exclusion suffered by them. By highlighting the recommendations made by the Karnataka Task Force on the subject of empowerment of women, more concrete actions were recommended to steer the State policy and action for the benefit of women especially those from the marginalized socio-economic groups.

The present report comes after a decade of intense and rapid change in almost all spheres of the State and society especially due to the increased speed of economic reforms (liberalization, privatization and globalization) and altered perception of State engagement in the social sector (including efforts directed at altering the situation of multiple social exclusion/ discrimination suffered by women and other subordinate social groups especially vast segments of scheduled castes, scheduled tribes, minorities and the differently abled). Transgender groups have been brought into the gender related development discourse and State directed welfare actions during the last decade in response to their struggles for identity and justice. More focused interventions (laws, policies and schemes) inclusive of gender budgeting by the State and central governments have been undertaken to address the issues of women which result from their situation of subordination, oppression and marginalization in the gender, class and caste hierarchies. Despite all such interventions, the State of Karnataka and India (to a more or less extent along with all its States/UTs, (union territories) have yet to resolve many issues linked to life, health and survival, safety and security, identity and dignity which affect women across all social groups. This chapter seeks to take forward the discussion by attempting critical appraisal of the interventions of the State in terms of its contribution to the process of addressing problems faced by women and reducing gender disparities. Recommendations are made to facilitate more effective interventions at the level of perspectives, policies and institutional mechanisms.

Despite attempts at applying more rigorous procedures in the recent decade by the central and State government agencies, educational and civil society organizations (inclusive of international – UNDP, World Bank), the questions associated with the methodologies/ theoretical frameworks, data collection

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procedures as well as the adequacy and reliability of gender disaggregated data available on various aspect of women's life and gender realities continue to persist. Keeping these limitations in mind relevant data available from various sources on the subject is presented and analyzed here.

Gender, Demography and Health

Population Composition: Missing Women Composition of women and men in the population in absolute number and sex ratios are significant indicators of gender parity/disparity. It is a known fact that given similar conditions of life, the more sturdy and disease resistant female foetus survives better in the womb of the mother and after birth and that women have a higher life expectancy compared to men. However, in the population of the State of Karnataka as per 2011 census there were nearly 309.67 lakh men and nearly 301.29 lakh women nearly - 8.4 lakh women in absolute number were missing from the population of Karnataka – a definite manifestation of demographic trend tilted against women.

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Analysis over three decades reveals that there was a small increase in the percentage of women by 0.13 per cent from 1991 to 2001 and 0.22 per cent from 2001 to 2011. In absolute number, the Male: Female difference has also come down in 2011 compared to the previous two decades **(Table 4.1)**. These facts connote some marginal progress in attaining gender parity in the State population. However, interstate comparison of 2011 census data show that Tamil Nadu with nearly 1.29 lakh and Andhra Pradesh with nearly 3.04 lakh women less than men have a much lower gender disparity in population composition compared to Karnataka. Kerala remains an exception with an excess of 13.51 lakh women over men. At the all India level the corresponding variation is slightly above 35.67 million men over women **(Census 2011)**

Table 4.1
Gender wise distribution of the population of Karnataka (1991 to 2011)

Year	Women and men in the population						
	Total		Women		Men		Diff
	No.	Percent	No.	Percent	No.	Percent	
1991	4,49,77,201	100	2,20,25,284	48.97	2,29,51,917	51.03	9,26,633
2001	5,28,50,562	100	2,59,51,644	49.10	2,68,98,918	50.90	9,47,274
2011	6,10,95,297	100	3,01,28, 640	49.32	3,09,66,657	50.68	8,38,017

Source: Census of India 1991, 2001, 2011

It is clear from these estimates that though the space in the State of Karnataka became slightly more favourable for their survival, there are many women who are missing from the population. Missing women are not mere statistical numbers but human persons who have the right to live with security and dignity.

Age wise distribution of female and male population in Karnataka: It is important to note that the age specific data of 2011 census is already outdated by now (mid 2016). The 0-5 year age group has new entrants born since 2011 and all those listed in specific age groups have added more than 5 years to their age. This factor needs to be borne in mind when evolving age cum gender group specific policy perspective and interventions. In Karnataka as per 2011 census there were nearly 52.79 lakh boys and nearly 50.10 lakh girls in the 0-9 year age group - 2.69 lakhs boys more than girls. The **female adolescent population** (15 to 19 years) in Karnataka numbered 27.85 lakhs and male 30.42 lakhs as per 2011 census – nearly 2.57 lakhs men over women **(Table 4.2, Figure 4.1)**.

The **youth population** (20-39 years) in the State constituted nearly 107 lakh men and slightly above 105 lakh women – 1.77 lakh men over women. On the contrary among the **elderly (60 years and above)** women and men are 30.44 lakhs and 27.47 lakhs respectively – women outnumber men by nearly 2.97 lakhs. In all relatively younger age categories from 0-4 years to 59 years, males exceed female population. On the contrary in all the relatively older age groups above 59 years, women outnumber men, despite all the odds stacked against them. Such skewed sex composition at various age levels has many adverse consequences. Besides addressing the forces responsible for missing women in the relatively younger age groups, the State has to facilitate an environment conducive for the fulfillment of not only common needs/rights but also the diverse needs/ concerns of both men and women of various age categories inclusive of the elderly.

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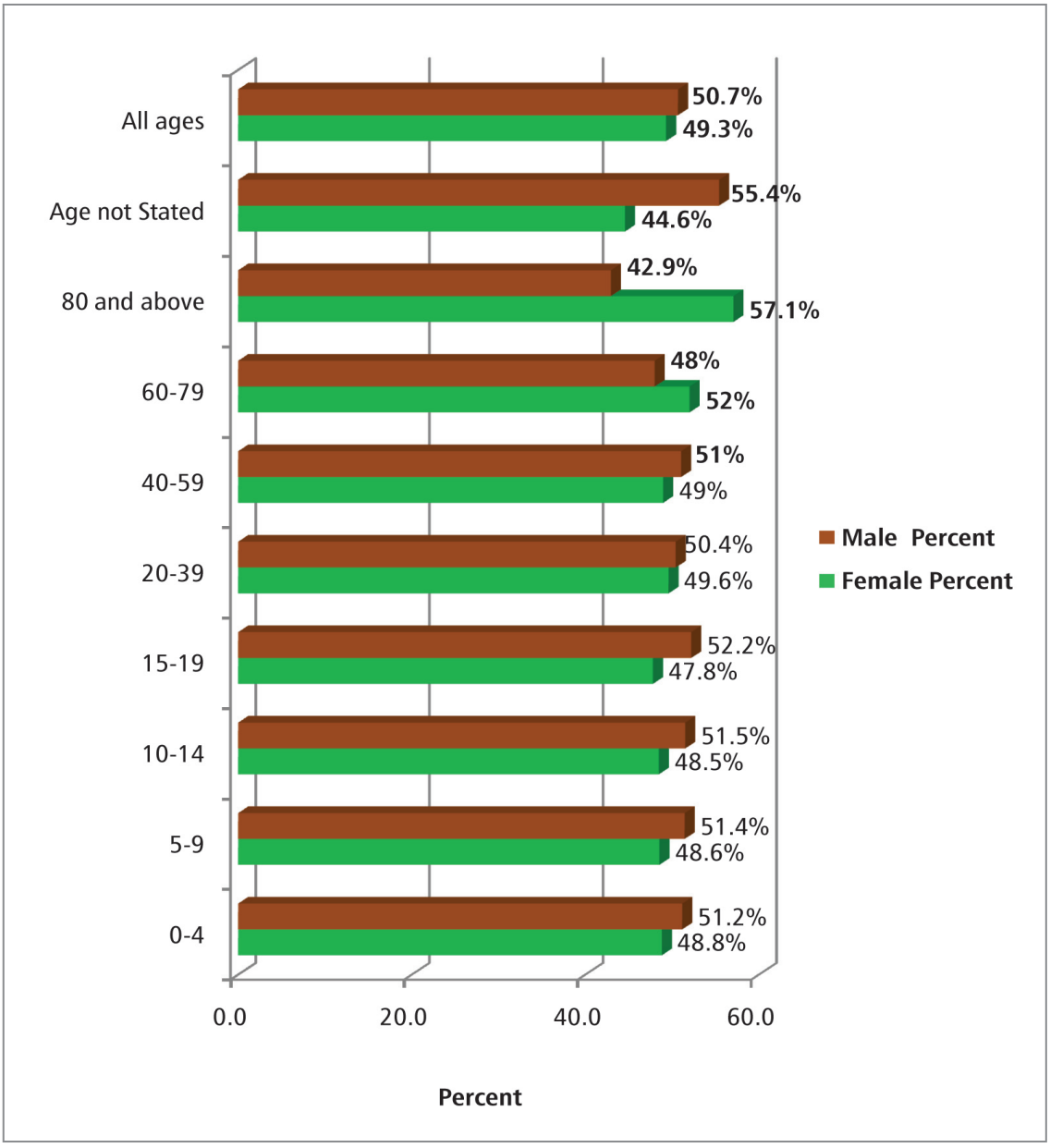
Table 4.2
Population in age groups by sex in Karnataka: 2011 Census

Age group	Total	Male		Female		Male Female Diff.	
		No	Percent	No	Percent	No	Percent
0-4	5046719	2582024	51.17	2464695	48.83	117329	2.34
5-9	5241509	2696670	51.45	2544839	48.55	151831	2.90
10-14	5736646	2955287	51.52	2781359	48.48	173928	3.04
15-19	5827277	3042048	52.20	2785229	47.80	256819	4.40
20-39	21217995	10697522	50.40	10520473	49.60	177049	0.80
40-59	12188268	6220624	51.04	5967644	48.96	252980	2.08
60-79	5165722	2478570	47.99	2687152	52.01	-208582	-4.02
80 and above	625310	268502	42.94	356808	57.06	-88306	-14.12
Age not Stated	45851	25410	55.42	20441	44.58	4969	10.84
All ages	61095297	30966657	50.69	30128640	49.31	838017	1.38

Source: Compiled from Men and Women in Karnataka, September 2015, Publication, Directorate of Economics & Statistics, Bengaluru; Please note: In the age group of 55-59 years there are 30396 women more than men. However, when this category is included in the 40-59 year age group, men exceed women.

Figure 4.1
Population in age groups by sex in Karnataka: 2011 Census



Sex ratios in Karnataka State

The comparative analysis of sex ratio of the general population, child sex ratios (0-6 years, 0-1 year) and sex ratio at birth (SRB) and sex ratios across ethnic groups provide further insights into the phenomenon of missing women in the population of the State.

General sex ratio: The sex ratio (SR) of the population of Karnataka at 973 females per thousand males as per 2011 census continues to be unfavorable to women (Table 4.3, Diagram 4.2). Residential area wise data show that rural Karnataka's sex ratio score of 979 was 16 points above urban (963). The data over the last three decades reveal that there is sustained progress towards gender parity in population composition in the State

(by 5 points from 1991 to 2001 and 8 points from 2001 to 2011). The State and civil society interventions could be held responsible for the progress. However, the fact remains that there are 27 women less per every 1000 men (21 and 37 women less in rural and urban areas respectively). The more recent data from NFHS – 4 indicates a sharp decline in sex ratio from 1,028 in 2005-06 (NFHS-3) to 979 in 2015-16 a decline by 49 points in Karnataka. This regression is mainly due to the low urban sex ratio (963) rather than the rural which is relatively high (990). The data reinforces the finding that higher knowledge about and easy access to sex selection technologies among the urbanites buttressed by non-enforcement of the PCPNDT **(Pre-Conception and Pre-Natal Diagnostic Techniques)** (Regulation and Prevention of Misuse) Act, 2014 could be behind such development. Wide variations in sex ratios across some districts in Karnataka are also sustained over the decades. Sex ratios among the major caste and religious categories also vary - among the SCs and the STs of Karnataka it is 990 vis-a-vis 973 among all categories (2011 census). Corresponding data at all India level is 945 among the SCs, 990 among the STs and 943 among all categories indicating progressive situation of women from among the SCs and other categories in Karnataka compared to their Indian counterparts. However, the fact that there are 10 women less per every 1000 SC men and ST men even in Karnataka indicate that patriarchal notions of son preference have started entering such communities which did not under value girls in the past. Christians at 1049 rank high in SR followed by Hindus, Muslims and Jains at 972, 965 and 951 respectively, whereas Sikhs and Buddhists at 803 and 739 rank low (2011 census). At all India level Christians, Jains, Muslims and Hindus at 1009, 940, 936, 931 respectively fall behind their Karnataka counterparts, whereas Buddhists who rank 2nd in SR with 953 and Sikhs who have the lowest SR at 893 have performed better than Karnataka. Analytical understanding of such variations could be arrived at only in relation to other variables – educational, economic and social when such data is available across various States.

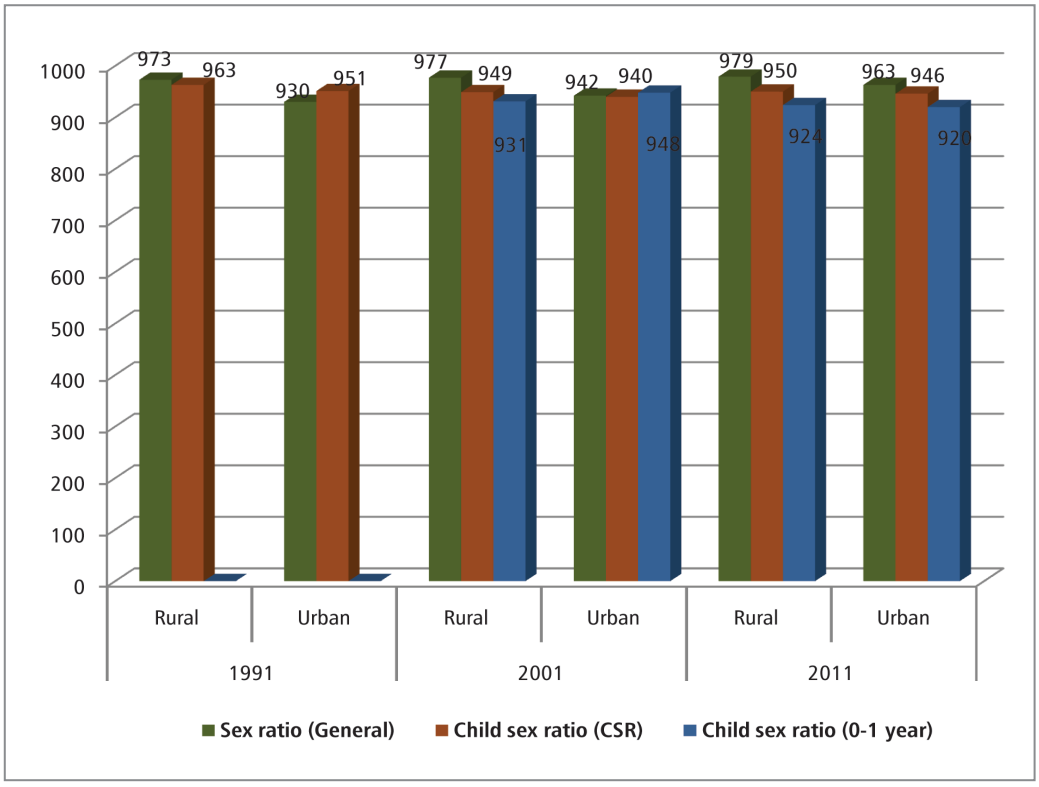
Sex ratios among the major caste and religious categories also vary - among the SCs and the STs of Karnataka it is 990 vis-a-vis 973 among all categories (2011 census). Corresponding data at all India level is 945 among the SCs, 990 among the STs and 943 among all categories indicating progressive situation of women from among the SCs and other categories in Karnataka

Table 4.3
Sex Ratios in the State of Karnataka across three decades

Sex Ratios	Sex Ratio - Residential area wise								
	1991			2001			2011		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Sex ratio (General)	973	930	960	977	942	965	979	963	973
Child sex ratio (0-6 years)	963	951	960	949	940	946	950	946	948
Child sex ratio (0-1 year)	-	-	-	931	948	936	924	920	922

Source: National Population Census of India, 1991, 2001, 2011

Fugure 4.2
Sex Ratio - Residential area wise



In fact even those districts with general sex ratio exceeding 1000 such as Udupi, Dakshina Kannada, Chickmagaluru and Hassan have relatively low CSR.

Child (0-6 years) sex ratio (CSR) CSR is estimated at 948 girls per 1000 boys (2011 census). At all India level the child sex ratio at 919 is much lower (Table 4.3). The rural, urban comparisons in Karnataka show that CSR was 950 in the former and 946 in the latter (2011 census) - urban areas revealing higher level son preference by 4 points compared to the rural (The corresponding figures at all India level are much lower at 923 in rural and 905 urban).

Religion wise CSR in Karnataka computed from 2011 census data places Christians at 962 followed by Buddhists, Hindus and Muslims at 949, 947 and 947 respectively. Sikhs and Jains at 913 each rank very low in the series. In comparison at the all India level CSR among the Christians, Muslims and Buddhist at 958, 943 and 933 is relatively higher compared to Hindus, Jains and Sikhs which is 913, 889 and 828 respectively. It is evident that all religious groups fare better in Karnataka than their all India counterparts in CSR. However, daughter de-preference is prevalent to a more or less extent among all religious groups in the State.

District wise variations in CSR (0-6 years) reveal that no district in Karnataka has a CSR beyond 975 except Kodagu (978) as per 2011 census (Table 4.4). In fact even those districts with general sex ratio exceeding 1000 such as Udupi, Dakshina Kannada, Chickmagaluru and Hassan have relatively low CSR. There are few districts such as Ramanagara, Kolar, Mysuru. from old Mysuru Region, all the four districts of south Karnataka Malanad Region and Ballari from Hyderabad Karnataka region have sex

Ratio. above 960. whlle Kodagu has the highest sex Ratio of 978. Vijayapura has the lowest sex Ratio of 931 in the State. In other words although daughter de-preference is prevalent to a more or less extent across all districts and regions of Karnataka, parts of the Hyderabad Karnataka and the Mumbai Karnataka regions appear to have higher tilt towards males.

Table 4.4
Sex-ratio of the 0-6 year child population (district wise) in Karnataka

Sex Ratio (number of females per 1000 males) by residence : 2001-2011								
State / District	Sex Ratio 2001				Sex Ratio 2011			
	Total	Rural	Urban	Diff.	Total	Rural	Urban	Diff.
South Karnataka - Old Mysore region								
Bengaluru	943	953	941	12	944	953	943	10
Bengaluru Rural	939	944	925	19	950	947	956	-9
Chikkaballapura	952	953	949	4	953	957	941	16
Ramanagara	945	947	938	9	962	961	964	-3
Chitradurga	946	947	944	3	947	947	948	-1
Davanagere	946	950	934	16	948	946	952	-6
Kolar	965	971	949	22	962	955	979	-24
Tumakuru	949	950	946	4	959	959	959	0
Chamarajanagara	964	965	960	5	953	954	951	3
Mysuru	962	967	952	15	961	963	959	4
Mandya	934	929	960	-31	939	938	944	-6
South Karnataka, Malnad region								
Chikkamagaluru	959	960	952	8	969	971	963	8
Hassan	958	964	932	32	973	977	957	20
Shivamogga	956	957	954	3	960	958	966	-8
Kodagu	977	975	988	-13	978	978	974	4
South Karnataka -Old Madras Region (Tulunadu)								
Dakshina Kannada	952	947	960	-13	947	951	942	9
Udupi	958	957	966	-9	958	960	952	8
Bombay Karnataka Region								
Bagalkote	940	945	924	21	935	936	931	5
Belagavi	921	923	915	8	934	936	929	7
Vijayapura	928	932	914	18	931	933	924	9
Dharwad	943	942	944	-2	944	933	954	-21
Gadag	952	950	955	-5	947	946	950	-4
Haveri	957	959	946	13	946	953	921	32
Uttara Kannada	946	947	945	2	955	957	950	7

Sex Ratio (number of females per 1000 males) by residence : 2001-2011								
State / District	Sex Ratio 2001				Sex Ratio 2011			
	Total	Rural	Urban	Diff.	Total	Rural	Urban	Diff.
Hyderabad Karnataka Region								
Ballari	947	953	934	19	960	957	966	-9
Bidar	941	948	921	27	942	949	923	26
Kalaburagi	931	939	911	28	943	944	940	4
Yadgir	952	955	938	17	951	954	937	17
Koppal	953	952	958	-6	958	955	973	-18
Raichur	964	969	948	21	950	951	949	2
Karnataka	946	949	940	9	948	950	946	4
India	927	934	906	28	919	923	905	18

Source: National Population Census of India, 2011

Child sex ratio (0-1 years) Rajan S Irudaya et.al (2015) support the conclusions arrived at by a previous analysis of 0-1 year sex ratios, by using the data on 21 million live births which occurred in the year preceding the census 2011 **(Table 4.3)**. His calculations in relation to Karnataka State show, 0-1 year child sex ratio was 936 in 2001 which declined by 14 points to reach 922 in 2011. The decline in rural Karnataka during the two periods was by 7 points (931 in 2001 to 924 in 2011) and in urban Karnataka by 28 points (948 in 2001 to 920 in 2011) - four times more decline in urban over the rural areas.

From these facts it can be said that the climate is not yet conducive enough in the State to safeguard the rights of girls to be born and live with security and dignity.

Sex Ratio at Birth (SRB) In Karnataka, the SRB declined by 64 points from 1047 in 2008 to 983 in 2011 and further by 90 points within five years to reach 893 in 2015 **(Figure 4.3).** Such dangerous slide is noted only in Tamil Nadu (by 87 points from 905 in 2011 to 818 in 2015). In Andhra Pradesh the decline is by 12 points only (from 983 to 971) and in Kerala a rise by 9 points (from 939 to 948). At the national level the decline in SRB is reportedly by 28 points from 909 in 2011 to 881 by 2015 (Vital statistics of India based on the Civil Registration System, 2015). The most recent data provided by NFHS – 4 (2015-16) for children born in the last 5 years in Karnataka also reinforces the CRS data given above - 910 female births per 1000 male births - 90 female births less per every 1000 male during the last 5 years - a decline by 12 points since NFHS-3 (2005-06) when it was 922. While Kerala manifests remarkable progress in SRB from 925 to 1047 during the period, Karnataka slides below Tamil Nadu and Andhra Pradesh, only exception being rural Karnataka with higher SRB (935) than Andhra Pradesh (880). From these facts it can be said that the climate is not yet conducive enough in the State to safeguard the rights of girls to be born and live with security and dignity.

Figure 4.3
Sex Ratio at Birth in Karnataka - 2011 and 2015

Source: Vital statistics of India based on the Civil Registration System 2015

Negative effects of declining sex ratio have been noted by researchers such as reinforcing the notion of low value attached to the women, shortage of girls for marriage and rise in incidents of violence on women. Bride deficit in certain caste and religious communities and regions has resulted in trade in brides from poverty stricken homes (Senthalir, S., 2010). Many such brides, some from Karnataka, Kerala and other States have landed into extremely oppressive conditions of life in different cultural contexts (especially in bride deficit north western States). Some of the rising incidence of abduction or kidnapping of women are associated with marriage as per the National Crime Records Bureau (2013 and 2014).

The factors held responsible for son preference leading to missing women in the population are- use of pre-conception and pre-natal sex selection technologies, foeticide and infanticide and those that are associated with non-enforcement of law (i.e. PCPNDT Act, 2014) inclusive of unethical medical practices by doctors. The complexity of forces socio-structural/ institutional, cultural and behavioural (psychological or mind set centred) are responsible for discrimination against women in a patriarchal social setup, and for son preference on the one hand and daughter de-preference on the other. For instance son preference is associated with economic forces such as the choices the households are forced to make under extremely adverse conditions of livelihood insecurity – e.g. lack of secure jobs and adequate income, shrinking size of agrarian land holdings and decreasing productivity of farms and closure of small scale enterprises. A politico economic factor linked to daughter de-preference is amendment to laws of inheritance of property such as the Hindu Succession Act 2005, that provides a share of immovable properties such as lands, house and other capital assets to daughters and the consequent increase

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Much higher incidence of child marriage in the State is revealed by the NFHS-4 (2015-16) – which places the percentage of women age 20-24 years married before age 18 years in the State at 23.2 per cent. It declined by 18.6 per cent over the decade from 41.8 per cent in 2005-06.

in fragmentation of lands/division of houses and increasing litigation associated with parental properties. Experience of violence among women is another factor that de-motivates even women from opting for daughters. So it is important to note that historically entrenched misogynous cultural ethos, which pervades the patriarchal institutional sites and the mindsets of the people, combined with the adverse effects of escalating consumerism, economic divide and resultant economic crisis in various combinations have contributed to the persistence of low sex ratio in Karnataka and India.

Child marriage: The data on **child marriage** from DLHS – 4 (2012-13) shows that 14 per cent women (18 per cent in rural and 7.4 per cent in urban areas respectively) were married below legal age in the State of Karnataka. In comparison data from DLHS-3 conducted in 2007-08 is 22.4% women (25.7% in rural and 14.3% in urban), showing a definite decline by 8.3 per cent over the last five years. Much higher incidence of child marriage in the State is revealed by the NFHS-4 (2015-16) – which places the percentage of women age 20-24 years married before age 18 years in the State at 23.2 per cent. It declined by 18.6 per cent over the decade from 41.8 per cent in 2005-06, more sharply in rural areas of Karnataka (23.1 per cent) than the urban (10.6 per cent). In brief these facts indicate that the incidence of child marriage among women, though slightly (only 3.6 per cent) below the national average (26.8 per cent) in 2015-16, it continues to be a serious issue of concern, more so in the northern districts of Karnataka. Andhra Pradesh is the only State among the four southern States faring worse than Karnataka in this respect, although it is showing steeper decline than Karnataka and other southern States compared here, including India as a whole **(Table 4.5).** The problem is prevalent even among the men, though to a much lower extent than among women (men age 25-29 years married before age 21 years was 10.9 per cent in 2015-16 (NFHS – 4) a decline by 7.2 per cent points from 18.1 per cent in 2005-06), which has negative consequences though not to the extent and intensity as among women.

Table 4.5
Women (aged) 20-24 years married by age 18 years – Percentage in Karnataka & other major southern States and India

	NFHS-3 (2005-06)			NFHS-4 (2015-16)			Decline over the decade %		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Karnataka	28.5	50.1	41.8	17.9	27.0	23.2	10.6	23.1	18.6
Andhra Pradesh	41.5	61.4	54.8	26.3	35.5	32.7	15.2	25.9	22.1
Kerala	9.2	19.4	15.4	7.7	7.5	7.6	1.5	11.9	7.8
Tamil Nadu	18.0	26.8	22.3	13.0	18.3	15.7	5.0	8.5	6.6
All India	29.3	56.2	47.4	17.5	31.5	26.8	11.8	24.7	20.6

Source: NFHS -3 (2005-06) and NFHS-4 (2015-16)

Besides conducting campaigns to create awareness by using multimedia channels against the evil of child marriage and the law prohibiting child marriage, programmes targeted at promoting education among children especially girls, programmes such as Bhagyalaxmi were introduced in 2004 and extended since then to cover more girls from BPL households. The Government of Karnataka constituted a core committee headed by Justice Shivraj V. Patil in early 2011. Acting upon the committee's significant recommendations, the government of Karnataka has initiated several new measures, such as amending the **Karnataka Prohibition of Child Marriage Act, 2006 by** initiating and completing the process of enacting the Prohibition of Child Marriage (Karnataka Amendment) Bill, 2016. The new bill seeks to ensure not only zero tolerance to child marriage by making it void ab-initio, but also a minimum period of rigorous imprisonment for offenders including penalties for those who attend such marriage ceremonies and power to police officers to take up such cases suo-moto. Child marriage prohibition monitoring cell, setup in the department of women and child development and the child marriage prohibition officers appointed by government at the State, district and taluk levels vide notification dated 20-8-2008 and addendum issued on 16-11-2011 have the responsibility to carry forward the mandate of the committee in association with the civil society fora inclusive of child line and other child right protection centered institutions. Yet, the NFHS -4 (2015-16) reported that women age 15-19 years who were already mothers or pregnant were 7.8 per cent (5.3 urban and 9.6 rural)

Transgender persons: One of the most neglected, harassed and discriminated segment of society, The transgenders are subjected to multiple forms of severe social exclusion. For the first time they were included as a distinct 3rd gender category in the enumeration process of 2011 census - totally 20,266 persons were identified as transgender in the State of Karnataka, out of whom there were 1,771 children of the 0-6 year age group. Corresponding figures at the all India level are nearly 4.9 lakh persons inclusive of 54,854 children **(Table 4.6).** There are transgender activists who claim that the number of transgender persons is 6 to 7 times higher than the census estimates. Sixty six per cent of the transgender population is said to be residing in rural areas (0.1 per cent of the total rural population). The socio-economic and caste census (SECC, 2011) released by the Ministry of Rural Development, Government of India show that in rural Karnataka only 2,716 persons have identified themselves as third gender (with high variation from one district to the other - minimum of 8 persons in rural Chikkaballapura to the maximum of 210 persons in Uttara Kannada). Corresponding data for rural areas of southern India was 12,743 persons and rural India 74,544 persons (Socio-Economic Caste Census 2011 - Rural). There appears to be lack of coherence between the data from the two sources namely National Population Census and Socio-Economic and Caste Census indicating the need for a more systematic survey to identify transgender persons.

The transgenders are subjected to multiple forms of severe social exclusion. For the first time they were included as a distinct 3rd gender category in the enumeration process of 2011 census - totally 20,266 persons were identified as transgender in the State of Karnataka.

Table 4.6
Transgender persons in Karnataka and India – 2011 census

Location	Number of transgender persons				
	Transgender	Child (0-6)	SC	ST	Literacy
Karnataka	20,266	1,771	3,275	1,324	58.82%
India	4,87,803	54,854	78,811	33,293	56.07%

Source: http://www.census2011.co.in/transgender.php

The gender disaggregated data from NFHS-4 (2015-16) makes it clear that 44.8 per cent of the women and 18.2 per cent men (age 15-49 years) in Karnataka are anaemic. Further the anaemic rural women were found to be relatively in larger percentage (46.2 per cent) compared to their urban counterparts (43 per cent).

For the first time the data collected on suicides among transgender persons in 2014 reveal that there were 2 victims in Karnataka and 16 at all India level – mirroring the mental agony that transgender persons go through in an atmosphere of extreme discrimination and deprivation.

Transgender persons are subjected to perverse abuse, violence and exploitation. Parental abuse often forces many of them out of their homes into ghettos of poverty and degradation where transgender persons struggle to survive often by resorting to sex work or begging. Discriminated against in every walk of life, they remain deprived of opportunities to access education and employment. The literacy rate among the transgender persons is noted to be 58.82 per cent only in the State of Karnataka slightly above that of India (56.07 per cent) and much below the average rate of literacy of the general population. They drop out of school early as a result of harassment and bullying. The proportion of those employed among them is found to be very low. Very few among them have contested elections and those who have won elections among them are fewer. Even the few who have accessed education, employment and positions of authority have done so after much struggle against severe forms of harassment and violence ***(http://www.thesoftcopy.in/archive/softcopy_2012_13/04_10_12_shreyag_transgender.html).***

Health - Physical and Mental Well-being

Dimension of health is already dealt with in another chapter in this report. However, a few significant issues with gender dimension are highlighted here as these throw light on the deeper malaise impacting physical and mental well-being amongst women and men. Gender bias from conception (unethical use of sex selection technologies against the female) infancy to adulthood is also unearthed by census reports, surveys and other studies.

Gender discrimination in access to food / nutrition

The gender disaggregated data from NFHS-4 (2015-16) makes it clear that 44.8 per cent of the women and 18.2 per cent men (age 15-49 years) in Karnataka are anaemic. Further the anaemic rural women were found to be relatively in larger percentage (46.2 per cent) compared to their urban counterparts (43 per cent), whereas anaemic men in rural and urban areas were placed at 18 per cent. Anaemic pregnant women were 45.4 per cent. According to a study by Global Alliance

for Improved Nutrition (GAIN), 56 per cent of young girls and 30% of young boys in India - one out of two adolescent girls and one out of nearly every three boys are anaemic. These facts indicate that more women have insufficient access to food/nutrients compared to men. Malnutrition is a breeding ground for life cycle disabilities.

Gender Discriminaton in Health Care

In India's Special New Born Care Units (SNCUs') which at present treat 7,00,000 new-born children in various parts of India, only 40 per cent of those admitted are girls. For every two boys only one girl gets admitted according to UNICEF report (Kounteya Sinha, 2015). A Gender bias in treatment of diseases is also observed. Another recent study by the American college of Cardiology/ Foundation across outpatient departments of 17 hospitals across India between 2011 and 2015 found shocking gender bias in the treatment of heart diseases, the leading cause of deaths across India. (Iyer, Malathy, 2016).

Unnecessary surgeries - the systemic violence on the body of women

Only four issues among many are highlighted here: The procedure of **hysterectomies** on hapless women from lower income families unearthed by the Karnataka Janarogya Chaluvali (NGO) in 2015 and the subsequent media exposure, the expert committee appointed by the State government to probe the racket found shocking facts about breach of prescribed medical protocol in performing these surgeries. (Srivastava, Roli, 2016). An inquiry committee set up by the Department of Health and Family Welfare found in Birur community health centre, Chikkamagaluru district, 1,428 "unnecessary hysterectomies" were conducted from 2012-14 - more than 40 per cent of the women who underwent the surgery were below the age of 35, (Sivanandan, T.V.2016). The misuse of **caesarean operation** (C section) - a surgical intervention that had been designed for saving lives of women in case of serious delivery complications is another matter of concern (Ankita Rao, 2015). As per District Level Health Survey (DLHS) - 4 (2012-13) there were totally 7.7 per cent (7.3 rural and 8.3 urban) C - section deliveries in the government institutions in the State of Karnataka. The corresponding figures in private hospitals was 14.5 per cent (10.1 per cent in rural and 21.2 in urban). In comparison as per DLHS - 3 (2007-08) there were only 4.8 per cent and 8.6 per cent such deliveries in government and private institutions respectively. **Tubectomy** (female sterilization) is another more painful medical procedure which has been extensively advocated and adopted in various parts of India as a method of population control/ family planning, although vasectomy (male sterilization) is a safer and least painful procedure. According to NFHS-4 (2015-16) totally 48.6 per cent (42.8 per cent rural and 52.8 per cent urban) women were subjected to tubectomy procedure in Karnataka, whereas only 0.1 per cent men (from urban areas only) adopted vasectomy adhering to various patriarchal myths in circulation. Adoption of **cosmetic surgeries** and use of harmful cosmetic products are other practices to which the bodies of women are subjected.

As per District Level Health Survey (DLHS) - 4 (2012-13) there were totally 7.7 per cent (7.3 rural and 8.3 urban) C - section deliveries in the government institutions in the State of Karnataka. The corresponding figures in private hospitals was 14.5 per cent (10.1 per cent in rural and 21.2 in urban).

Issues such as domestic violence, sexual exploitation and the problems arising from economic dependence on men of the household and lack of freedom to make choices/ decisions also affect the physical and mental health among women.

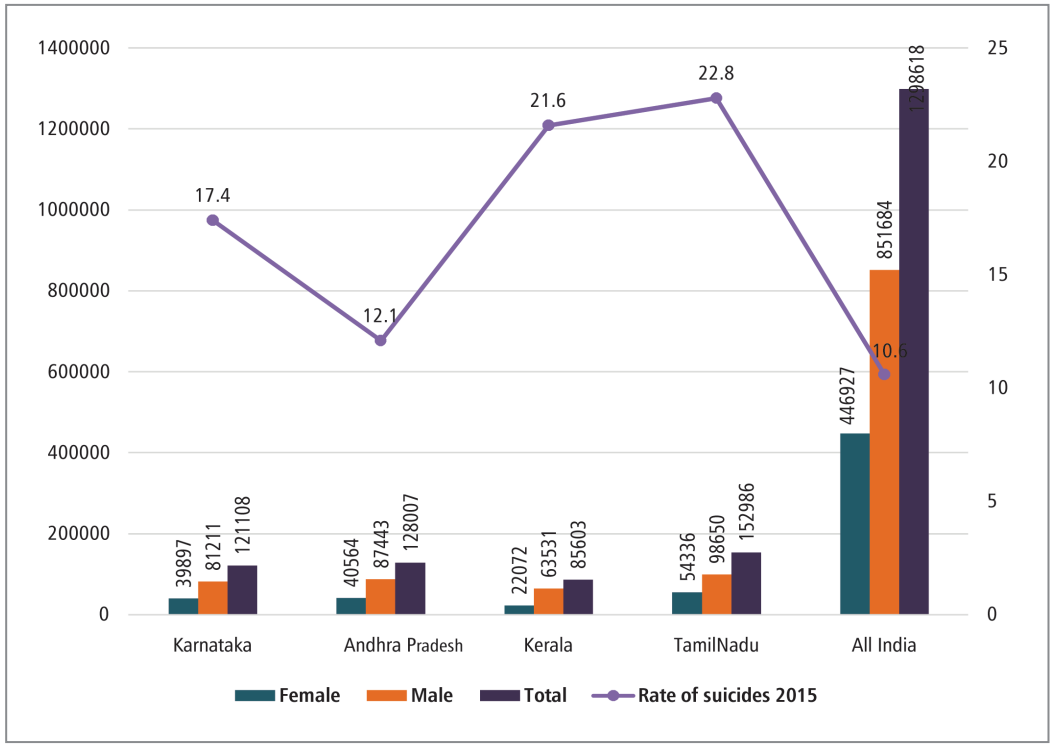
Gender dimension of non-communicable inclusive of mental health disease burden

Non-communicable diseases (NCDs) include cardio vascular (heart and blood vessel related) diseases, chronic respiratory (lung related) diseases, diabetes, digestion related ailments, many types of cancers, mental stress related illnesses inclusive of addictions, Mental stresses and anxieties, life styles (inclusive of dietary practices), environmental issues (air, water pollution and food toxicity) as well as genetic factors are considered responsible for non-communicable diseases by a number of experts. Issues such as domestic violence, sexual exploitation and the problems arising from economic dependence on men of the household and lack of freedom to make choices/ decisions also affect the physical and mental health among women. **Four main NCDs – cardiovascular, cancer, diabetes and chronic respiratory** resulted in 85.8 lakh deaths in India as per the W.H.O, Non-Communicable Disease Monitor, 2015. Cardiovascular diseases accounted for 23 per cent of all deaths in 2010-13 compared to 20 per cent in 2004-06 (Rukmini, S, 2015). W.H.O has predicted that by 2020, 40 per cent of all deaths in India will be because of coronary artery disease (Dhar, Shobita, 2016). **Various forms of addictions** (i.e. to alcohol, drugs, smoking, gambling, T.V, Internet, face book) could be considered as self abusive behavioural manifestations which indicate emotional illness. Although less women are addicted to alcohol, smoking and gambling, it is not only men who bear the ill effects of such addictions but also women and children (i.e. as victims of violence, loss of income/assets and passive smokers). Gender sensitive research and analysis of the root causes responsible for various types of addictions could help in evolving more holistic approaches to tackle the persistence of such diseases which result in much suffering, injury and disease. **Increasing incidence of persons suffering from stress related ailments such as anxieties, hypertensions and sleeplessness** are other manifestations of declining mental health. The NFHS-4 (2015-16) reveals that 7 per cent of women and 12 per cent of men in Karnataka suffer from slightly above normal hypertension. Those suffering from moderately high and very high hyper tension are comparatively less, However, even in this case, the men outnumber women. The NIMHANS Survey 2015 – 16 has revealed that nearly 11% of Indians above 18 years are suffering from mental disorders. This situation has potential to impact lives/relations (especially gender) among people within families and work places in many adverse ways. In India an estimated 70 million people are living with psycho-social problems and disabilities. According to government estimates one in five people in India need counseling, either psychological or psychiatric. However, there are less than 50 government mental health establishments to cater to their need for treatment (Kanth, Rajani, 2015).

Rising burden of suicides is another significant manifestation of the deteriorating mental health climate (high stress/anxiety levels) in a specific location/region. Suicide is the worst form of self abuse directed against one's own self. People resort to suicide as a last resort, as a sign of distress and loss of hope but also as a last desperate act of resistance against abuse, harassment, discrimination, humiliation and loss

of dignity/respect (perceived sense of failure). Many cases of unnatural deaths and accidents may also be suicides or homicides. **Gender wise data (NCRB) on suicide mortality in Karnataka** reveal that over the last 10 years (2006-2015), the number of women who committed suicides is 39,897 and men 81211 – slightly above two men per every woman **(Figure 4.4).** Karnataka ranks 3rd among the four southern States in rate of suicides (much higher than the national average) and 2nd in terms of total suicide cases. As suicide has been decriminalized recently by amending the age old law, more such cases inclusive of attempts at suicide may get registered (especially among women who send signals of distress through such attempts).

Figure: 4.4
Suicides in Karnataka, Southern States and India



*Source: National Crime Records Bureau – Decadal data - 2006 to 2015; * Please note that the sum total of suicides at all India level includes 7 transgender cases.*

According to Patel, V (2010), "suicide will soon become India's number one killer". He considers suicide the second leading cause of death among the young in India – out of the total cases of suicidal deaths among those aged 15 years or older, about 40 per cent men and about 56 percent women were aged 15-29 years. Suicide deaths occurred at younger ages in women (average age 25 years) than in men (average age 34 years). Recent evidence from NCRB, 2014 and 2015 reveal that among the women, housewife constitute the majority of those who committed suicide and among men the self employed. Women and men from the socio-economically marginalized groups have been driven to suicide in larger number highlighting the importance of economic security for human well-being.

Box 4.1
Women bear the worst consequences of male suicides

For instance Sainath P. who has done in-depth work on agrarian distress has rightly pointed out that farmer suicides are not of the dead but that of the living. This can be said about most cases of male suicides. It is wives, children, elderly parents and other dependents left to struggle for survival, often face debt burden and other emotional traumas, who are the worst victims / survivors in such cases.

Gender and Education

Equitable opportunities to access all types of education from the pre-school to the university, in all areas of education generic or specialized and vocational or professional among girls and boys, women and men at all ages across all social groups are essential to ensure human well-being and gender equality. As the chapters on education provide analysis of gender disaggregated data on most aspects of education, the focus here will be on the subject of gender sensitivity in particular and social sensitivity in general that learners need to acquire through educational pedagogy at various levels of education and in various streams (i.e. generic, technological, medical) of education. In the absence of generally accepted list of indicators to assess the extent of gender sensitivity among the managers, teachers and learners in the sphere of formal education and comparative research studies to assess the outcomes of education on the subject, we can make only a few hypothetical observations on the subject.

On the positive side, access to education has enabled an increasing percentage of educated women to make crucial choices pertaining to their own lives – education, career, marriage and children.

On the positive side, access to education has enabled an increasing percentage of educated women to make crucial choices pertaining to their own lives – education, career, marriage and children. Many gender sensitive articulate and confident women as well as men, formally well qualified with degree and above education in every sphere of society, to a more or less extent across all social groups (inclusive of dalits and adivasis) and regions of Karnataka are visible. There are an increasing number of women and their male partners who are sharing household and child rearing tasks. Besides women, men who have internalized feminist perspectives and constituted collectives (e.g. Men against Masculinity) and actively engaged in struggles against all forms of abuse and human rights violations (on women and men) are increasing (Menon, N, 2013). On the negative side, the heaviest burden of domestic and caring tasks is still borne by housewives and employed women. Many formally educated, professionally qualified women are also not free from the double/triple role burden.

Critical analysis of educational pedagogy reveals the persistence of gender biased messages by omission (i.e. leaving out messages that are women and transgender centric from text books/syllabi) and commission (gender biases present in texts, activities, teacher behaviour and educational pedagogy in general). The perpetuation of prejudices directed at other social categories within the

educational campuses is also a serious concern. A study report in 2010 by Mary Thornton of five educational institutions in India and the UK notes that "separation of social groups in the higher education campus is pervasive and ubiquitous. While some separation may be for supportive reasons, at other times it is due to overt discrimination on the grounds of race, religion, nationality, caste, class or gender" (cited in Thorat, 2016). There are systemic weaknesses and constraints inherent in the education system (which in turn reflects the larger hierarchical politico-economic system) that hinders creation of a climate essential for imbibing among the learners the values of justice, equality, liberty and fraternity enshrined in the Indian Constitution – in short humanization of their selves.

Gender and Economy

As most issues connected with economy including employment related aspects are covered elsewhere, only certain significant areas with implications for women and gender relations are highlighted here:

Decreasing work participation and economic autonomy among women: Some of the major recent sources of data on employment are Economic Survey of India (2013-14), Census of India (2011), National Sample Survey (2011-12) and National Family Health Survey (NFHS-4). According to the census of India (2011) data proportion of total employed women workers in Karnataka is 319 and men 590 per 1000 – slightly lower than one woman for every two men. Corresponding data at the national level is 255 women and 533 men – slightly above two men per every woman. As per National Sample Survey, roughly one out of 3 women of the working age group is reportedly engaged in the labour force, compared to nearly two out of 3 men in Karnataka (NSS, 2011-12, 68th Round, Report No. 554). According to this source labour force participation rate (LFPR) among women declined by 102 points - from 348 in 2005-06 to 246 per 1000 in 2011-12. In comparison LFPR among the males rose by 24 points from 586 to 610 during this period. According to Economic Survey of India (2013-14) LFPR for persons of age 15-59 according to usual principal status is 319 for women and 788 for men and worker population ratio in principal status is 310 for women and 776 for men. As per NFHS-4 (2015-16), only 29 per cent of the women (29 per cent rural and 29.4 per cent urban) in the State of Karnataka were engaged in cash payment related work in the last 12 months less than one out of three women – a decline by 5.7 per cent from 34.7 per cent in 2005-06 (NFHS-3). It is evident from all these sources that the participation of women in employment in Karnataka is very low. Even in the organized sector – both public and private, the percentage of women employed continues to remain low compared to men (nearly 16.11 lakh men and slightly above 7.75 lakh women in Dec.2015) (D E S, 2005-06 to 2007-08, 2010-11, 2014-15 and 2015-16).

The economic development policies have resulted in low employment growth in agricultural sector which employed 75 per cent of the women. While males have accessed non-agricultural jobs to a relatively higher extent in sector such as construction, manufacturing and services, women with lack of appropriate competencies, opportunities

According to the census of India (2011) data proportion of total employed women workers in Karnataka is 319 and men 590 per 1000 – slightly lower than one woman for every two men. Corresponding data at the national level is 255 women and 533 men – slightly above two men per every woman.

and gender barriers are pushed back into their own homes – mostly ending up performing household work including **care work** (up to 39 per cent of GDP in India (Public Health Foundation of India, 2015)). Much of women's contribution to production remains invisible as they are seen to be engaged in supplementary tasks which do not result in acquisition of income. Lack of an autonomous, secure and sustainable source of income/ salary/wage, places women in situations of disadvantage. It results in the loss of personal autonomy and economic independence, increases dependence on and subordination to men. It reinforces their secondary status in the family and society at large and makes them vulnerable to abuse.

Lack of an autonomous, secure and sustainable source of income/ salary/wage, places women in situations of disadvantage. It results in the loss of personal autonomy and economic independence.

Vulnerability of employment especially among women of the marginalized social groups: The 2015 UNDP report estimates vulnerable employment (percentage of total employment) in India as a whole at 80.8 per cent. Out of 100 workers in India slightly above 19 per cent (fewer women among them) have secure work opportunity to ensure their personal and family well-being. Employment is increasingly in the low paid, **informal sectors** in both rural as well as urban areas – more so among women in Karnataka as in other parts of India. The crisis ridden agrarian, artisan and petty enterprise economy does not provide security of work for a substantial number of persons especially women. As per NSS estimates between 2004-05 and 2009-10, the number of self-employed female workers engaged in agriculture and related activities decreased by 19 million in India (Thomas J J, 2013). Most members of the rural households pushed into urban slums and streets because of dearth of adequate livelihood options in the villages, function as construction workers, sanitary workers, street vendors, domestic workers and other low paid employees in offices, shops and malls. Women invariably earn less wages/ salaries/income and are more insecure in the informal sector. According to the Walk Free Foundation (2016), out of 167 countries covered by the study, India has the highest number people caught up in modern slavery – out of 1.3 billion people in India, 18.35 million (1.40 per cent of the population) are engaged in one or the other type of modern slavery – forced sex work, forced labour (bonded and child), forced marriage, domestic work and beggary – the majority are women among them.

Vulnerability of employment in the private organized sector is another major issue, more so with women. All India NSS data reveal that between 2004-05 and 2009-10, 3.7 million manufacturing jobs were lost in the country - more than 80 per cent of those who lost their jobs were women (Thomas J J., 2013). Therefore, generating sustainable work opportunities/ livelihood options is essential for the well being of individuals (women and men), households and State/society. Lack of sustainable employment adversely affects the self image of individuals and makes them vulnerable to exploitation and abuse (more so for women in gender unequal environments). Poor and hazardous work conditions have harmful effects on physical and mental health of women and men workers. Insecure and dehumanizing work climate is considered one of the primary reason responsible for turning men into self abusive direction (e.g. addiction to alcohol, drugs, smoking, and other forms of self harm inclusive of suicide) but also abusive towards others

especially dependent members of their own families – women in particular. Rising incidents of brutal sexual attacks on women in public places are often associated with men/juveniles who live and work under inhuman conditions. In short generating sustainable work opportunities / livelihood options is essential for the well being of individuals (women and men), households and State/Society.

Ownership of Assets Ownership of assets such as land, house and other properties by women vis-a-vis men within the households and the locality is an important indicator of the status of women and extent of gender parity that prevails in a locality or social group. The India Human Development Survey (IHDS–II, 2011-12) provides State wise data on incidents of agricultural land ownership as well as agriculture land ownership conditional on household ownership. In the former category of land ownership there were 23.6 per cent and in the latter 35.7 per cent men in Karnataka. Corresponding percentages among women were 3.7 and 5.9 percent respectively. Only 10 per cent women had some type of ownership of land compared to 59.3 percent men. Andhra Pradesh and Kerala are better placed than Karnataka, whereas Tamil Nadu fares worse in incidents of land ownership and slightly better than Karnataka in incidents of land ownership, conditional on household ownership. All India situation of land ownership among women appears to be slightly better than that of Karnataka (Lahoti, R., Suchitra J Y, Swaminathan, H, 2016).

According to the Karnataka Household Assets (KHAS) Study (2010-11) in at least 66 per cent of the households, legal ownership of principal residence, agricultural land and other real estate were exclusively with men whereas only 21 per cent of the women had legal ownership to such assets. Corresponding figures for urban areas of Karnataka are 31 per cent men and 13 per cent women. The study concludes that women are least likely to own their residence and agricultural land and most likely to own jewellery, livestock, agricultural tools and certain consumer durables. In most cases where women own assets they are co-owners with some or all household members and jewellery is the only asset they own individually. Since jewellery is often pawned or sold during economic crisis, it leaves women asset-less and more vulnerable even though it provides a coping strategy for households. Further the survey notes that there are a significant portion of widows among those with ownership titles over the land and house (Swaminathan, H., et al, 2012). District wise variations were also found by the KHAS study.

As per NFHS-4 2015-16, the percentage of women owning a house and /or land (alone or jointly with others) in Karnataka is 51.8 per cent. The percentage for rural women is 57.5 and urban much less at 45.1. The corresponding figures for Tamil Nadu are 36.2 per cent women (37.9 per cent in rural and 34.6 per cent in urban areas) and Andhra Pradesh 44.7 per cent (45.6 per cent rural and 42.8 per cent urban). This data projects Karnataka in a much more positive light in this crucial indicator of empowerment of women. It is quite clear that the schemes of granting exclusive right or joint right to women with their male partners to land grants made and houses constructed on their private lands and government

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sites (tiny plots usually ranging from 3 to 5 cents) has led to positive outcomes for households in general - One major benefit being freedom from obligation to work in the farms/homes of land owners under exploitative conditions. Women in particular cannot be thrown out of their homes as in the past.

High co-relation has been found between asset ownership by women and their status in the household and the society, their bargaining power, their self-confidence, their engagement in decision making within the household and labour market and access to knowledge. Evidence shows that property in women's name is empowering and can have a transformative effect on their lives and of their families and children (Lahoti, R., et al, 2016) and may also reduce women's vulnerability to domestic violence (Swaminathan, H. 2012). Arokiasamy P and Goli, S. (2012) cite historical and more or less current research evidence to argue that female discrimination and female foeticide is high in areas where landholding families are dominant in influence. According to them, the traditions of male ownership of land are at the root of emergence of unfavourable social, political and economic systems that undermine women. Women in large landholding families do not have much socio-economic freedom or decision – making power, have less autonomy in terms of labour force participation outside the home, low self earnings and limits on their freedom of movement. Chaudhari Prem (2012) has also asserted with reference to KHAP panchayats in Haryana that one of the implications for women's legal rights to land is seen in the rampant foeticide to put an end to her claims forever (cited in Ahlawat and Neerja, 2013). Many of those engaged in honour killing in Karnataka belong to landed dominant caste households, indicating high co-relation between such gruesome acts of violence on women and land ownership status of the household.

Participation in decisions on issues such as marriage, career, children, mobility outside the home and so on determine the status of woman in her household and the extent of freedom that she is able to enjoy as a human person and citizen.

Participation in Decision Making/Governance

Capacity to make decisions/participate in governance in both private and public spheres of life on an equitable basis are significant indicators of empowerment of women as well as men across social groups. It implies ability to assert the will (individual as well as collective) and safeguard human rights and freedoms. It is a known fact that in a patriarchal society, the role of a woman as a decision maker vis-a-vis man is often curtailed. Further in class and caste based societies, persons irrespective of their gender (more so the women) among the socially excluded groups face more barriers in this regard.

Participation in household decision making Participation in decisions on issues such as marriage, career, children, mobility outside the home and so on determine the status of woman in her household and the extent of freedom that she is able to enjoy as a human person and citizen. According to the findings of the India Human Development Survey II (IHDS, 2011-12), 79 per cent (nearly 4 out of 5) of women covered in Karnataka reportedly had a say in their marriage. In comparison at the all India level 59 per cent (slightly above 3 out of 5) women claim this advantage indicating relatively higher advancement of Karnataka women in this regard. However, corresponding figures are 94 per cent in Tamil Nadu

(highest in India) and 86 per cent each in Andhra Pradesh and Kerala, relatively better than Karnataka. As per this survey, educated, urban and younger women had better say about their marriage and so did economically better off women - in the last instance not as much as one would expect (IHDS, 2011-2012, cited in Rukmini S, 2015). As per NFHS-4 (2015-16) more than 80 per cent of the women in Karnataka claim that they participate in household decisions. The per cent of women who reportedly, do so, increased by 11.8 points from 68.6 in 2005-06 (NFHS-3). Urban women are able to do so to a relatively higher extent (83.5 per cent) compared to rural (78 per cent), implying that they have more freedom to direct their own lives. In comparison relatively more rural women in Kerala (92.4 per cent), Tamil Nadu (84.7 per cent) and Andhra Pradesh (80.4 per cent) were found to participate in household decisions compared to Karnataka, where urban women were more forward in this respect next only to Kerala. The finding that a significant per cent of women perceive themselves as decision makers is in itself a positive sign. However, from this data, it cannot be ascertained whether or not women's ability to exercise their will in major aspects of their life has altered significantly.

Information collected by raising specific questions in relation to freedoms available to women throws further light on women as agents of decision making. As per IHDS (2011-12), 79 per cent women in Karnataka Stated that they need permission to go to the health centre. Corresponding figures are 90 per cent in Andhra Pradesh as well as Tamil Nadu, 66 per cent in Kerala and 81 per cent at all India level. From this data Kerala appears to be more progressive than Karnataka in this respect, whereas other two Southern States cited here fare worse. The survey also found that 40 per cent of women cannot go to the health centre alone in Karnataka. Kerala with 7 per cent and Tamil Nadu with 26 percent and all India figure at 31 per cent are more progressive than Karnataka in this regard. Practice of Purdah or Ghunghat (covering of head) is another autonomy constraining practice reported by 17 per cent of women surveyed in Karnataka. Such practices are relatively more prevalent in Kerala (23 per cent) and relatively less prevalent in Tamil Nadu (6 per cent), although at all India level 60 per cent women are said to practice this tradition. It is clear from these facts that a variable number of women continue to face constraints on the way of freedom of movement as well as freedom of choice and are denied opportunities to acquire the essential mental, physical and legal competencies required to protect themselves.

As per NFHS-4 (2015-16) more than 80 per cent of the women in Karnataka claim that they participate in household decisions.

Participation in public governance
Extent of engagement of women (especially from the socially excluded groups) in various sphere of State (legislature, executive and judicature), economy and civil society are important signs of their political empowerment. Participation at various levels of governance gives them voice, enhances their capabilities for decision making and enables them to bring to the fore the concerns of the groups they represent. Participation in local governance is also said to offer options for the women and other excluded groups in society to utilize State resources and services for their development. Experience and skills acquired at local level facilitates their entry into higher levels of polity.

Women, more so from the marginalized social groups, have been largely excluded from the political process of decision making/influencing decisions since historical times. It is in this context we need to analyze the emerging trends in political participation by gender groups - especially women across various social groups in Karnataka.

Besides occupying one third (33 per cent) seats reserved for them during that period, women in some districts were successful in contesting and winning from the general category – a progressive sign of participation by women in electoral politics/local governance.

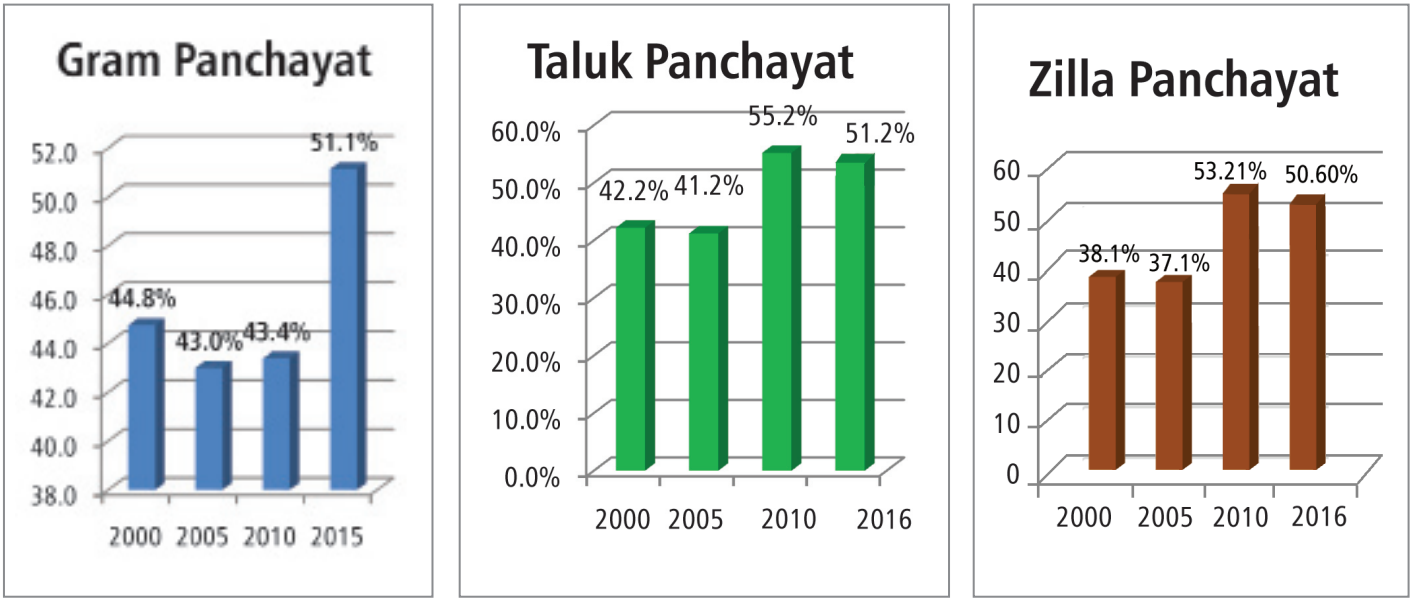
Gender composition of membership and leadership in Panchayat Raj Institutions: Before 1983 women's entry into panchayats in Karnataka was only through nominations. Karnataka was the first State in the country to implement the Panchayat Raj Act, which mandated 25 per cent reservation for women in 1987, prior to the 73rd and 74th Constitutional Amendments. Between 1987 and 1990 only women from the dominant castes (lingayats and vokkaligas) and that too the relatives of the male political leaders could enter the system. In 1990 elections, 60 percent of the elected women representatives (EWRs) belonged to these castes. Since the Panchayath Raj Elections held in 1993, one third seats were reserved for women as members and office bearers. SCs, STs came in proportionate to their representation (minimum18 per cent) and OBCs at 33.3 per cent. Elections held in 1993, 2000, 2005 and 2010 brought in 35305 (43.8 per cent), 35064 (44.75 per cent), 39318 (43 per cent) and 39327 (43.39 per cent) women representatives respectively into the local pool of leadership. Besides occupying one third (33 per cent) seats reserved for them during that period, women in some districts were successful in contesting and winning from the general category – a progressive sign of participation by women in electoral politics/local governance. In the Gram Panchayat Elections held in the State of Karnataka in April 2015, a big force of 48,252 women members (51.14 per cent) had entered the village level local bodies slightly above the mandated 50 per cent reservation of seats for them **(Table 4.7).** However, due to non-availability of gender disaggregated data for general seats, we do not have exact number of women elected to the Gram Panchayats.

Table 4.7
Representation of women in PRIs 2000, 2005, 2010, 2015 and 2016 in Karnataka

Year	Gram Panchayat			Taluk panchayat			Zilla panchayat		
	Total number of members	Total number of women members		Total number of members	Total number of women members		Total number of members	Total number of women members	
		No	Percent		No	Percent		No	Percent
2000	78349	35064	44.75	3255	1375	42.2	890	339	38.1
2005	91402	39318	43.0	3683	1519	41.2	1005	373	37.1
2010	90643	39327	43.39	3659	2018	55.15	1013	539	53.21
2015 & 2016	94344	48252*	51.14*	3903	1998	51.19	1083	548	50.60

Source: State Election Commission (SEC) cited in the Monograph on status of women in Karnataka, 2015; Men and women in Karnataka, 2005, 2010 and 2014-15 (Gram Panchayat – reserved seats only); Karnataka State Election Commission website – Taluk and Zilla Panchayat Elections (2016)

Figure 4.5
Representation of women in PRIs 2000 to 2016 in Karnataka



Variable composition of women and men elected representatives (ERs) from excluded social groups at Gram Panchayat level: The data of the 2015 elections reveal the presence of women representatives among SCs at 12 per cent (11049), OBCs at 10 per cent (9654), STs at 8 per cent (7634) and from the general category at 21 per cent (19915) (The computation of gender disaggregated data on ERs from the non-reserved categories may reveal presence of women to a variable extent from different social groups). In comparison the 2010 election data (revised) reveals that 7807 women from the SCs and 6395 from the STs (9 and 7 per cent respectively of the total ERs) had entered the governance system at the gram panchayat level. During this period EWR's from the backward class (especially BC-A) had much higher representation at 32 per cent followed by general category at 14 per cent **(Table 4.8).** It is clear from this data that more women from the SC and ST groups are present in the local governance system at present than ever before – giving them a modicum of visibility if not real authority / influence. The number of EWRs from the general category has also risen indicating their overall superiority vis-à-vis women of other social groups.

Table 4.8
Social category wise composition of women and men elected to the Grama Panchayat

Social category	Gender wise composition of elected Gram Panchayat Members											
	2010						2015					
	Men		Women		Total		General (Men + Women)		Women (Reserved only)		Total	
	No	Percent	No	Percent	No	Percent	No	Percent	No	Percent	No	Percent
S.C	9060	10%	7807	9%	16867	19%	7748	8%	11049	12%	18797	20%
S.T	3447	4%	6395	7%	9842	11%	3053	3%	7634	8%	10687	11%
Backward Class A	13467	15%	10642	31%	24109	27%	5138	5%	8358	9%	13496	14%
Backward Class B	4902	5%	1080	1%	5882	6%	1971	2%	1296	1%	3267	4%
General	20773	23%	13096	14%	33869	37%	27303	29%	19915	21%	47218	51%
Total	51649	57%	39020	43%	90669	100%	45213	48%	48252	52%	93465	100%

P.S: Social groups wise updated information of 2010 elections collected from the Department of Panchayati Raj and Rural Development, Government of Karnataka and 2015 data collected from the State Election Commission, Government of Karnataka Website (May 2016). There is variation in the total figures of Gram Panchayat elected representatives in Table 7 and 8.

Participation in Taluk Panchayats (TP) and Zilla Panchayats (ZP) In the TP of Karnataka constituted after the 2016 elections there are totally 1998 (51.19 per cent) women out of 3899 elected representatives. In the ZP out of 1083 members, 548 (50.6 per cent) are women. In the previous elections held in 2010, EWRs constituted 55.15 per cent (2018 out of 3659 members) in the TPs and slightly above 53.21 per cent (539 out of 1013) in the ZPs (Table 4.9).

Table 4.9
Social category wise composition of women and men elected to the Taluk Panchayat and Zilla Panchayats (2010 and 2016)

Category	Taluk panchayat						Zilla panchayat					
	2010			2016			2010			2016		
	Women	Men	Total	Women	Men	Total	Women	Men	Total	Women	Men	Total
	No%	No%	No%	No%	No%	No%	No%	No%	No%	No%	No%	No%
S.C	381	293	674	432	340	772	86	100	186	113	99	212
	(10.41)	(8.01)	(18.42)	(11.08)	(8.72)	(19.80)	(8.49)	(9.87)	(18.36)	(10.44)	(9.,14)	(19.58)
S.T	239	108	347	255	132	387	33	53	86	59	36	95
	(6.53)	(2.95)	(9.48)	(6.54)	(3.39)	(9.93)	(3.26)	(5.23)	(8.49)	(5.45)	(3.32)	(8.77)
Backward Class A	351	246	597	342	243	585	82	98	180	99	82	181
	(9.59)	(6.72)	(16.32	(8.77)	(6.23)	(15.00)	(8.09)	(9.67)	(7.77)	(9.14)	(7.57)	(16.71)
Backward Class B	64	89	153	68	88	156	22	23	45	19	22	41
	(1.75)	(2.43)	(4.18)	(1.75)	(2.25)	(4.00)	(2.17)	(2.27)	(4.44)	(1.74)	(2.03)	(3.79)
General	983	905	188	898	1101	1999	251	265	516	259	295	554
	(26.87)	(24.73)	(51.60)	(23.03)	(28.24)	(61.27)	(24.78)	(26.16)	(60.16)	(23.91)	(27.24)	(51.15)
Total	2018	1641	3659	1998	1904	3899	539	474	1013	54.8	534	1083
	(55.15)	(44.85)	(100)	(51.10)	(48.83)	(100)	(53.21)	(46.79)	(100)	(50.60)	49.30	(100)

*Source: Taluk and Zilla Panchayat Members – guidelines–2010, Department of Rural Development and Panchayati Raj; State Election Commission, 2016 * figures in bracket indicate Percentage (%)*

Comparative assessment over two elections in Karnataka reveals some improvement in the situation of women representation in ZPs at present, whereas in the TPs there is a decline. In the currently constituted ZPs there are only 15 (only 0.7 per cent) EWRs more than men (only Bangalore urban has two and 13 other districts only one more), even such small gain over the reserved seats (50 per cent) is a positive sign. What is significant is that it is the EWRs from the STs, BCs (A) and SCs which exceed their male counterparts by 23, 17 and 14 persons respectively in the ZPs of the State at present. On the contrary among the general and BC (B) categories men exceed women by 36 and 3 persons respectively.

It is clear from these facts that the grassroots governance bodies are manifesting a more gender cum caste diverse ethos in recent decades and providing more visibility to women across social groups. Many articulate and competent local women leaders have emerged even from among the economically marginalized groups inclusive of dalits, adivasis, OBCs and minorities through participation in local level politics despite facing family related restrictions and role burden, socio cultural barriers, interference from the male members of their families/ localities who seek to function as de-facto leaders, discrimination based on gender, caste and class, economic dependence on dominant forces in their localities/vulnerability to manipulation by them, lack of appropriate competencies (knowledge, skills and attitudes) essential for a representatives, lack of information technology related skills (e-governance) and other obstacles because of their status in the rural socio-economic hierarchy. According to Ramesh, Asha and Sudhamani N (2015) factors that deter participation of women especially potential candidates from the reserved categories in local governance are rotation of seats (30 and 20 month term in operation at the 3 levels of the PRI), criminalization and communalization of politics, corruption, environment of non co-operation both from within the GP (from men and government functionaries) and community-hostility and ridicule faced by women (NIAS study cited by them)..

To what extent EWRs are able to respond to women's issues? A study by ANSSIRD, 2015 in Davangere and Kalaburgi in Karnataka found less focus by women adhyakshas of panchayats on women's issues and pro-women service delivery. Like their male counterparts' women prioritized issues like sanitation, drainage and water. Women empowerment, violence against women did not figure in the list of priority areas of investment for the panchayat women leaders and were avoided as these could bring them into direct confrontation with the patriarchal norms. The study found that women adyakshas faced several socio-cultural and institutional constraints in a patriarchal society. 90 percent of the EWR said that they sought help from their family members mainly men in performing their roles as Adhyaksha. Compared to dalit women adyakshas, the upper caste women adyakshas were better able to negotiate their way through socio-cultural and institutional constraints. However, the study noted that opportunity to be adyakshas, provided women with authority which is both political and social in nature that opened the door not only for many other opportunities i.e. creating

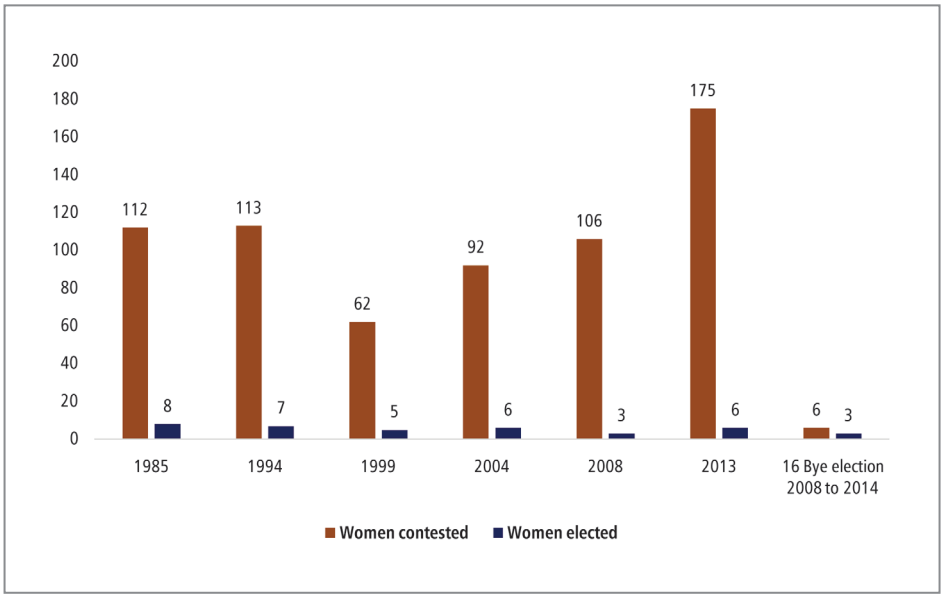
It is clear from these facts that the grassroots governance bodies are manifesting a more gender cum caste diverse ethos in recent decades and providing more visibility to women across social groups.

avenues for self-efficiency through access to information, learning, capacity building and platforms for self-experience and convergence with different stakeholders. In short despite all the obstacles women face even at the local levels of political leadership, their participation as members/office bearers such as adyakshas will not only raise their competence but will also be a confidence booster for women in general and girls in particular. At the same time it sends out signals to men and boys that women cannot be relegated only to the private spheres of domestic life and has an equal role to play in governance.

Gender composition of the State assembly The data pertaining to the latest Vidana Sabha elections held in 2013 reveal that only 6 women (less than 3 per cent) succeeded in winning out of 175 women contestants despite the over 50 per cent female vote share of the relevant electoral constituency in the State (Figure 4.6). Overtime comparison show that there were 8 and 7 women MLAs in the election held in 1985 and 1994 respectively. Since 1999 election, their number has not moved beyond a lowly 6 out of 224 MLAs. Even in the bye polls for the Vidhana Sabha of Karnataka between 2008 and 2014 only 3 women candidates out of 6 who competed were elected. Vidhana Parishad of Karnataka at present has just 5 women (6.6 per cent of total members). All these facts reveal that women continue to be not only very poorly represented but also have very little space to articulate their voice in this significant legislation cum policy making body.

Inter southern State comparisons reveal that although women representation remains very low, the number of women elected to their respective State Assembly is 2 to 3 times more than that of Karnataka - Andhra Pradesh with 10.2 per cent women MLAs ranking 1st in the list and Tamil Nadu and Kerala 2nd and 3rd with 7 and 6 per cent women respectively. The fact that Karnataka has well established and relatively better financially empowered Panchayati Raj system and significant women representation ought to have been translated into more women getting elected at the State level. Unfortunately this is not the case.

Figure 4.6
Number of women contested and elected to Vidhana Sabha in Karnataka



Source: Chief Electoral Officer cited in Women and Men in Karnataka 2015-16

Gender composition of MPs Karnataka State has a lone woman MP in the 16th Lok Sabha out of 28 MPs representing the State (2014 elections). Over time data reveal that in all except one of the 5 elections held from 1984 to 2004 there were at least two women MPs representing Karnataka. In comparison although more women candidates contested assembly elections in 2009 and 2014 (19 and 21 women respectively) only one was able to win each time revealing further slide. Tamil Nadu with four MPs and Andhra Pradesh with two MPs have fared better than Karnataka. MPs from the SCs (5 only) and STs (2 only) from Karnataka are all men. These facts once again demonstrate that the political institutions and the cultural ethos is not yet conducive at higher levels of polity in Karnataka for the participation of women in general and dalit as well as adivasi women in particular (Lok Sabha Secretariat, 2014, Women and Men in India 2014-15). At all India level the situation is slightly better - in the 16th Lok Sabha elections 61 (11.23 per cent only) women MPs were elected out of 543 MPs - two more compared to the previous election (2009), when there were 59 (11 per cent) women MPs. However, in the highest citadel of democracy the women representation remains low - on an average one woman legislator for every 10 men (DES, 2013-14). The Rajya Sabha – upper house of the parliament has 29 (12 per cent) women representatives at present out of 243 members. As per women in parliament study, India ranks 103 out of 273 countries in the world (Kounteya, Sinha, 2015) – not a very positive picture of the largest democracy in the world.

At the ministerial level only one woman is currently present in the council of ministers of Karnataka State – a dismal representation. In comparison **the Union Council of Ministers constituted in November 2014 had 6 women cabinet ministers** (the biggest group of cabinet ministers so far) and two minister of State – totally 8 women (12.12 per cent) out of 66 ministers. In the expanded council of ministers constituted in July 2016 out of 78 ministers there are totally 11 women ministers (14 per cent) – 7 of cabinet rank, 1 minister of State – Independent charge and 3 ministers of State – the highest composition of women Thus, far (In comparison in the previous cabinet 2009) there were 3 cabinet ministers and 9 ministers of the State in the Central Council of Ministers). More women mantris compared to its neighbours have taken India to the 37th position out of 273 countries in the world according to Inter-Parliamentary Union - IPU (Kounteya, Sinha, 2015). There are just about 1.54 per cent women cabinet ministers in States across India. At least five State governments in India had women chief ministers during 2015-16 (sixteen women have been able to occupy this position from 1963 to 2016 – five of them two to five times for varying period of time). From these facts it can be ascertained that the space for women's participation in State and national level law/policy making bodies is expanding rather slowly. Patriarchal forces continue to hinder the process of emergence of women leadership in substantial number at the higher levels of administrative and political hierarchy.

Judges in Karnataka and India According to Prabha Sridevan (2016)

These facts once again demonstrate that the political institutions and the cultural ethos is not yet conducive at higher levels of polity in Karnataka for the participation of women in general and dalit as well as adivasi women in particular

In the courts of Karnataka, there were only 209 women (25.36 per cent) out of 824 judges in 2014-15 one woman judge per every four male judges. In 2015-16 the situation remains almost the same with 208 women (25.67 per cent) out of 810 judges.

– a retired judge of the Madras High Court - In a healthy democracy, the judiciary must be a mirror of the whole society and an increased presence of women on the Bench (gender diversity in judicature) would definitely expand the jurisprudence to be more inclusive, equal and just. However, this is not so in reality. In the courts of Karnataka, there were only 209 women (25.36 per cent) out of 824 judges in 2014-15 one woman judge per every four male judges. In 2015-16 the situation remains almost the same with 208 women (25.67 per cent) out of 810 judges. Over time data reveal some progress in gender composition of judges – (there were nearly 15.5 per cent women - only 107 women out of 691) in 2007 (DES, 2007-08, 2014-15 and 2015-16). High Court of Karnataka had 3 women out of 27 judges in 2015 (http://www.karnatakajudiciary.kar.nic.in/profiles.asp). The corresponding figures for the High Courts across the country are only 62 women judges out of 611 including additional judges till the end of 2015. At the Supreme Court level there is only one woman Chief Justice at present. Only 6 women have been appointed to the Supreme Court up to 2015, out of a total of 229 judges appointed since 1950. "There are many deterrents for a woman practitioner of law who is an aspirant to the Bench - all created by the realities of history...The glass ceiling is there not because women lack merit and ability but because they are women". (Prabha Sridevan 2016) Recently in response to a public interest petition against gender unjust composition of the judiciary, the Supreme Court has admitted to decades of institutional disparity in appointment of women as judges in the higher courts of India despite women practicing as lawyers since 1992 and has expressed its will to alter the equation.

Gender composition of the executive in Karnataka In Karnataka there are 26 per cent women officers in the IAS (59 women and 166 men) in 2016, slight improvement over 2015 when there were only 23 percent women (53 women and 176 men). In the IPS less than 10 percent are women (14 women and 127 men) and in IFS only 11.6 per cent are women even in 2016. (DPAR 2015 and 2016). In group A services there were 21.46 per cent women and corresponding figures for Group B, Group C and Group D services is 25.14 per cent, 34.78 per cent and 28 per cent respectively at the end of March 2015 (Men and Women in Karnataka, 2015-16). It is evident from these facts that even the executive wing of the government has a predominantly masculine presence in Karnataka.

Leadership in civil society organizations and corporations Definite expansion and visibility of women in civil society organizations (as social Entrepreneurs, Directors, Members of boards and committees, Social activists) is visible in Karnataka as in other parts of India. Apart from sporadic publications and newspaper reports which highlight some cases of exemplary achievers, there is hardly any data on the subject. As far as corporate leaders are concerned India has secured 26th rank globally in terms of presence of women (6.91 per cent only in 2016 as against 6.69 per cent in 2015) on boards of companies – lower than overall average for developing countries (Myhiringclub, 2016). However, there are indications that relatively more women are beginning

to break the gender barriers in the economic sector including startups although the glass ceiling continues to be in place.

Gender Dimension of Human Security

A secure living environment free from all types of violence especially on the bodies/minds of women and men of all ages across all social groups is essential for human development. Incidence of crime is a manifestation of the environment of lawlessness, social disharmony, insecurity and human suffering that prevails in a society. Further, there are many crimes that go un-reported especially those associated with sexuality and family. The extent of legal awareness, trust in law enforcement and adjudication (courts) agencies, gender sensitivity, courage, perseverance that prevails among victims/survivors/ their relatives and support of human rights activists/ collectives are factors that are associated with higher extent of reporting. It is also important to note that women's experience of discrimination, domestic and societal violence is affected by various factors such as their social group affinity (i.e. age, caste, class, tribe, religion, language, sexuality) as well as social and geographic location.

Reported crimes against women in the State of Karnataka rose from 29,486 incidents in 2001-05 to 58,606 in 2011-15. While in the former period there were more than 16 incidents of crime against women each day, there were 32 registered incidents each day in the later period – a two-fold increase. Corresponding figures at all India level are 7,37,266 (2001-05) and 14,47,782 (2011 -15) – day wise more than 404 and 793 incidents respectively on an average **(Table 4.10). Crimes of sexual nature** such as rape, attempt to commit rape, assault on women with intent to outrage her modesty (inclusive of sexual harassment) and insult to the modesty of women are increasingly reported in Karnataka as elsewhere in India. As per NCRB data (2011-15) between 2 to 3 women were reportedly raped every day during the last five years – in most cases by perpetrators known to the victims (97.5 cases in 2014 and 97 per cent cases in 2015). Nearly 11 women every day have reportedly suffered assault with intent to outrage her modesty (inclusive of insult to the modesty of women) in Karnataka from 2011 to 2015 (NCRB). An increasing number of women in Karnataka as in other parts of India are becoming victims of cyber crimes (such as cyber stalking, trolling).

Incidence of crime is a manifestation of the environment of lawlessness, social disharmony, insecurity and human suffering that prevails in a society. Further, there are many crimes that go un-reported especially those associated with sexuality and family.

Table 4.10
Registered Crimes against Women - Karnataka and India

Crime Head	Karnataka			India		
	2001- 05	2006- 10	2011-15	2001- 05	2006- 10	2011-15
Rape	1540	2377	4200	84887	105121	154222
Attempt to commit rape		-	38	-		8671
Kidnapping and Abduction	1413	2117	6212	73775	116305	242296
Dowry Death	1167	1266	1329	33694	40657	41023
Cruelty by Husband or his Relatives	7918	10195	16360	265550	403989	560808
Assault on women with intent to outrage her modesty	8756	13890	19943	169748	195088	323715
Insult to the Modesty of Women	393	257	642	52211	54100	48752
Importation of Girls	-	3	44	474	279	189
Sati Prevention Act	-	-	-	1	1	1
Abetment of suicide of women	-	-	495	-	-	7794
Immoral Traffic (Prevention) Act	6516	2485	1834	32560	15741	12071
Indecent Representation of Women (Prohibition) Act	-	1	6	8898	5527	1043
Dowry Prohibition Act	1783	3612	7502	15468	26514	46310
Protection of women from domestic violence Act	-	-	1	-	-	887
Total	29486	36203	58606	737266	963322	1447782

Source: National Crime Records Bureau, Crime in India, 2001 to 2015

As per the NCRB, reported **incidents of cruelty by husband or relatives in Karnataka** increased from 7,918 in 2001-05 to 16,360 in 2011-15. The cases filed under domestic violence with the District Women and Child Development Departments also show increase from just 823 in 2007-08 to 5280 cases in 2014-15 (up to July – 7 months only) – totally 38503 cases since 2007 (Women and Child Development Department, Government of Karnataka; 2014-15). The recently released NFHS-4 (2015-16) survey report shows that a total of 20.5 percent (20.4 per cent rural and 20.6 percent urban) of ever married women have reported spousal violence in Karnataka. The corresponding figure for NFHS-3 (2005-06) was slightly lower at 20 per cent. Further the percentage of ever married women who have experienced violence during any pregnancy in the State is placed at 6.5 per cent by NFHS-4 (4.5 per cent rural and 8.7 per cent urban). All the studies reveal very high incidence of domestic violence in India (UNFPA, 2014). More than threefold rise has occurred in cases reported under Dowry Prohibition Act, during the three five year periods from **2001-05 to 2006-10 and 2011-15** in Karnataka – 1783, 3612 and 7502 cases respectively. Corresponding figures at all India level are 15468, 26514 and 46310.

Inability to give dowry, meet the costs of marriage and other expenses connected with marriage transactions are reasons for the presence of increasing number of **unmarried women in marginalized families in rural and urban areas of the State.** Women in such a situations become increasingly vulnerable to sexual exploitation, cheating and in some cases end up being murdered by much married men. Many missing women in the villages/towns and cities of Karnataka are often from the unmarried, separated/ divorced and widowed category. Dowry death cases reported in Karnataka rose from 1167 in 2001-05 to 1329 in 2011-15 (NCRB). The number of such cases could be much higher as many are homicides engineered to appear as unnatural deaths/suicides. Recent analysis of Bhate et al (2016) show that in India burn injury claims 91,000 lives on an average every year. In almost all cases it is the kitchen in the marital homes where women is at risk and almost all victims are young and most are from the economically marginalized groups. Cooking gas cylinder/stove killed 437 women and 190 men in Karnataka highest in India after Gujarat (NCRB, 2014).

Crimes against marginalized groups
Persistence of crimes against the marginalized/vulnerable sections such as children, schedule castes, schedule tribes and senior citizens more so the women among them is also a matter of serious concern. In a study by the Ministry of Women and Child Development Ministry among the 12,477 children surveyed, one out of every 2 children, a majority of them boys reported suffering **sexual violence.** It can be inferred from this data that half of all Indians have encountered sexual abuse before they became adults.

The rising **incidence of atrocities on members SC and ST communities** is also highlighted by NCRB. From 2008 to 2015 there were 421 reported incidents of rape of SC and ST women in Karnataka in some cases involving more than one victim. Marriages between dalit men and upper/dominant caste women are considered an affront to their caste status and honour by the dominant caste leading to either forceful separation or murderous attack on daughters, sisters or kinswomen and their dalit or minority community partners/relatives. The historically rooted practice of **devadasi / jogini** with its religious sanction which turned out to be a mechanism of pushing girls into sex work, persists in violation of the laws such as (Karnataka Devadasis (Prohibition of Dedication) Act 1982). According to a Public Interest Petition filed by an NGO S L Foundation in the Supreme Court - A 1993-94 survey found that there were 22,873 devadasis spread over ten districts in Karnataka and another survey in 2007 put this number at 30,000 in 14 districts (Express News Service, 2014). According to the National Commission of Women, over 2.5 lakh girls, most of whom belong to the Dalit communities are dedicated to temples in the Maharashtra-Karnataka border *(Parthasarathy, Sindhuja, 2013).*

Basic Issues and Challenges

The data presented on gender disparity in various arenas of life and issues affecting women focusing on the Karnataka State lead us towards certain conclusions: **Firstly,** all issues associated with women such as low sex ratios, child marriage, high incidence of violence, low levels of participation in wage/salaried work and public governance are interconnected - one reinforces the other, together

Persistence of crimes against the marginalized/ vulnerable sections such as children, schedule castes, schedule tribes and senior citizens more so the women among them is also a matter of serious concern.

resulting in violating the rights and freedoms of women by subjecting them to inferior status in the family and society and perpetuating gender inequality. **Secondly,** women from the historically oppressed/exploited low income ethnic groups (i.e. SCs, STs, other OBCs and specific religious minorities especially the economically and educationally excluded among them) and from the neglected areas of residence/settlement (slums and poor neighbourhoods) and historically backward regions (i.e. Hyderabad Karnataka) continue to bear the worst effects of multiple burdens of gender, class, caste and locality related discrimination and deprivations and disadvantages. **Thirdly** men/boys too bear the harmful consequences of discrimination and human rights violations to a more or less extent depending on their place in the hierarchies of class, caste, age, sexuality and positional power. Increased vulnerability to physical and mental disease inclusive of proneness to suicides, death and injury by accidents (more due to rash driving/road rage), higher incidents of physical injury and mortality (mostly resulting from violent conflicts/attacks), rising incidence of addiction to alcohol, drugs and smoking and sexual abuse of boys by men are the overt manifestations. **Fourthly** there are specific social groups more so women among them who face serious issues of denial of rights and freedoms (e.g. single women, widowed/separated women, domestic helpers, sex workers, elderly, safaikaramcharis, street vendors, export zone workers and differently abled). Such groups carry heavier burden of oppression and discrimination – not only gender, but also caste and class.

State Interventions to Promote Gender Equity, Equality and Women Empowerment

State interventions specifically aimed at empowerment of women and reducing gender disparities could be listed under four categories: i) Legislative provisions, rules and regulations; ii) Policies, which include gender budgeting; iii) Institutional mechanisms/structures; iv) Schemes and programmes initiated and sustained through different time periods. While some of these legislative measures, policies, institutional mechanisms and programmes have been evolved by concerned and committed government functionaries, many others have emerged as a response to advocacy attempts by social reformers (starting from the pre-independence period), pressure from women's movements/human rights movements and civil society action groups/individuals. Yet others have been initiated by the government because of the commitments made as signatory to the international human rights instruments (i.e. CEDAW) and Millennium Development Goals (MDG) and by the civil society organizations either in association with the government or autonomously.

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Legal interventions There are many laws – national and State (SLL - Special and Local Laws) to protect the rights of women, children (girls and boys), senior citizens (women and men), labourers, SCs, STs and other excluded groups. However, the prevalence of loopholes, high pendency and low conviction rates for the crimes, limits the effectiveness of legal strategies to tackle the challenge of atrocities on women and violation of their rights/freedoms in the State of

Karnataka as in other States of India. According to the National Judicial Data Grid (NJDG, 31-5-2016), the **pending cases** of women litigants is reportedly 1,47,298 and senior citizens (women and men) 1,07,830 out of total pending cases numbering 12,28,957 in all the lower courts of Karnataka. In other words there is very high rate of pendency of cases delaying justice for victims/survivors. **Conviction rate** (CR) at just 21.2 per cent for rape, 16.4 per cent for dowry deaths and 2.8 per cent under Dowry Prohibition Act (SLL) and less than 5 per cent in some other crimes against women presents a poor picture of justice delivery for women (NCRB, 2013). Although the number of incidents of rape on women rose from 626 in 2013 to 704 and 678 in 2014, 2015 respectively, cases convicted came down from 37 in 2013 to zero during 2014 and 2015 (Srinivasan, Sarayu, 2016). The recent data (NCRB, 2015) available at all India level show some progress in conviction rate for the crimes against women (rape - 29.4, molestation 24.3, sexual harassment of women – 21.8 per cent, dowry deaths 34.7 per cent and cruelty by husband and relatives – 14.2 per cent). The CR for cognizable offences (both Indian Penal Code (IPC) and Special and Local Laws (SLL) also show that Karnataka along with Andhra Pradesh rank lowest among the four Southern States and India. High level of cases pending in the law courts and low conviction rate make travesty of justice. Besides problems such as legal loopholes, inadequate number of judges, overworked, poorly equipped and low paid police force and other issues such as political interference, threats, corruption and nepotism (e.g. caste, kinship, creed, class, and profession) allows most offenders especially those with economic and political power/ influence to escape conviction. Lack of gender (in general social) sensitivity among significant stakeholders engaged in designing, passing, executing, interpreting the laws is another major problem. The statutory mechanisms that need to be constituted as per the laws are either not existing and if constituted often do not function effectively. In this regard Justice J S Varma Committee has emphasized the need for making marital rape a sexual crime in India in consonance with progressive legislation across the world and international human rights instruments. Women's movements and social activists who have done tremendous work in the legislative sphere in the past, have also demanded a strong law that will afford protection to self-choice partnerships and punish those who in the name of honour and tradition violate that right (Karat, Brinda, 2016), besides highlighting the need for more effective laws and amendments to some other women centric laws.

Institutional and non-institutional services have also been undertaken to support women at risk and living in difficult circumstances since long in Karnataka by the State and the non-government agencies. To support women victims-survivors of violence and distress in Karnataka, there are **8 State Homes and 4 reception centres,** operated by the Women and Child Development Department. The **"Santhwana"** centres initiated through recognized NGOs during the year 2000-2001 seeks to support women victims of atrocities such as harassment for dowry, rape, sexual abuse, domestic violence, physical and mental torture and facing social & financial problems. **"Swadhar"** a central government scheme run in

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Bhagyalakshmi. This innovative scheme introduced by the State of Karnataka in 2006-07, to address the issues of decreasing child sex-ratio, child marriage, child labour and child trafficking covered 237643 girls by March 2016.

association with NGOs, covers 32 centres in 2015-16 an increase from 17 centres in the year 2006. These centres seek to provide holistic and integrated services to women in difficult circumstances such as destitute widows, released prisoners, survivors of natural disasters; victim survivors of sexual crimes and trafficking (rescued from brothels or other places) and mentally challenged. **Women and Children's Special Treatment Units (Vishesha Clikista Ghataka)** is another institutional mechanism initiated in 2014-15 to provide integrated services (police, legal, counseling and 181 helpline under one roof), benefiting 1,135 women and children (Government of Karnataka, Gender Budget, 2016-17). Udupi in Karnataka was one of the districts selected in India to begin with, for assistance under the central government scheme to establish a **One Stop Centre** to provide integrated services (such as medical, legal, counseling, training, rehabilitation, child support and helpline cell – 181) for women victims of abuse and neglect. To address the issues of mental illness schemes started under the aegis of Karnataka State Mental Health Authority (KSMHA) from 2013 include **Manasadhara** - day care centers/residential care and rehabilitation for at least 20 men and 20 women patients in every district hospital of the State, **Mano Chaitanya or Super Tuesday programme** in which psychiatrists, psychologists and counselors would be made available to treat mentally challenged persons in taluk hospitals and primary health centres across the State on all Tuesdays is another noteworthy service. There is **suicide helpline number 104** to reach out to persons in distress. There are 35 **women police stations** to specifically cater to the needs of women victim-survivors of crime. Under the **Kishori Shakti Yojana** a centrally sponsored scheme for adolescent girls, training has been provided to nearly 17,000 girls by March 2016. All the above services (non-institutional and institutional) have supported varying number of women and children in different districts of Karnataka – more or less effectively depending on the availability of committed and competent management, personnel and funds.

Financial incentives as a strategy to address the issues of violence on women Schemes that provide financial incentives to end atrocities on women include **Bhagyalakshmi.** This innovative scheme introduced by the State of Karnataka in 2006-07, to address the issues of decreasing child sex-ratio, child marriage, child labour and child trafficking covered 237643 girls by March 2016. **Pension schemes** such as ***National Social Assistance Scheme*** (NSAP) to help destitute widows and elderly and differently abled (old women and men) and State sponsored schemes such as **Manaswini** (covering unmarried and divorced women above 40 years), **Mythri** (to assist transgender persons) and pension to support devadasis. **Bidaai,** a scheme implemented in November 2013 by Directorate of Minorities provides financial assistance to the economically marginalized women to purchase essential commodities at the time of marriage. **Sthairya Nidhi** scheme launched in 2015-16 with an allocation of Rs.500.00 lakhs corpus fund aims at providing financial relief to women who have been victims of various atrocities in the State. **Suraksha** - a scheme to support victims of acid attack in operation since 2008-09 is also significant. Such schemes provide

a modicum of relief to women from the excluded social groups especially those living in difficult circumstances. The adequacy of such monitory assistance schemes to support persons in distress has been questioned by critics. Lack of effective execution of some such schemes has also been highlighted (Shri Ugrappa, Chairperson of the Expert Committee. on safety of women and children and Prabhu, Nagesh 2016).

Interventions directed at financial support are also adopted as a significant approach to support women especially from the socially excluded groups. **Micro finance institution building strategy in association with women empowerment is** significant here. Self-help groups inclusive of Stree Shakti groups under the aegis of Women and Child Development Department (in all the districts) and SHGs/Sanghas under the sponsorship of various NGOs and federations of co-operative (with various extent of geographic coverage) are engaged in micro finance as one of their predominant function. Stree Shakthi Project launched throughout the State during 2000-2001, reportedly covers 1.50 lakh self help groups (SHGs) as on March 2016, up from one lakh groups in 2004.There are 22.00 lakh women members enrolled in these groups till March 2016, a rise by 7.2 lakhs since 2004 (nearly 14.8 lakhs). The rise in savings/loans and related financial transactions of women of these groups appears very impressive **(Table 4.11).**

Table 4.11
Stree Shakti group related data

Indicators	July 2015 and March 2016	March 2004
Number of Groups	150000 (March 2016)	100000
Total membership	22 lakhs (March 2016)	1479794
Membership from SC	407091 (July 2015)	310358
Membership of STs	162613 (July 2015)	118359
Membership from minorities	151887 (July 2015)	99779
Total savings	Rs. 1900.42 crores (March 2016)	Rs.288.56 crores
Number of groups with bank loans	137486 (March 2016)	62281
Extent of Bank loans	Rs. 2902.24 crores (March 2016)	
Internal lending	Exceeds 4654 crores (July 2015)	730.40 crores
No. of groups engaged in income generation	89303 (July 2015)	-
Taluk level federations formed	175 (July 2015)	-
Marketing complexes or Stree Shakti Bhavan	Taluk level 94 out of 162 Bhavans complete (July 2015)	-
District level complexes	Completion of 21 out of 28 (July 2015)	-
Divisional bhavans	4 sanctioned (July 2015)	-
Mobile marketing van	Sanctioned at the rate one each for 20 districts of Karnataka (July 2015)	-

Source: Department of the Women and Child Development Department, Government of Karnataka, Men and Women in Karnataka 2015-16

Udyogini – a scheme to promote income generation activities of women.

On the negative side the micro-finance model was found to be more focused on savings and lending transactions to the exclusion of activities that facilitate social empowerment. SHGs members were also found to be getting into a debt traps and leading stressful lives as they had to return loans in time. Inability of the poorest women to access credit, multiple membership acquired in various agencies sponsored groups by members and emergence of homogenous (caste, religion, tribe) groups in some locations are other negatives. Defunct groups that exist on paper, lack of investment in women themselves, limitation of capacity building in content and reach, conditional and restricted access to credit are also listed among the negatives (Parthasarathy, 2006). Despite unique nature of Stree Shakti/women's SHGs in the State (as in other parts of India) evidence of their economic impact is scant (Klaus D and Liu, Y 2009). The SHG model is criticized for its failure to ensure sustainable and secure source of livelihood for the majority of women members.

Income generation programme to empower women is another pre-dominant strategy. Under the micro credit through self-help groups (SHGs) funds are provided with subsidies to women especially SC and ST, OBC, minority, differently abled and widows from the BPL category to take up small business ventures both individual and collective. A total of 1,28,279 Stree Shakti groups have availed bank loans to the extent of Rs.2607.19 crores to take up various income generating activities (Men and Women in Karnataka, 2014-15). As per the information from the Women and Child Development Department there were 89,303 groups engaged in various incomes generating activities at the end of July 2015. Though some studies have highlighted negative factors associated with SHG model, (Parthasarathy, 2006) and evidence of their scant economic impacts (Klaus D and Liu, Y 2009). However,, some studies on Stree Shakti groups have also noted that even the economically marginalized were able to benefit not only economically but also socially *(http://ksdl.karnataka.gov.in/sites/default/files/Micro%20credit%20study%20final%20report%20with%20annexures.pdf).* There are a few agencies that facilitated the formation of such groups who were more successful in integrating the micro-financial and empowerment activities to a much larger extent than others **(e.g. Mahila Samakya)**. Federations of members of SHGs/Sanghas at various levels are also constituted providing higher visibility to women.

Udyogini – a scheme to promote income generation activities of women, **Swayam Sidha** – a scheme for rural SHG members to start micro-enterprises, **Dhanashree scheme** to promote economic activities for HIV/AIDS affected women and **Samrudhi scheme** for the economically marginalized street vendors (inclusive of women) have covered variable number of beneficiaries. Income generation ventures have also been launched by many NGOs in Karnataka with more or less extensive coverage. To overcome the problem of lack of market for the products of Stree Shakti groups, totally 164 Bhavans have been constructed from 2007-08 to 2015-16. However, in the absence of reliable outcome-centric studies across various income generation ventures in different districts of the State, there is no evidence available to show to what extent such a strategy has been successful in providing secure, sustainable employment/income for women of the economically and

socially excluded groups – among whom the work participation rates have reached the lowest level ever. Competing with the extremely powerful market forces that appeal better to the taste of consumers is not an easy task for the marginalized women. **The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** a centrally sponsored scheme has also been executed to a variable extent in various parts of the State to provide work to women and men of BPL households with varying degrees of success. However, such schemes can only be a temporary welfare measure during lean seasons and drought or flood prone situations and cannot be a replacement for sustainable livelihood options. **Vocational and entrepreneurship skill development programmes such as** Stree Shakti Kaushalya Programme, STEP (Support for Training and Employment of women) – to provide vocational cum entrepreneurial skill development among women, Working women's hostels, Programmes to ensure right to house sites and shelter are also directed at economic development of women. The extent of vocational competencies developed, the quality of houses built, resources accessed and the impact of such strategies in enhancing economic autonomy and freedom from violence for women need to be explored.

Health and nutrition related interventions: Besides the highly subsidized public distribution system to support members of the BPL households, **Mid-Day Meal** scheme for school children, and other supplementary nutrition programmes, the State government is also to launch **Matru Poorna** scheme in 2017 to provide **hot nutritious meal** to pregnant women and nursing mothers. Schemes like Madilu, ThaiBhagya are introduced to take care of reproductive health of women.

Organization promotion approach: Promoting organizations of women in general and that of specific interest groups in particular has been one of the predominant approaches used to facilitate development and empowerment of women. To begin with the government supported the formation of Mahila Mandals / Yuvati Mandals in various parts of the State. Diverse civil society organizations, also initiated the process of promoting organizations of women contributing to the emergence of women's movement in the State / Nation which played a crucial role in bringing issues and concerns of women to the forefront, resulted in laws and policies aimed at empowerment of women and addressing issues of injustice suffered by women in general and that of specific groups of women in particular. Organizations of specific interest groups among women especially devadasis/sex workers, HIV/AIDS affected, domestic workers, slum dwellers and garment workers have also been promoted in some parts of the State by civil society groups. Since mid 1990s formation of SHGs/sanghas has been adopted as a pre-dominant organization promotion strategy by the government departments and NGOs – integrating approaches of **micro-finance and social development** with various degrees of effectiveness. There are some positive spin-offs associated with such women groups in various parts of India including Karnataka (Reddy and Reddy, 2012: Klaus D and Liu, Y 2009). However, a strong democratic women's movement as a collective voice of the socially excluded, that is capable of impacting public policies to end the

Since mid 1990s formation of SHGs/ sanghas has been adopted as a pre-dominant organization promotion strategy.

multiple forms of exclusions and altering the direction of the political economy to safeguard the rights of all, especially the marginalized women has yet to emerge at all levels from the village to the State and the nation.

Interventions to support transgender persons: Through specific interventions, the government of Karnataka has sought to provide not only pension coverage (Mythri scheme) but also more visibility to the transgender community in recent years. The State legal services authority headed by Justice Manjula Chellur has organized workshops on the issue of transgender and the law in some districts of Karnataka as a part of the larger national programme spearheaded by the National Legal Services Authority (NALSA). Civil society groups are engaged in educational, organizational and advocacy work to empower the transgender persons and to ensure the passing of effective policies and law to safeguard their rights. Plans are on to undertake a survey of transgender persons across the State. The committee to look into the situation of sex workers in Karnataka also has representatives from the transgender group.

The central government which has been preparing gender budget since 2005-06, selected Karnataka State for the introduction of Gender Budget (GB) on a pilot basis, as it was 1st State in the country to introduce a scheme of inter sectoral allocation for women under the label Karnataka Mahila Abhivradhi Yojane (KMAY) in 1995-96.

Karnataka Mahila Abhivrudhi Yojane and Gender Responsive Budgeting*: The central government which has been preparing **Gender Budget** since 2005-06, selected Karnataka State for the introduction of Gender Budget (GB) on a pilot basis, as it was **1st** State in the country to introduce a scheme of inter sectoral allocation for women under the label **Karnataka Mahila Abhivrudhi Yojane (KMAY) in 1995-96.** The Finance Department, Government of Karnataka established Gender Budget Cell in 2007 to undertake gender analysis of government budgets * and has been submitting GB documents to the State legislature since 2007-08.

Box 4.2
Genders Responsive Budget (GRB)

* Gender Responsive Budget (GRB) aims to analyze how effectively Government's policies, programmes, and budgetary allocations respond to the needs and concerns of women. A gender analysis of Government budgets offers a new tool or methodology for ensuring a better match between Government's policy commitments and development outcomes for women, recognizing underlying gender inequalities and redressing them through allocation of public resources. (Source: Gender Budget Initiatives of Government of Karnataka – 2007-08, A Note Prepared By Singamma Sreenivasan Foundation, Bangalore).

The data on magnitude of revised Gender Budget over the years reveals there is increase in allocation of finances for women beneficiaries for all three categories of schemes (A - 100 per cent, B - 30 to 99 per cent and C less than 30 per cent). The total allocation consolidated fund under plan increased from Rs. 18,17,831 lakhs in 2008-09 to Rs. 62,57,555 in 2015-16 - a rise by nearly 3½ times. Non-plan revised budget also rose from Rs. 34,16,708 to Rs. 79,92,737- more than double over the 8 year period **(Table 4.12).** This data indicates that the government of Karnataka has shown sustained commitment to the cause of women in particular and gender equity in general through the budgeting process.

Table 4.12
Magnitude of Gender Budget in Karnataka State (lakhs) – Revised Estimate (RE)

Year	Category A		Category B		Category A+B		Total consolidated Fund A+B+C	
	Plan	Non-plan	Plan	Non-plan	Plan	Non-plan	Plan	Non-plan
2008-09	51137	265	806485	1137641	857621	1137906	1817831	3416708
2009-10	67298	385	996115	1250590	1063413	1250974	2332917	3672200
2010-11	94087	608	1171266	1460496	1265353	1461104	2858200	4369502
2011-12	84514	514	1450959	1671002	1535473	1671516	3495641	4937789
2012-13	165481	40532	2252570	2367169	2418051	2407701	4251596	6150714
2013-14	208893	45058	2476997	2882736	2685890	2927794	4803399	6817853
2014-15	332735	45003	3314400	3154587	3647135	3199590	5688632	7594912
2015-16	469419	92846	3330329	2307027	3799748	2399873	6257555	7992737
2016-17 (BE)	400455	108652	3719885	2440455	4120340	2549107	7169423	9172434

Source: Government of Karnataka, Gender Budget, 2008-09 to 2014-15 (RE); Gender Budget 2016-17(2015-16 (RE) and 2016-17(BE -Budget Estimate)

The assessment of 10 year old **Gender Responsive Budgeting** (GRB) by Jhamb and Mishra (2015) reveals a mixed picture of both positives and drawbacks - the list of positives include factors such as incorporation of gender perspectives to bring about changes in select planning and budgeting processes, creation of gender budget cells in 57 ministries and departments of the central government by 2015, innovative schemes/procedures taken up by the gender budget cells of specific ministries and departments, identification of gender coordinators/ nodal officers in every division, research studies to assess existing schemes from a gender perspective and preparation of gender sensitization models. Among the drawbacks of GRB identified by Jhamb and Mishra are restricted reach of GRB, segmented approach and declining allocation for the gender agenda. The study has brought out significant insights which could be useful for the State as well.

Institutional structures / Mechanisms to empower women and enhance gender equality Institutional structures and mechanisms are a pre-requisite to achieve the highly co-related objectives of empowerment of women (especially most marginalized among them) on the one hand and end disparities and gender based violence that prevails across various areas of the State and society on the other. Such institutions at various levels from the local, State to the national need to be women centric such as Mahila Samakhya, Panchayat Raj institutions (especially most marginalized women centric), and legally constituted, democratic (not hierarchal), participatory, autonomous, sustainable, predominantly government funded, outcome centered, transparent and accountable, effective and efficient has also been repeatedly emphasized by various international and national conferences and International human rights instruments such as CEDAW (Convention on Elimination of all Forms of Discrimination Against Women).

Box 4.3
Mahila Samakya, Karnataka

According to Sujaya C P (2015) MSK had evolved a distinction set of institutional structures and mechanisms through the process of learning and representation since last 25 years (launched by the education ministry of government of India and handled at the Karnataka level by the education department). According to her "A critical issue of MSK is its hierarchy". It upturns the usual hierarchies in government institutional structures and mechanisms. In MSK it is "..... the sanghas right at the bottom, who power the cluster level, which further powers the taluka and which finally, powers the Zilla". Sangha women have setup six committees under each identified theme such as Health, literacy, legal education, local governance, credit and savings and small enterprises and self-reliance and empowerment. "Instead of treating these core areas separately, as is invariably done in the government by each of the "sectoral" departments, the MSK programme has created a new paradigm in bringing all threads (i.e. the so called sectors) together by locating women in the centre of the hub of MSK activities. MSK has been able to successfully bridge the 'sectoral divide', which is one of the very basic building – bricks of government mechanisms – bureaucracies, technocratic departments, field officers, budgets, cadres, et al"..... The mahila sangha is the nodal point of the MSK and all the activities are planned around the sangha....."The sangha is a place for women's own time and space, providing them opportunity to bond with other women, dialogue, share life experiences and learn from each other. It is a place to seek information and knowledge and to question what is defined as 'women's traditional roles'. According to her, the process enables women to make informed choices and to bring change in women's perception about themselves. Through active involvement in the process, women have learnt to counter discrimination, social exclusion and oppressive social practices. The process has charted a trajectory for women's self-empowerment at a pace that takes into account their daily lives and their levels of consciousness. It has been an enriching process of democratization where women have identified problems and evolved strategies to resolve them through this initiative of women, by women and for women. This was the background against which newer entities such as cluster resource persons – CRP, (who manage twenty villages), the taluk-level sanghas, and then the federations (at district levels) came up through processes of continuous evolving. Nari Adalats - the institution of the legal committee in MSK evolved based on women's experience.

Box 4.4
Vision of Panchayath Raj

The nature of institutional mechanism within the overall vision of Gram Swaraj by the Karnataka Panchayati Raj Act Amendment Committee (2014) is articulated as follows: "Panchayats shall work towards a vision of a society that is tolerant, peaceful, and respectful of all its citizens and upholds the spirit and values enshrined in our Constitution". To achieve the vision of Gram Swaraj:"All functions had to be 'People Centric' ensuring the Constitutional right of all people to determine the present and future of their villages with the power and resources to transform their communities and habitations to the vision of the one they aspired for. In order for this to take place; the accent had to shift from mere top down implementation of 'development' schemes designed by those in New Delhi and Bangalore, far away from the real 'Bharath', to bottom up planning for inclusive development with a focus on equal rights and social justice without any gender or caste bias. The structure has to be 'people centric' with primacy given to the Gram Sabhas. It has to be as the Mahatma envisaged; the "legislature, judiciary and executive combined" so gradually India will not be "a pyramid with the apex sustained by the bottom" but "a majestic tree whose trunk cannot be shaken off its roots which are deep down in the bowels of the earth (and) the mightiest wind cannot move" of which "we are all leaves". Grama Sabhas of women themselves and that of SCs and STs are important components of the process of participatory democracy.

Some other government operated institutional mechanisms in operation in Karnataka are KMAY cell (established in the Directorate of Women and Child Development in mid 2003 to monitor inter-sectoral allocation of finances for women in related programmes), The Department of Women and Child Development (which has a primary mandate for monitoring of Schemes under Gender Budget (GB), Karnataka Evaluation Authority (KEA) set up under the Planning Department for impact evaluation of GB schemes, Gender Budget Cell (GBC) established by the Finance Department of the government of Karnataka in the Fiscal Policy Analysis Cell (FPAC) in Jan-2007 merged in Fiscal Policy Institute in Oct -2013, the Finance Department which monitors the progress of expenditure of all the schemes which also includes Schemes categorized in the GB document and the Planning Department which monitors the implementation of Schemes of all departments every month using the Monthly Programme Implementation Calendar (MPIC) and an amplified format of MPIC to monitor the GB Schemes (Gender Budget, 2016-17). At the level of women there are stree shakti/self-help groups/sanghas and their federations. Critically analyzing KMAY, Sujaya C P., (2015) raises certain significant questions on some of the established institutional mechanisms that deal with Gender Budget.

There are many other institutional mechanisms established at various levels of the State to take the cause of women and gender justice forward, some of which are mandated by specific laws

the interventions (policies, laws, institutional and non-institutional services/ programmes by the State and civil society- inclusive of social movements/ advocacy attempts) have resulted in some positive outcomes.

that exist to safeguard the rights of women (i.e. the State commission on women and its' national counterpart) and to prevent atrocities/human rights violations against socially excluded groups – both women and men (i.e. the national as well as State Human Rights Commissions) and others specifically meant for safeguarding the rights of SC/ST/OBC/minority groups, children, differently abled, labourers and consumers. There are district level coordination committees to implement laws and action plans to counter atrocities on women and to address child rights, child labour, bonded labour issues (both amongst women and men). In relation to law enforcement there are specific mechanisms such as women police stations, family courts and special courts for child sex abuse victims – survivors (under POCSO Act). Special treatment cells for women and child victims of atrocities in all the 30 district hospitals have been established to provide integrated services (i.e. legal aid, counseling, medical assistance, police help, shelter, psycho-social support). There are women's studies/ gender studies, dalit and adivasi studies centres/units in Universities/ some colleges. To what extent these have succeeded and are effectively responding to violation of women's rights and promoting gender justice? **Very little documentation is available about their coverage, activities, strengths, limitations, constraints, achievements and impact.**

Critical analysis of the current situation

The facts presented above, reveal that all the interventions (policies, laws, institutional and non-institutional services/programmes by the State and civil society- inclusive of social movements/advocacy attempts) have resulted in some positive outcomes. Compared to the past women have gained better share of the power resources/opportunities inclusive of relatively higher number of leadership positions and more visibility in all spheres of the State and society. However, despite of all interventions, cutting across all other forms of social exclusion (i.e. wealth, occupation, caste, kinship, religion, sexuality, age, disability) gender based discrimination persists and remains as challenge. Attempt is made here to critically look at the **institutions, cultures and mindsets that perpetuate gender inequality in general and dis-empowerment of women in particular in the Indian sub continent as a whole inclusive of Karnataka.**

Patriarchal institutions By their very nature imbued with hierarchical / authoritarian/discriminatory/exclusivist / and non-participatory characteristics, patriarchal institutions remain largely resistant to change. This applies to the traditionally entrenched institutions (i.e. family, kinship, caste, religion and economy based), those evolved during the relatively recent colonial period (e.g. bureaucracy/ executive, judiciary – courts, police, defense forces, educational institutions, NGOs) and those established since Independence (i.e. legislative and judicial bodies, the central and State government ministries and departments, the local governance institutions, agricultural, manufacturing and service sector production units and educational institutions). Women remain largely excluded from positions of leadership

and relegated to subordinate roles in many institutions. Even those institutional mechanisms set up to ensure gender and social justice such as human rights commission, commissions on women, SC, ST, minorities development corporations, Boards (State and national levels) committees (various levels) and women police stations themselves demonstrate afore mentioned unhealthy characteristics to a more or less extent. The data highlighted in the earlier sections of this chapter make it clear that not only patriarchal ownership and control over positions of leadership, material resources/opportunities but also control over the body of women – her behaviour, labour, fertility and sexuality is sustained across most institutions. For instance the primary institution of family, which is supposed to be a caring and nurturing place, has become in reality a site that throttles many rights and freedoms of women and subjects them to all forms of abuse (physical, emotional and sexual). The citadels of democracy such as State assemblies and parliament denies women equality of representation and voice in policy and law making. Generally institutions have yet to free women from the multiple hierarchies of political, economic and knowledge power. The process of socialization/gender role stereotyping/modeling, especially the everyday practices of male preference and female de-preference embedded within such sites, breeds a sense of masculinity/misogyny and privilege in men and that of inferiority and subordination in women.

Patriarchal culture Ideas, beliefs, values, norms, symbols (both traditional and modern) which ascribes superiority to the biological and behavioural traits/characteristics and roles (tasks or activities) of men (especially upper class/caste) and inferiority to those associated with women (especially those who belong to the traditionally oppressed groups) continues to permeate all institutional sites to a more or less extent. This is despite the emergence and spread of counter cultural ideas, women centric/ feminist knowledges and cultural products (i.e. literature, theatre, films and paintings), that uphold the dignity, equality and contribution of women from across time and space. Culture of patriarchy legitimizes and reinforces male domination and female sub-ordination. On the one hand, it enforces protectionism towards women who are considered to be part of the family, kin-group/caste/religion by socializing them to be helpless without men, forcing them to subject themselves to the will of the father/husband and men of the kin-group/caste/religion. On the other hand, it justifies all forms of violence even sexual violence on women (wives at home and others outside). Disseminated from one generation to the other and from one area to another through spoken and written language, gestures and audio-visual symbols and other channels of communication (folk, mass and social media), such misogynous, patriarchal ideas contribute to the process of subverting history of women and sustaining gender discrimination, subjugation and violence on them. New patriarchal discourses keep emerging reinforcing the old (e.g. sexist jokes in social media and women projected as women's worst enemies in films and TV serials).

Such misogynous, patriarchal ideas contribute to the process of subverting history of women and sustaining gender discrimination, subjugation and violence on them. New patriarchal discourses keep emerging reinforcing the old.

There forms are associated with positive outcomes such as scientific progress and technological advancement across all sectors inclusive of household (e.g. gadgets to reduce house work),

Patriarchal mindsets: Most individuals (Men and women) constructed as they are within the institutional cum cultural ethos of patriarchy tend to have **patriarchal mindsets,** although the number of women and men who question patriarchy and manifest gender sensitive behaviours and engage in spreading gender sensitive messages through their activities (both individual and collective) is on the rise. Many men and women in India act in a manner that is fairly predetermined by their gendered roles and expectations, socio-economic characteristics and childhood expectations. Men perform tasks/ roles considered superior or dominant and abstain from performing tasks considered inferior and women's job (i.e. household labour, child rearing and other caring tasks), whereas, women even those engaged in wage/salary giving work – consider household work their sole responsibility. Many men tend to act in aggressive/violent ways and women put up with it silently. Women and men justify violence on wives, daughters and others as being normal/natural. According to a UNICEF (2012) survey at all India level, men and women adolescents aged 15-19 years who think a husband is justified in beating his wife under certain circumstances number 56.8 per cent and 52.9 per cent respectively *(http:// www.unicef.org/ infobycountry/india_statistics. html).* The Breakthrough Foundation study in Karnataka (2015) also found that domestic violence was considered a normal phenomenon by a significant majority of men and women surveyed. Sixty six per cent boys think women provoke by the way they dress placing the blame for their sexist/misogynous behaviour on women. Persons with patriarchal mindsets reinforce traditional boundaries on women (e.g. how she has to behave, talk, gesture, dress, with whom she should or should not talk or travel at what age, where she should be or should not be found at what time) by using subtle conditioning/disciplining process on the one hand and violence and other repressive power strategies (inclusive of violent attacks on young women and men - labeled as moral policing - actually illegal) on the other. The perspective that no one can physically and mentally abuse his wife, partner or anyone for that matter for whatever reason and that women alone have the right over their own bodies and the rights to live in dignity, security and autonomy has not yet been internalized by a large majority of men and women.

The current paradigm of unsustainable development The relatively recent economic reforms (broadly labeled liberalization, privatization and globalization), are associated with positive outcomes such as scientific progress and technological advancement across all sectors inclusive of household (e.g. gadgets to reduce house work), high growth especially in the industrial and service sector, high incomes/profits for those who access jobs at the managerial levels and succeed in their entrepreneurial ventures (inclusive of startups), availability of wide ranging choice of goods and specialized services for consumers, more comforts, reduction of poverty, widening of the middle class base and much higher access to financial resources in the hands of the State (from direct and indirect taxes) to spend on public goods for all and welfare schemes for the women and men from the socially excluded sections. Negative outcomes associated with this paradigm are jobless growth, widening

inequalities (one per cent of the supra-rich own 50 per cent of the wealth as per 2014 estimates), decline/destruction of non-renewable natural resources (36 percent of land in the State of Karnataka is degraded according to a recent report), water, forest bodies and bio-diversities, climate change, (resulting in global warming), violent conflicts over water, displacement of people (especially adivasis, dalits and other marginalized farmers and labourers) from their livelihoods and cultures, deepening agrarian and food crises, lack of increasing distress migration to over crowded cities (leading to a life of drudgery and squalor in slums and streets), destruction of life sustaining and humane traditional knowledge, rising authoritarianism, revival of primordial social identities based on caste, religion, language, region and nationality, widening communal divide and rising non-communicable disease burden (mental and physical). One major negative effect is large scale de-empowerment of urban/rural youth, mainly due to lack of decent work and living environment inclusive of cultural/ recreational spaces and activities, which has contributed to intensification of male rage against deprivation, inequalities and real and perceived injustices, culminating in addiction to all types of vices (self abuse) on the one hand and all forms of violence on women, men and children on the other. Reinforcing pre-existing culture of sexual violence, women's body has become the principal terrain of male rage (Rajalakshmi T.K. (2013) and Parveen Swami (2013). Revivalist movements by dividing not only men but also women on the basis of their ascribed identities – i.e. ethnicity (i.e. religion, caste, tribe, language) and region/nation have weakened progressive social movements, Thus, reinforcing **institutional, cultural and mindset basis of** subordination/ oppression of women. In short the current paradigm of development is producing contradictory outcomes - on the one hand expanding the space for freedoms and liberties available to certain categories of people (women and men) and on the other giving rise to new forms of patriarchy (patriarchies) hidden under the guise of morality and righteousness which seek to destroy the hard won freedoms and rights by women and other socially excluded groups in society. This analysis makes it clear there is need for re-conceptualizing the perspectives on development to ensure justice and well being for all, particularly women of the socially excluded ethnic/ caste, religious groups who carry the burden of gender based discrimination/ violence as well.

Recommendations

Many recommendations have emerged from the United Nations declarations/ covenants, human development and research centered reports of the State and the Central government and international/United Nations Agencies and components of policies passed and policy drafts placed in the public domain at the State and central level (i.e. The Draft Karnataka State policy on women; the Draft Karnataka Government Policy for Transgender Persons (2014); the Draft Karnataka State Girl Child Policy – (KSGCP) – 2015; the Draft National Policy for Women (2016); the Karnataka State Child Protection Policy for Schools, 2014 and the National Policy for Children, 2013. The report of the status of women in Karnataka (2015) has also

Evolving an integrated/holistic perspective and policy to address the intrinsically interrelated concerns associated with women of all ages across multiple dimensions of social exclusion – family, economy, polity, education, religion, culture and media.[1]

made comprehensive suggestions. The suggestions made here are mainly focused on perspectives and policies (Please see Annexure **I – Note on Alternative Policies,** for further details).

- **Evolving an integrated/holistic perspective and policy** to address the intrinsically interrelated concerns associated with women of all ages across multiple dimensions of social exclusion – family, economy, polity, education, religion, culture and media.[1]
- **Facilitating higher levels of gender sensitization** in particular and social sensitization in general against all forms of discrimination/abuse based on gender, caste, language, occupation/wealth, disability and sexuality. (Noronha, R., et al, 2011). Based on this perspective it is important for the State to evolve a gender sensitization policy.[2]

Focusing on equitable access to secure and sustainable livelihood options to ensure empowerment of women.

- **Focusing on equitable access to secure and sustainable livelihood options** to ensure empowerment of women and human well being and reduce gender disparities by evolving perspectives and policies at the State level and eco-politico-economic region level.[3]
- **Enhancing food/nutrition security by** evolving State level and eco-region specific policies and interventions to ensure food and nutrition security/ safety/availability and access with the participation of all stakeholders especially food producers/consumers especially women. Programmes such as highly subsidized rations almost free for the below poverty line households, mid day meal scheme, nutritional supplements for pregnant women and children inclusive of campaigns to promote breast feeding and the dividends produced by the neo – liberal economy such as growth in per capita income and scientific and technological advancement have not succeeded to the extent desirable to ensure human well-being.[4]
- **Evolving comprehensive health policies to address the issue of rising non-communicable disease burden** inclusive of mental health (incorporating lessons from services initiated through Karnataka State Mental Health Authority established in October 2012 and the positive aspects of National Mental Health Policy 2015).[5]
- **Evolving a policy cum legal framework that promotes equitable percentage of women in governance/** leadership positions in all State, civil society and corporate sectors by highlighting the positives of women leadership and diversity.[6]
- **Promoting human security and preventing atrocities on women, transgender persons and other vulnerable sections.**[7]
- **Ending severe forms of social exclusion to which the transgender persons continue to be subjected and safeguarding their rights to live with security and dignity.**[8]
- **Promoting more effective Gender budgeting and Gender Auditing of Government schemes and programmes.**[9]
- **Facilitating the establishment of effective institutional mechanisms** that are non-hierarchal/democratically constituted, inclusive and

autonomous, adequately resourced and sustainable in order to design/ execute/monitor/evaluate policies, laws and programme interventions. (e.g. Mahila Samakya, Karnataka). The local governance institutions if re-structured could also serve the cause of gender justice.[10]

To begin with well represented institutional mechanisms could be established at the State and the district level to set in motion a participatory process of critical review of the impact of all the interventions directed at strengthening women and enhancing gender parity as well as to evolve perspectives, policies, institutional mechanisms and programmes that will be owned, controlled, managed and sustained by women themselves at various levels from the local, taluka, district historical-eco-political region to the State. Constituting district level and historical eco-region wise councils for empowerment of women representing women of marginalized groups is essential. Supportive consultative committees comprising various stakeholders (i.e. concerned women and men, people's representatives, civil servants, representatives of civil society, health experts, academicians, scientists, environmentalists) could also be constituted. Such mechanisms with clearly laid down tasks could steer the process of mapping the extent of multiple exclusions and evolving region specific policies and participatory mechanisms for execution, monitoring and evaluation of activities, process and outcomes.

Conclusion

In short to respond to the challenges of addressing persisting deprivations and gender disparities (cutting across all other forms of social discrimination), the strategies of law enforcement, welfare or economic/social development are not sufficient. It is important to direct attention towards understanding and addressing the multiple axis of patriarchal power that cover all the sites/ institutions (e.g. from the family to the State assembly and parliament, from the small enterprise to large corporations, from the anganwadi or pre-school to the university, from the primary health centre to the large hospital networks, from language to the mass media houses, from local worship places to all religion based macro organizations). It is equally important to demystify patriarchal culture and evolve more humane perspectives that uphold the equity and dignity of all human persons irrespective of their gender, age, caste, religion, class, sexuality. It is necessary to direct State and civil society efforts at promoting a more inclusive, ecologically sustainable and humane model of development (with appropriate perspectives, policies, processes, strategies and institutional mechanisms). In alliance with the civil society, political will of the highest order needs to be galvanized for the purpose. By effectively utilizing the available opportunities and systematically dealing with the constraints as a constituent part of the Indian nation and the globalizing economy, the State of Karnataka with its commitment to social justice has the potential to design a model of development that is gender sensitive, dalit/adivasi sensitive, child sensitive, elderly sensitive and eco sensitive to ensure the well being of all – women in particular.

It is equally important to demystify patriarchal culture and evolve more humane perspectives that uphold the equity and dignity of all.

Annexure I – Note on Alternative Policies

1. **Evolving a holistic women centric policy** could facilitate a more co-ordinated approach on the part of the State and the civil society to counter not only the cultural and mindset related forces but also the institutional/ structural roots and lopsided development perspectives /approaches responsible for the persistence of dehumanizing situation of women and gender inequality. To begin with holding public hearing programmes among various stakeholders across the districts of Karnataka and listening to the voices of the marginalized women in particular could deepen the process of reflection on the complexity of causes responsible for the problems and could be useful in evolving more participatory, effective and integrated perspective, policy framework and approaches to address the same.

2. **Facilitating critical conscio -usness** is a complex processes which involve action cum reflection. In other words engagement in acts of resistance/ protest but also collective reflection of such experiences. Classroom centred educational programmes/campaigns are useful in raising awareness of such realities which may or may not translate into actions against such discrimination (Noronha, R., et al, 2011). The State policy on gender sensitization has to be supportive of the following: **i)** Involvement of women and men inclusive of organized groups in collective actions against gender and other forms of discrimination in a sustainable manner; **ii)** Creation of a conducive democratic climate essential for strengthening women's and other human rights centric social movements inclusive of ecological; **iii)** Research studies on the effectiveness of classroom centric gender awareness building programmes inclusive of campaigns undertaken by various civil society organizations, educational and government institutions to discover how far such efforts have impacted behaviour change among various participants groups (men and women) and using the insights Thus, gained to facilitate more effective awareness programmes/campaigns; **iv)** Collection /production, dissemination and effective use of highly creative, participatory and interest provoking educational materials such as texts, lesson plans, plays, documentaries, films, stories, songs, slogans and advertisements that are appropriate for spreading awareness among various stakeholders; **v)** Learning from innovative experiments of civil society organizations and educational institutions in this line from across the State and other places to galvanize the extensive educational infrastructure to contribute to the process of deepening gender awareness (i.e. Jawaharlal Nehru Technological University (JNTU), Hyderabad has initiated participatory gender sensitization programme at the under graduate level in engineering and pharmacy colleges affiliated to it by adopting a bilingual textbook on gender titled "Towards a World of Equals". Another pilot project launched by the Centre for Enquiry into Health and Allied Themes (CEHAT), Directorate of Medical Education and Research (DMER), Maharashtra University of Health Sciences and the United Nations Population Fund (UNDF), in Feb 2016 in government medical colleges of three

districts of Maharashtra seeks to enable medical educators/students to look at health from a gender lens and review of medical textbooks to eliminate gender biased messages (Srivastava, R. 2016). It is in and through these places of learning that the mandate of the constitution of India which enjoins every citizen to develop the scientific temper, humanism and spirit of enquiry and reform has to be nurtured.

3. **Ensuring secure and sustainable livelihood options** require providing adequate attention to the following: **i)** Mapping the human, natural, and infrastructural resources available and collecting reliable gender disaggregated facts across the districts to ascertain not only the extent of loss of employment across sectors but also the quality, safety and sustainable aspects of work available for women and men at present; **ii)** Finding ways to judiciously combine economic growth with creation of sustainable and secure livelihood options/jobs to the majority who seek work especially the large youth force across all educational categories, especially from excluded social groups and backward regions; **iii)** Maximizing the urban and town area potential to generate highly diversified/specialized as well as multi-sectoral employment opportunities, by developing good quality roads, transport and market links between 30 to 40 villages and the closest city/town centres. The SMART cities and other urban centres could be conceptualized as job creation hubs not only in the fields of manufacturing and services but also trade in agricultural commodities and fresh and value added organic products. The potential of the Street Vendors Protection and Regulation Act could be used to generate income earning opportunities for women and men of the marginalized groups by drawing lessons from organizations such as NASVI, Delhi and SEWA, Ahmedabad. Skills promotion programme of the union government could be effectively executed to enable women and men to develop their job related and entrepreneurial competency to procure work options within the State/country and overseas; **iv)** Giving serious thought to the issues related to ownership, control over and sustainable use of natural resources such as land, water, forest bodies, bio-diversities and renewable sources of energy and preventing their concentration in private lands. Policies that aim at enabling women especially of the excluded groups to acquire equitable ownership/control over productive assets such as lands and other productive assets has the potential not only to democratize the structures of ownership but also to steer the State in the direction of a more inclusive, sustainable and humane development. Undertaking in-Departmenth gender sensitive assessment of the State and central policies in relation to land reforms laws, land inheritance, land acquisition, encroachment and privatization of common property resources, displacement/dispossession of rights over lands/water and forest bodies, degeneration and destruction of natural resources and the effects of such interventions in various historical-geo-political regions is called for as all these issues impact women and men differently and increase their disease and violence burden; **v)** Promoting economic enterprises especially co-operatives - owned

controlled and managed by women only and men and women jointly from the marginalized groups as these have potential for extensive networking to counter monopolistic business entities (Karnataka Milk Federation with joint as well as specific women centred cooperatives based on Verghese Kurien's AMUL Model is a good example). Cooperatives in the area of food grains (millets), horticultural crops, animal farming, fisheries, herbal, forest products and cash crops as well as manufacturing and service sectors (inclusive of women run co-operative enterprises, markets, food parks) could be promoted with appropriate changes in the law related to co-operatives and by using The Karnataka Souharda Sahakari (Amendment) Act, 2005. Young, competent and socially sensitive/committed professional who are emerging out of our educational institutions or those motivated to become social entrepreneurs, would be willing to join hands with the dalits, tribals, other small and marginal farmers, artisans, weavers, fisher people, street vendors especially youth (both women and men) of these groups to establish appropriate collective enterprises or innovative startups if a supportive climate is created for them. There are some such exemplary initiatives in Karnataka/India already which could provide useful lessons for adoption; **vi)** Perceiving Work as being inherently and intrinsically linked to human development - as a means of unleashing human potential, creativity, innovation and spirits, essential to make human lives productive, worthwhile and meaningful and enable people to have a means to earn a living, to participate in society and have a sense of security and dignity as emphasized by UNDP(2015). Work in this sense is not only jobs/employment but also covers household work, unpaid care work, voluntary work and creative work (e.g. the work of a writer or a painter). As women carry proportionately very high burden of household, caring and voluntary work which is ascribed very low value to this day, it is important to collect data on the subject and accord value and recognition to this work. **vii)** Guaranteeing labour rights, safely and security benefits to all workers especially for the most marginalized women who are present in large numbers in certain work areas (e.g. domestic work, sanitary work, sales and service related work, sex work) is another area which requires alternative perspective oriented policy interventions.

4. **To ensure nutrition security** the following State actions could be facilitated: **i)** undertaking an in-Depth analysis of the political economy of the food system that is emerging as a result of the central and State government policies and programme interventions within the global context of political interests associated with food business. According to a panel of the Global Nutritional Report 2015, "Around the world, the food systems are defined by political decisions and the differential power of actors to influence those decisions. In other words different types of food systems reflect the different power structures and political arrangements that have taken root in a country. In food systems, in which the primary objective of governments is to ensure that cheap food is made widely available to consumers, economic power lies with large agribusiness

firms achieving economics of scale" The report highlights the need for reorienting the food systems towards different promoters such as healthy diets and a small ecological foot print and advocates setting up of inclusive fora at various level from local food policy council to national level consultation bodies by bringing in the voice from civil society into a reformed set of institutions for food policy making (IPES Food 2015; **ii)** Ensuring availability of fresh and value added organic products (food grains, herbs, animal products – milk, meat) by reducing food miles. (Kerala and Sikkim States are forging ahead in this direction by mobilizing all stakeholders inclusive of people's representatives, students and media). Immense experience of civil society organizations from the State and outside could be drawn through a consultative process to design an appropriate gender friendly food safety policy for the State. The interventions envisaged by the Central Government on contract farming and development of organic farming clusters could be utilized by the State to engage self-help groups / co-operatives especially of women by providing them support services to acquire appropriate competencies, essential inputs and marketing infrastructure. The lands left unused/fallow (private and public) could be used for the purpose with an effective legal framework.

5. **Evolving holistic health policies and integrated strategies** (curative, preventive and promotional) to address the interrelated physical, mental, social and environmental health issues affecting children, women and men through community centric participatory approaches makes it essential to enhance the competencies and responsibility of the people to ensure their own well-being. Life skills enhancement interventions at all ages need to be extensively undertaken/supported to equip children/ adolescents/ adults/ elderly with competencies required to enhance holistic health. Well equipped mental health care centres with help lines (e.g. Suicide helpline) need to be initiated and strengthened. Innovative experiments from across India and the world could provide useful insights. (i.e. a project named Athmiyata) launched in 2013 in Nasik villages by the Pune based Centre for Mental Health, law and policy at the Indian law society is making mental health accessible to villages for the first time. It trains volunteers by using tools such as short films loaded on a basic Android app to identify mental health disorders in their community (Srivastava Roli, 2016). Palliative care facility to improve quality of care for the dying in all districts to begin with is also an urgent need.

6. To **strengthen active participation of women in governance** intensive efforts are needed to bring in more women across social groups into the State legislative bodies and keep the pressure on the parliament to enact law to reserve at least one third seats for women in the State and central legislative assemblies as well as judiciary and to ensure that the reserved seats for women in the executive at all levels are filled. Besides mobilizing broader involvement of all concerned to develop leadership competencies among women, enhancing effectiveness of

competency building programmes being conducted for women representatives and potential women leaders from Stree Shakti/Self-Help groups/sanghas could help. Many civil society initiatives have useful lessons to offer in this regard.

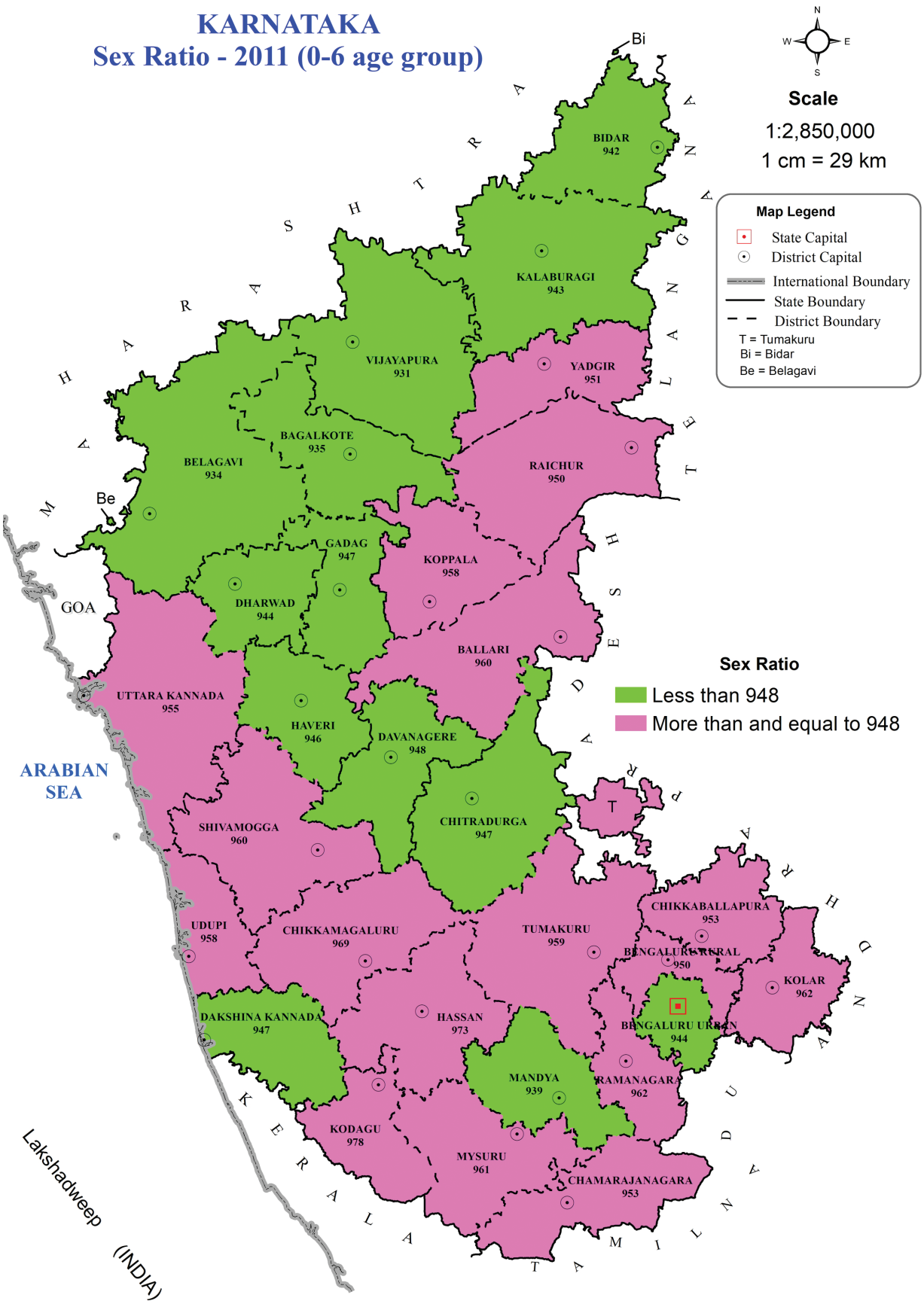
7. **To ensure security for women,** all the above recommendations which aim at addressing the three axis of patriarchal power – institutional, cultural and personal (mindset) as well as altering current unsustainable, non-inclusive and violence ridden mode of development are a must. Some other interventions in this regard could be: **i)** Developing a more critical systemic perspective on the subject of causation of crime and juvenile delinquency and overcoming the dominant tendency to see criminal incidents as isolated pathological/ deviant behaviours of individuals (men, women – adolescents and children). The later perspective has resulted in a clamor for more and more stringent punishment inclusive of death sentence for perpetrators of crimes on women and children by disregarding the systemic forces that foster violence inclusive of rape by producing misogynous mindsets. Seen from the systems perspective women, adolescent, child and even adult men offenders emerge as victims cum perpetrators and require a more sensitive correctional/rehabilitation centred approach; **ii)** Enforcing women centric and related generic laws in a gender sensitive manner and taking steps to plug the loopholes in State laws, as well as initiating actions in coordination with civil society to facilitate the passing of more effective comprehensive laws (in the place of hundreds of laws) at the national level; **iii)** Providing facilities (technological, infrastructural and human resource), and raising competencies of all concerned is required for effective law enforcement at all stages from reporting, investigation, trial to conviction to reduce pendency and increase the rate of conviction; **iv)** Designing through a broad based participatory process from the local to the State level **a peace policy** with emphasis on zero-tolerance to all forms of violence - physical, sexual, verbal and non-verbal at all ages and in all sites of social relations with a peace index in place is another desirable interventions that could enable Karnataka to become a trend setter in this regard.

8. **As highlighted by the** groundbreaking Peoples Union for Civil Liberties (Karnataka) report on Human Rights Violations against the Transgender Community in Bangalore (2003) "any proposal which tries to ensure that the dignity and selfhood of kothis and hijras is respected has to deal with a complex reality in which class, gender and sexuality play a crucial role.... Apart from shifts in class relations, change would also crucially hinge upon overturning the existing regime of both gender and sexuality that enforces its own hierarchies, (e.g. heterosexuality over homosexuality), exclusions (e.g. hijras as the excluded category) and oppressions". The Karnataka State draft transgender policy currently in the public domain has to be revised and passed bearing in mind such a broad perspective. Participatory process of collective action to safeguard their rights and freedoms among the transgender persons has to be strengthened at all levels by facilitating the formation of autonomous organizations among them.

9. **In this direction** it is important to

consider some of the suggestions made by Jhamb and Mishra, who have brought out a well researched paper by assessing the decade old central government effort at gender responsive budgeting (GRB): **i)** Developing conceptual clarity on gender at all levels; **ii)** Enhancing competencies of the personnel; **iii)** Making adequate human resources available; **iv)** Designing outcome centric budgets as tools for reporting achievements of gender equity outcomes and accountability; **v)** Setting in place more effective accountability, monitoring and evaluation mechanisms to assess the impact on women and gender relations; **vi)** Creating mechanisms for mobilizing active participation of women especially women of the most excluded social categories in planning and budgeting which is in itself empowering or autonomy enhancing process; **vii)** Initiating micro and macro level research studies to assess existing policies and their impact on women at the bottom of multiple hierarchies of caste, class, position of authority could help in pushing the gender equity agenda further (Jhamb and Mishra, 2015).

10. To facilitate the process of evolving an effective participatory institutional mechanism towards empowerment of women especially of the marginalized sections, there are strengths and opportunities within the political, bureaucratic, judicial and civil society set up of the State, especially the segments of leadership and collectives committed to justice/ empowerment and human development that could be effectively galvanized. There are also replicable models which could be investigated, adapted and built upon to evolve women centric institutional mechanisms from the local to the State level.


KARNATAKA
Sex Ratio - 2011 (0-6 age group)
N
W
E
S
Scale
1:2,850,000
1 cm = 29 km
Map Legend
State Capital
District Capital
International Boundary
State Boundary
District Boundary
T = Tumakuru
Bi = Bidar
Be = Belagavi
Bi
Be
BIDAR
942
KALABURAGI
943
YADGIR
951
VIJAYAPURA
931
BAGALKOTE
935
BELAGAVI
934
RAICHUR
950
GADAG
947
KOPPALA
958
DHARWAD
944
BALLARI
960
UTTARA KANNADA
955
HAVERI
946
DAVANAGERE
948
CHITRADURGA
947
SHIVAMOGGA
960
UDUPI
958
CHIKKAMAGALURU
969
TUMAKURU
959
CHIKKABALLAPURA
953
BENGALURU RURAL
950
KOLAR
962
BENGALURU URBAN
944
DAKSHINA KANNADA
947
HASSAN
973
RAMANAGARA
962
MANDYA
939
KODAGU
978
MYSURU
961
CHAMARAJANAGARA
953
GOA
ARABIAN SEA
Lakshadweep (INDIA)
MAHARASHTRA
TELANGANA
ANDHRA PRADESH
KERALA
TAMILNADU
Sex Ratio
Less than 948
More than and equal to 948

Demography and Health

Chapter-5

Demography and Health

Introduction

Karnataka provides a mixed picture as far the demographic and health achievements are concerned. The State made significant strides with respect to demographic advancement. At the same time, there is lot to be desired in ensuring better health status in comparison to southern states bordering Karnataka. Undoubtedly, further improvements in health front necessitate renewed efforts in ensuring accessible health care provision for all, innovative methods of health financing and more importantly, taking care of the social determinants of health in terms of provision of water, sanitation, environmental factors, education, employment etc. Therefore, the challenges in the health front are many and further success depends critically on investing in health to achieve the desired effect.

One of the major challenges in achieving health is the inequity in health both in terms of health care and provision. Despite the fact that Universal Health Coverage (UHC) which ensures that all people obtain the health services they need without suffering financial hardship when paying for them is at the heart of government's health care agenda, wide disparities persists on health coverage. There is considerable inequality in health status across socio-economic groups as well as regions in the State. This is despite the fact that several efforts to address these inequities have been undertaken. Although health equity is understood differently in different context, the pursuit on systematic elimination of health disparity should be the priority in any contexts. Therefore, renewed attention is required to ensure that the health system is more equitable and in particular addresses to improve the health status of the vulnerable sections of the population.

As already pointed out, health is not merely a function of the provision of health care facilities but has direct connection with many social determinants. Adequate nutritious food, quality of water, controlling environmental pollutants, providing employment, ensuing education etc, affect the health status overwhelmingly. The holistic approach to health, therefore, necessitates addressing all these issues which has direct linkages for the overall well-being of population. Various studies have clearly indicated the close nexus of education and income status with the health status of the people (Grossman and Kaestner, 1997; Preston, 1975). Therefore, achieving higher levels of health involves addressing all these concerns as well than mere provision of health care facilities. The link between social determinants of health and health outcomes is very strong and often dominate in ensuring better health status.

Health is not merely a function of the provision of health care facilities but has direct connection with many social determinants.

Health is a complex subject involving multiple stakeholders. In India, in addition to the pivotal role played by the

public sector, private sector and non-governmental organizations (NGOs) also play vital role in the provision of health care. This is particularly relevant in a context where out of pocket expenditure constitute nearly 75 per cent of total health expenditure and a large section of population depending upon private sector for curative care. Therefore, the role of large private sector can neither be undermined nor remain completely unregulated as has been the practice for a long.

This chapter investigates the current health status and trend in Karnataka and its variation across socio-economic and geographical locations by considering some major demographic and health indicators. First, the chapter discusses current demographic and health status both at the State and the district level. Second, it analyses the health infrastructure. Third, it brings out the social determinants of health. The evolution of health policy and system development is discussed in fourth section. Fifth section addresses the health financing in the State and the final section brings out the future challenges.

I. Demographic and Health Profile

The Sustainable Development Goals (SDGs) adopted by the UN Summit on 25 September 2015, by member countries include a set of 17 Goals all of which have direct connection in ensuring healthy lives and promote well - being for all at all ages. The Goal 3 specifically addresses the health dimension. The targets under this include the desire to reduce maternal and child mortality, prevalence of communicable diseases etc. There is a need for renewed efforts to achieve these goals in the State.

Box 5.1
Sustainable Development Goals
Goal 3 - Ensure healthy lives and promote well-being for all at all ages

- By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births
- By 2030, end preventable deaths of new-borns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
- By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
- By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being
- Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol
- By 2020, halve the number of global deaths and injuries from road traffic accidents
- By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health

into national strategies and programmes

- Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all
- By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
- Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate
- Support the research and development of vaccines and medicines for the communicable and noncommunicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all
- Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States
- Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks

The achievements in some demographic goals have been noticeable in Karnataka. The population growth rate has significantly come down from over 2 per cent per annum around three decades before to 1.5 per cent in recent years. This is likely to reduce further in future. Thus, the era of the concern on rapid increase in population is almost giving way to more of optimism in recent time. Table 5.1 presents the total population and the annual rate of growth in the last four decades.

The achievements in some demographic goals have been noticeable in Karnataka. The population growth rate has significantly come down from over 2 per cent per annum around three decade before to 1.5 per cent in recent years.

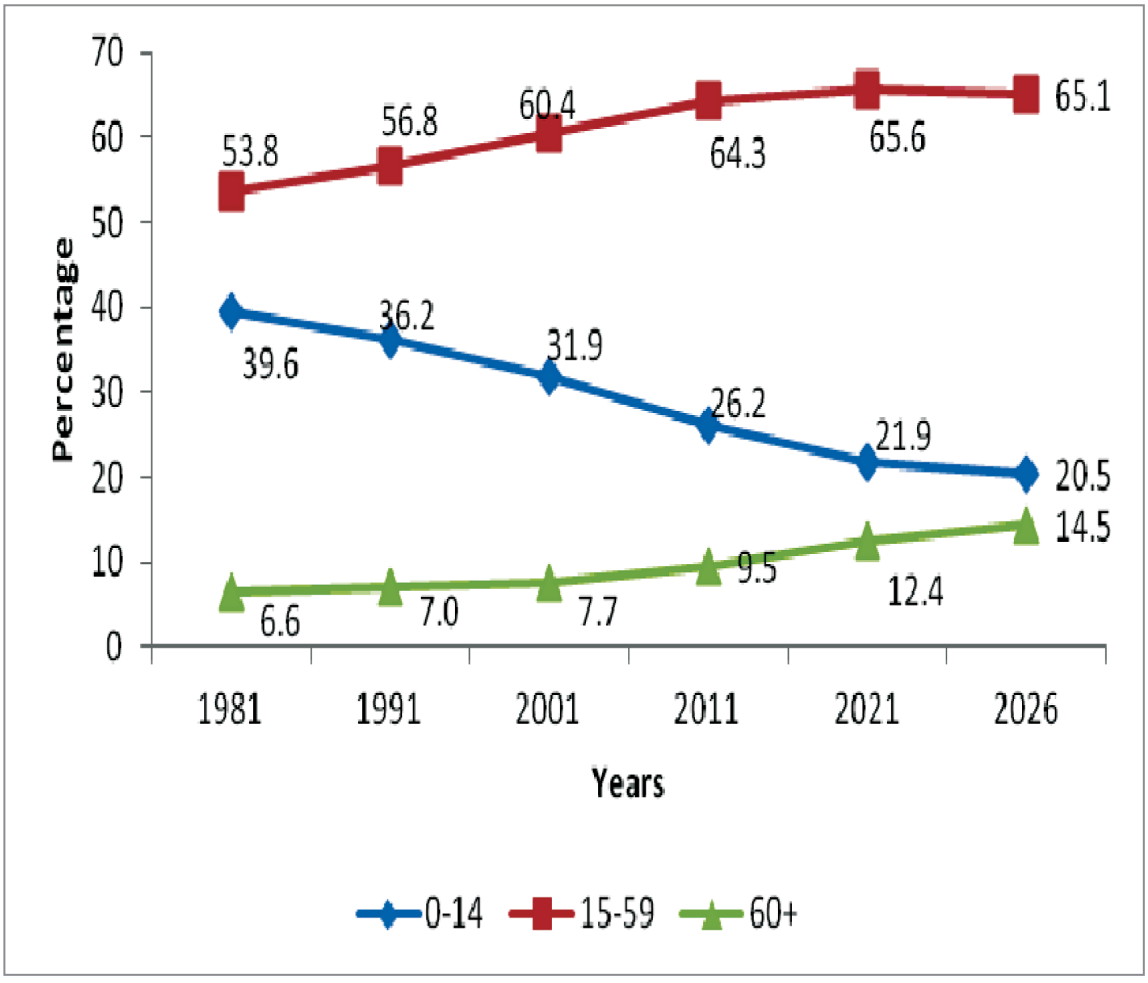
Table 5.1
Total population and its annual growth rate, 1981-2011, Karnataka

Year	Population	Growth Rate (Annual)
1981	37135714	2.37
1991	44977201	1.92
2001	52850562	1.63
2011	61095297	1.47

Source: Census figures, various years

A major demographic shift that has occurred and widely discussed in the last one decade has been the alteration in the age structure of the population (Bloom 2012; James, 2011). It has major implications for several economic and social forces in the society. The age structure impacts on economy by way of demographic dividend that is well recognized. Karnataka's age structure is typically adult peak since the last decade and is likely to continue for the coming two to three decades as well (Figure 5.1). The percentage of adult population in the State has reached around 65 per cent in 2011. The young age population (below age 14), on the contrary, is declining drastically since 1991. Simultaneously the proportion of old age is also on the rise but the total share of elderly is still less than 10 per cent. But the rapid increase in the elderly population signifies that they will constitute a significant proportion of the population in the State in coming decades.

Figure 5.1
Percentage of Population in 0-14, 15-59 and 60+ age group, India, 1981-2026



Source: Same as Table 5.1.

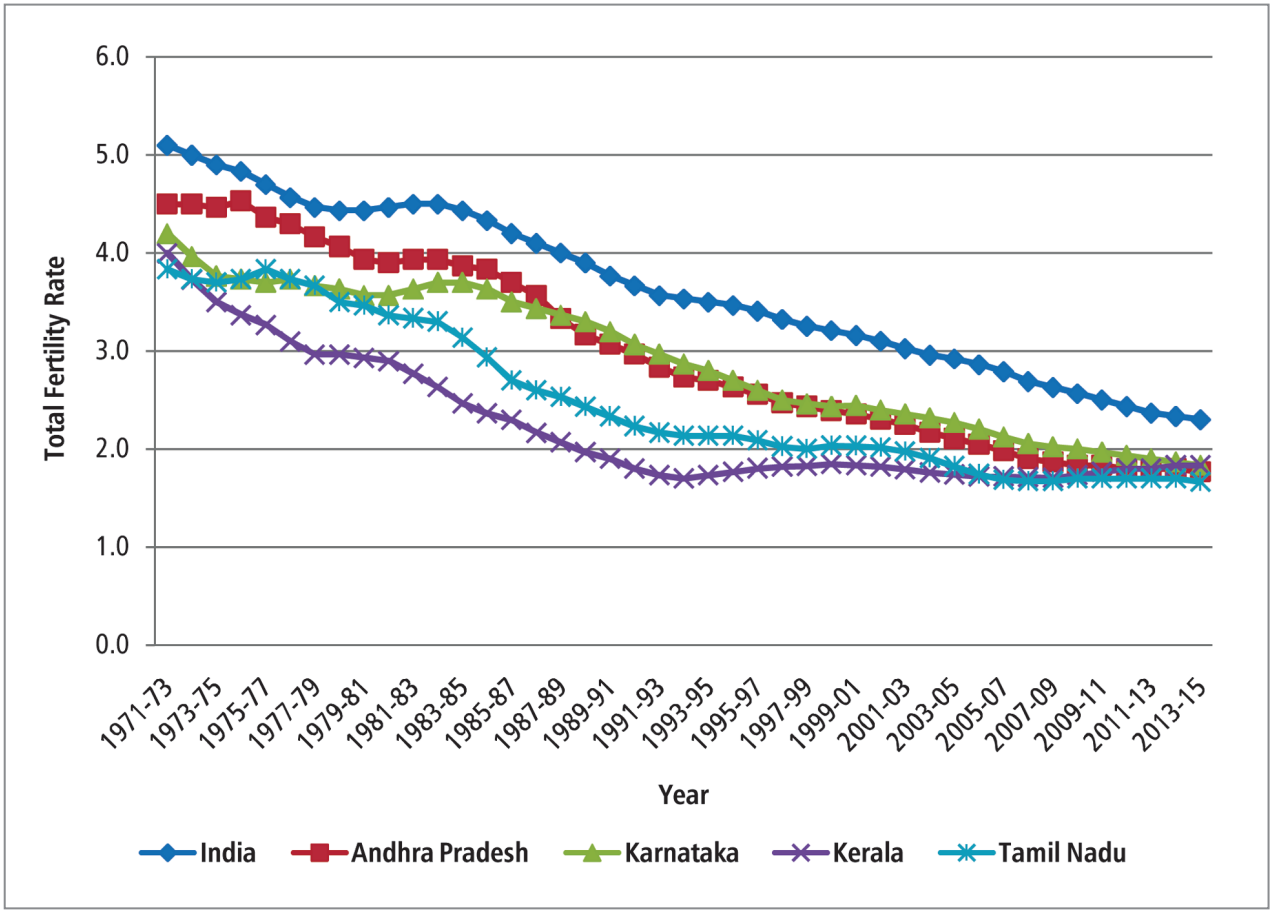
Fertility Trends

The main driver of population change in the State has been the fertility transition. Fertility has been rapidly and steadily declining in the State since the 1990s. **With Karnataka reaching replacement level fertility by middle of the last decade, all the southern states in the country have achieved the replacement level.** Karnataka, therefore, was a laggard among southern states but as compared to all India trend as well as many northern states, the State's achievement in fertility front is noteworthy. Figure 5.2 presents three year moving average of total fertility rate for Karnataka, all India and other southern states since 1971. Both the rural and urban areas of the State have now reached below replacement level fertility. The urban fertility has reached as low as 1.7 in 2015 and rural fertility stands at 1.9. The estimated total fertility rate from the National Family Health Survey-4 (NFHS-4) also stands at 1.8 for the period 2015-16. Thus, it appears that the fertility transition has nearly embraced most sections of the population.

With Karnataka reaching replacement level fertility by middle of the last decade, all the southern states in the country have achieved the replacement level.

Figure 5.2

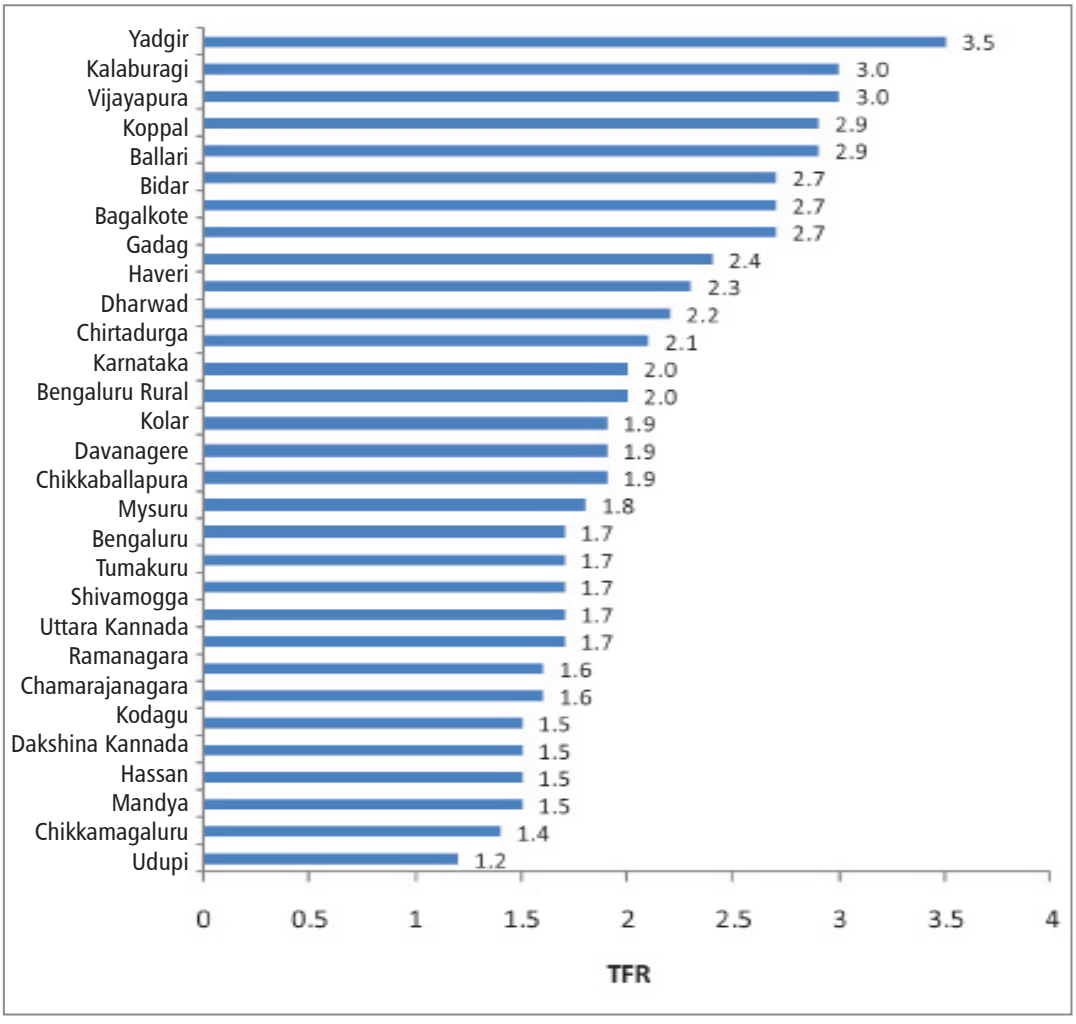
Total Fertility Rate in Southern States and all India, 1971-73 to 2013-15



Source: Office of the Registrar General of India, Various Years, Sample Registration System.

At the same time, the total fertility rate at the district level gives a slightly different picture. Figure 5.3 presents district level fertility rate in Karnataka estimated based on 2011 census. There appears to be wide contrast in the levels of fertility across districts in the State. Yadgir stands as an exception with very high levels of fertility of 3.5 children per woman. At the other end, the southern districts have recorded very low fertility far below replacement level. The levels of fertility as low as 1.2 in Udupi and there are six districts with fertility level below or equal to 1.5 which is generally considered as low fertility. It appears that Karnataka's fertility transition, of late, brings up some interesting features. The fertility level has not shown any sign of stabilisation around 2 children but rather continues to fall in districts with rapid fertility transition. **With the decline in fertility, it is also expected in the northern part of the State, the levels of fertility will come down further in the State far below replacement level. This, perhaps, will also change the age structure with a rapidly increasing elderly proportion and relatively few children to take care the elderly.**

Figure 5.3
Total Fertility Rate across districts in Karnataka, 2006-2011



Source: Guilmoto and Rajan (2013)

More importantly, the State has also recorded moderate improvement in life expectancy over the last few decades. Table 5.2 presents life expectancy in Karnataka over the last three decades.

Table 5.2
Life Expectancy in Karnataka, 1981-85 to 2010-14

Years	Total			Male		Female	
	Karnataka	India	Difference in years	Karnataka	India	Karnataka	India
1981-85	60.7	55.5	5.2	59.7	55.4	62.0	55.7
1991-95	62.5	60.3	2.2	60.6	59.7	63.9	60.9
2001-05	65.1	63.2	1.9	63.4	62.3	66.9	63.9
2006-10	67.2	66.1	1.1	64.9	64.6	69.7	67.7
2010-14	68.8	67.9	0.9	66.9	66.4	70.8	69.6

Source: Office of the Registrar General of India, Various Years, Abridged Life Tables.

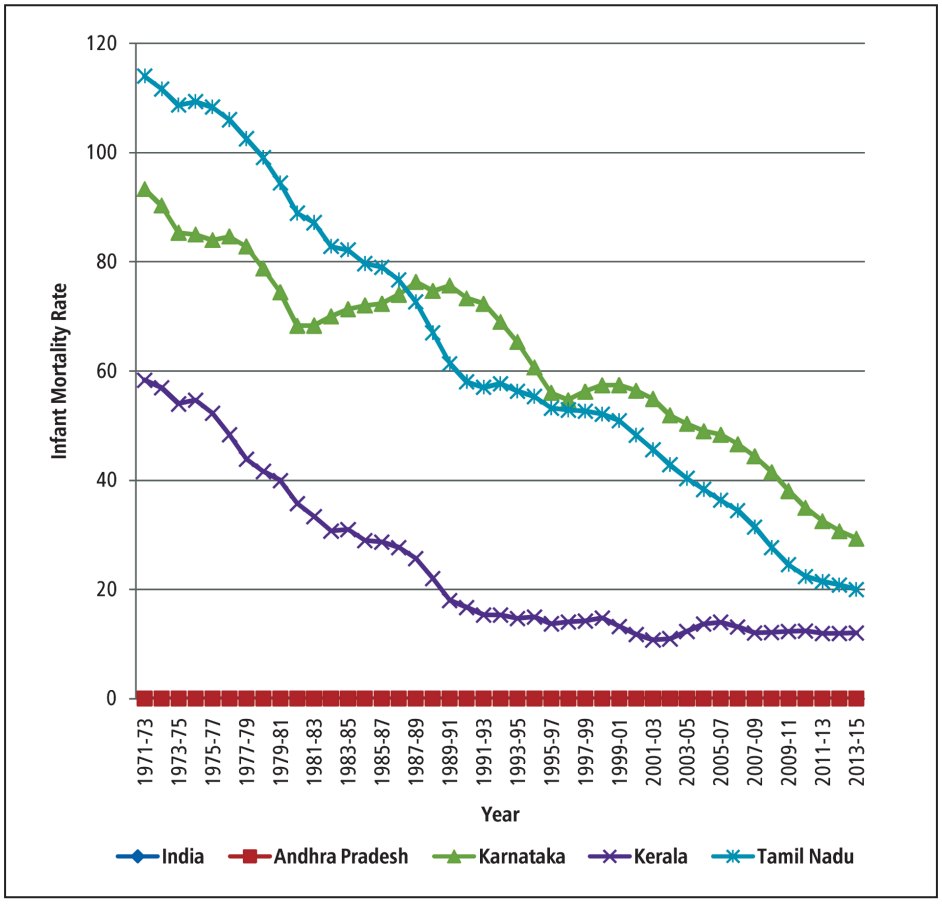
The life expectancy has increased from 61 to 69 between 1981-85 to 2010-14 in Karnataka but the improvement has been rather sluggish over the last decade. Thus, of late, the life expectancy in Karnataka is very close to the Indian life expectancy except in the case of females where Karnataka has over one year advantage compared to all India. Perhaps, it indicates that while female disadvantage over health is less intense in the State as compared to all India pattern, the health improvement as such has not been very satisfactory. As life expectancy improvement in the country is largely the result of reduction in infant and maternal mortality rate, it is important to have a closer look at the trends of these two vital indicators to understand the health status of the population.

Infant and Maternal Mortality

Reduction in Infant Mortality has been the major focus of the maternal and child health programmes in India from its inception. Inadequate progress in child survival remained a matter of grave concern for many decades. Undoubtedly, National Rural Health Mission (NRHM) launched in India since 2005 has provided renewed focus on reducing infant mortality rate in India. It, later, covered the urban areas as well and transformed into a National Health Mission (NHM). Karnataka has also launched several incentive programmes as part of the NRHM to promote institutional delivery and seeking health facilities by the poor sections. Figure 5.4 presents the infant mortality rate in Karnataka, all India along with other southern states in the country.

The infant mortality rate has reached 28 in 2015 as against 37 for Andhra Pradesh, 34 for Telangana and 37 for all India.

Figure 5.4
Infant Mortality Rates in India and Southern States, 1971-73 to 2013-15



Source: Office of the Registrar General of India, Various Years, Sample Registration System.

The pace of infant mortality decline in Karnataka shows an uneven trend. At the same time, the State has performed better in recent times. The infant mortality rate has reached 28 in 2015 as against 37 for Andhra Pradesh, 34 for Telangana (Telangana figures are not shown in the Figure 5.4) and 37 for all India despite the fact that the rate is far higher if comparison is made with Kerala. Kerala had the same IMR of Karnataka in the early 1990s indicating the lag in achievement of the State. Tamil Nadu recorded much faster decline than Karnataka and has reached an IMR of 19 by 2015.

Undoubtedly, the pace of decline in IMR has a direct linkage with the several initiatives the government has undertaken in recent times. Table 5.3 presents the rate of decline in IMR in different periods. The rate of decline has been considerably slow till 1990. Thereafter it has increased to over 2 per cent per annum. However, the rate of decline further declined in the first half of the last decade. With the introduction of NRHM programme, the pace has again gone up over 2.5 per cent. Most of the infant deaths in the State take place soon after birth. The neonatal deaths taking place within 28 days constitute more than 70 per cent of the total infant deaths in the State.

Table 5.3
Annual Rate of Decline in IMR (1981-2015)

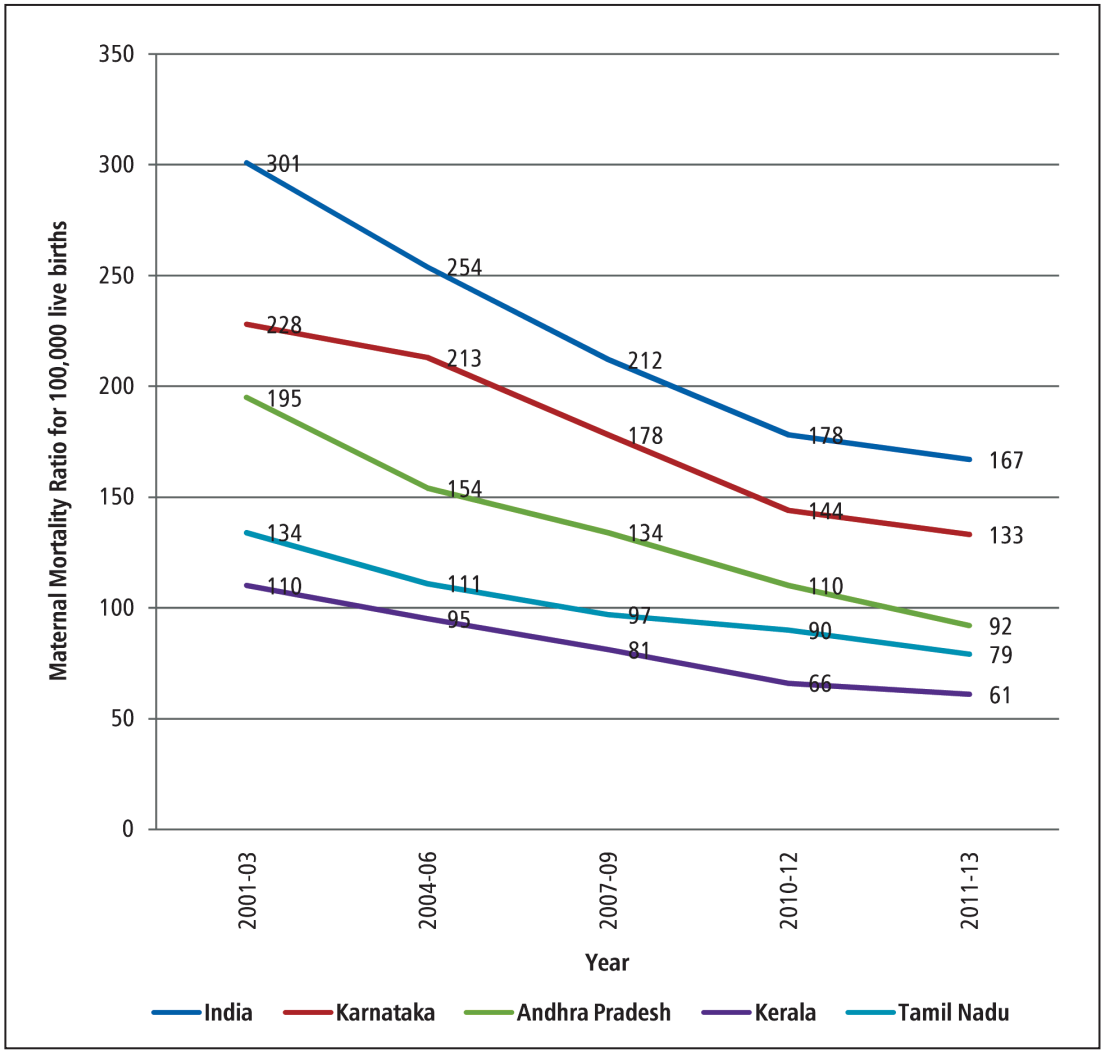
Years	Rate of decline in IMR
1981-1990	1.14
1991-2000	-2.35
2001-2006	-1.92
2007-2015	-2.51

Reliable estimates of infant and child mortality are not available at the district level. Till 2001 indirect estimates from census was published. For the 2011 census, however, the indirect estimates do not appear to provide reliable figures. Therefore, the district level estimates are not presented. However, it is clear that there is substantial district level variation as far as infant mortality is concerned across districts with definite

south-north divide in the State.

The trends in maternal mortality ratio also give similar picture as that of infant mortality rate. The decline has been sharp since the second half of the last decade and has reached 133 per 100,000 live births (Figure 5.5). Although the recent reduction is noteworthy, Karnataka's MMR level among southern states is relatively high. The second highest level is observed in Andhra Pradesh which has a MMR of below 100 as compared to the Karnataka figure of 133. Therefore, renewed efforts are still necessary to bring down maternal mortality rate in the State.

Figure 5.5
Maternal Mortality Ratio (per one lakh live births) in Southern States, 2001-03 to 2011-13



Source: Office of the Registrar General of India, Various Years, Maternal mortality deaths and maternal mortality ratio from special survey

There is no doubt that the health delivery system particularly for the maternal and child health services have considerably improved over the period. Tables 5.4 and 5.5 present delivery and immunization related indicators across districts in Karnataka based on National Family Health Survey-4 conducted in 2005-06.

Table 5.4
Percentage of Women by Various Delivery Characteristics across districts in Karnataka, 2015-16

District	Full ANC	Insti Births	Births in Public Insti	C-Section	District	Full ANC	Insti Births	Births in Public Insti	C-Section
Bagalkote	36.5	91.9	56.5	14.4	Kalaburagi	30	91.3	59.7	8.4
Bengaluru Rural	32.1	98.5	63	30.5	Hassan	34	98.3	57.8	33.1
Bengaluru	27.5	96.2	48.1	27.5	Haveri	19.6	96.9	78.5	18.7
Belagavi	48.6	97.1	68.1	16.4	Kodagu	31.5	97.7	71.6	24.7
Ballari	41.2	86.2	67	22.5	Kolar	50.3	96.8	62.4	32.1
Bidar	33.3	98	78.9	18.5	Koppala	17.2	84.8	72.6	10
Vijayapura	24.4	90.7	54.2	19.4	Mandya	17.1	99	64.7	33.2
Chamarajnagara	43.4	96	76.9	18.1	Mysuru	28.2	94.7	69.8	33.3
Chikkaballapura	38.1	91.6	67.1	25.1	Raichur	38.8	79.7	57.3	11.6
Chikkamagaluru	13.6	96.2	72.4	40.3	Ramanagara	27.4	99.3	68.7	27.3
Chitradurga	33.3	95.6	74.3	28.1	Shivamogga	26.9	97.9	74.5	31.4
Dakshina Kannada	31.6	97.1	38.6	29	Tumakuru	34.6	96.4	61.6	33.4
Davanagere	55.5	97.7	70.5	27.7	Udupi	35.9	97.9	32.8	47.2
Dharwad	35	95.3	56	22.4	Uttara Kannada	33.5	94.8	47.9	17.8
Gadag	32.7	92.9	67	29	Yadgir	19	90.5	70.7	8.5
Karnataka	32.9	94.3	61.4	23.6					

Source: Complied from the District level fact sheet of National Family Health Survey-4, International Institute for Population Sciences, Mumbai and Ministry of Health and Family Welfare, New Delhi.

The percentage of women receiving full antenatal care is still far from satisfactory. Full antenatal care includes at least four antenatal visits, at least one tetanus toxoid (TT) injection and iron folic acid tablets or syrup taken for 100 or more days. Although many women receive some care, completing all the recommended doses of care is only 33 per cent of pregnant women in the State. The main reason for this low utilization is due to very low consumption of iron folic acid tablets or syrup which remains only at 45 per cent in the State. This is abysmally low given the fact that the pregnant women continue to have high anemic level. However,, the institutional delivery has significantly gone up in recent years. Nearly 94 per cent of the delivery takes place in health institutions as against 65 per cent in the beginning of the NRHM implementation during 2005-06. All the districts in the State have recorded relatively high institutional births. Only Raichur has recorded institutional delivery less than 80 per cent. More than 61 per cent of the delivery takes place in the public health institutions. There are significant district differences in the utilization of public health institutions in the State from 32 per cent in Udupi to 78 per cent in Haveri for delivery purpose. But it appears that along with the increase in institutional delivery, the Cesarean section delivery has also gone up in the State. The districts of Udupi and Chikkamagaluru record unacceptably high rates of C-section delivery in the State.

Table 5.5
Percentage of children (12-23 months) receiving immunization across districts of Karnataka 2015-16

Districts	Full Vacci	Vacci from Public Insti	Vit A Tablets (9-59 month)	Districts	Full Vacci	Vacci from Public Insti	Vit A Tablets (9-59 month
Bagalkote	75.9	91.8	90.2	Kalaburagi	58.6	93.4	85.6
Bengaluru Rural	64.1	89.4	88.2	Hassan	68.1	89.0	82.7
Bengaluru	62.1	66.8	72.3	Haveri	69.3	95.7	92.0
Belagavi	63.4	91.0	85.9	Kodagu	68.2	95.5	84.2
Ballari	71.1	93.9	77.5	Kolar	76.4	98.1	94.5
Bidar	59.6	97.6	72.0	Koppala	72.8	98.6	91.5
Vijayapura	58.1	93.7	64.9	Mandya	61.0	95.8	89.0
Chamarajnagara	59.5	95.4	88.8	Mysuru	46.7	93.2	71.8
Chikkaballapura	63.7	90.2	77.8	Raichur	65.4	100.0	70.3
Chikkamagaluru	41.2	100.0	80.0	Ramanagara	58.8	98.0	93.7
Chitradurga	48.7	97.5	74.8	Shivamogga	45.5	94.8	72.4
Dakshina Kannada	77.3	71.0	72.0	Tumakuru	64.8	97.4	69.5
Davanagere	75.2	89.0	86.8	Udupi	64.6	63.5	78.9
Dharwad	54.9	89.9	71.2	Uttara Kannada	67.7	93.3	75.1
Gadag	46.7	100.0	80.4	Yadgir	61.3	95.6	78.3
Karnataka	62.6	88.2	78.7				

Source: Compiled from the District level fact sheet of National Family Health Survey-4, International Institute for Population Sciences, Mumbai and Ministry of Health and Family Welfare, New Delhi.

The picture that emerges from the immunization is also not encouraging. The full immunization coverage is only 63 per cent in the State which is mainly due to poor coverage of polio vaccine and measles. The immunization rate drops to around 75 per cent in Polio from almost 93 per cent due to BCG. Moreover, the Vitamin A tablet consumption is also only 78 per cent in the State with wide district level variation despite the fact that the malnutrition is significantly prevalent in the State. It shows that the follow up of the children is still weak and needs further strengthening. This will ensure that all the children receive the recommended doses of immunization as well as the vitamin A supplementation to ensure the child survival as well as child nutrition.

Another important dimension that is brought out by the data is the wide variation across districts in the State. It is also clear that the immunization is mainly carried out by the public health system. **Therefore, only through expanding the health delivery system in those poor performing districts, the goal of achieving cent percent full immunization can be achieved in the State.**

There is no doubt to the fact that various programmes initiated during the last decade or so was critical in bringing down the infant and maternal mortality rate significantly

Box 5.2
Major Programmes initrated by the Government of Karnataka

The Janani Suraksha Yojane (JSY)aimed at increasing the institutional deliveries of BPL and SC/ST families. Under this scheme, besides ensuring maternity services like 3 antenatal check-ups and referral transport, cash assistance is provided for deliveries taking place both in health institutions and home. Over 3 lakh women are covered under this programme every year.

Thayibagya is implemented in the backward districts of Vijayapura, Bidar, Kalaburagi, Yadgir, Raichur, Koppal, Bagalkot and Chamarajanagar. In these districts, the empanelled private hospitals are given an incentive of Rs. 3 Lakhs for every 100 deliveries conducted including surgeries with treatment being free to the patients. Around 30 thousand women are covered under this programme every year in the State.

ArogyaKavacha provides free first aid and referral transport in case of medical, police, and fire emergencies. Currently over 700 ambulances have been deployed under this programme. In the year 2015-16, upto December around 6,86,128 women are benefited from this programme.

Rashtriya Bal SwasthyaKaryakram is a unique programmein which about one crore school children are medically screened. In case the screened children need surgeries, they will be provided at free-of-cost in empanelled hospitals.

Madilu provides post - natal care for the mother and the child. The objective of the scheme is to encourage poor pregnant women to deliver in health centres and hospitals in order to considerably reduce maternal and infant mortality in the State. Under this programme, a kit is provided to women belonging to below poverty line families delivering in Government hospitals. Nearly 3 lakh women are benefitted per year.

Prasooti Araike is implemented among BPL pregnant women (including SC/ST) who undergo deliveries in Government Hospitals. They are given an incentive of Rs. 2000 (Including Janani surakshaYojane) for getting their nutritional requirement. The coverage rate has declined over the last few years. However,, in the last year 2014-15 over 2 lakh pregnant women benefitted from the programme.

Arogya Vani enables citizen to ask health related queries. People from any part of the State can avail their service by calling 104 round the clock throughout the year.

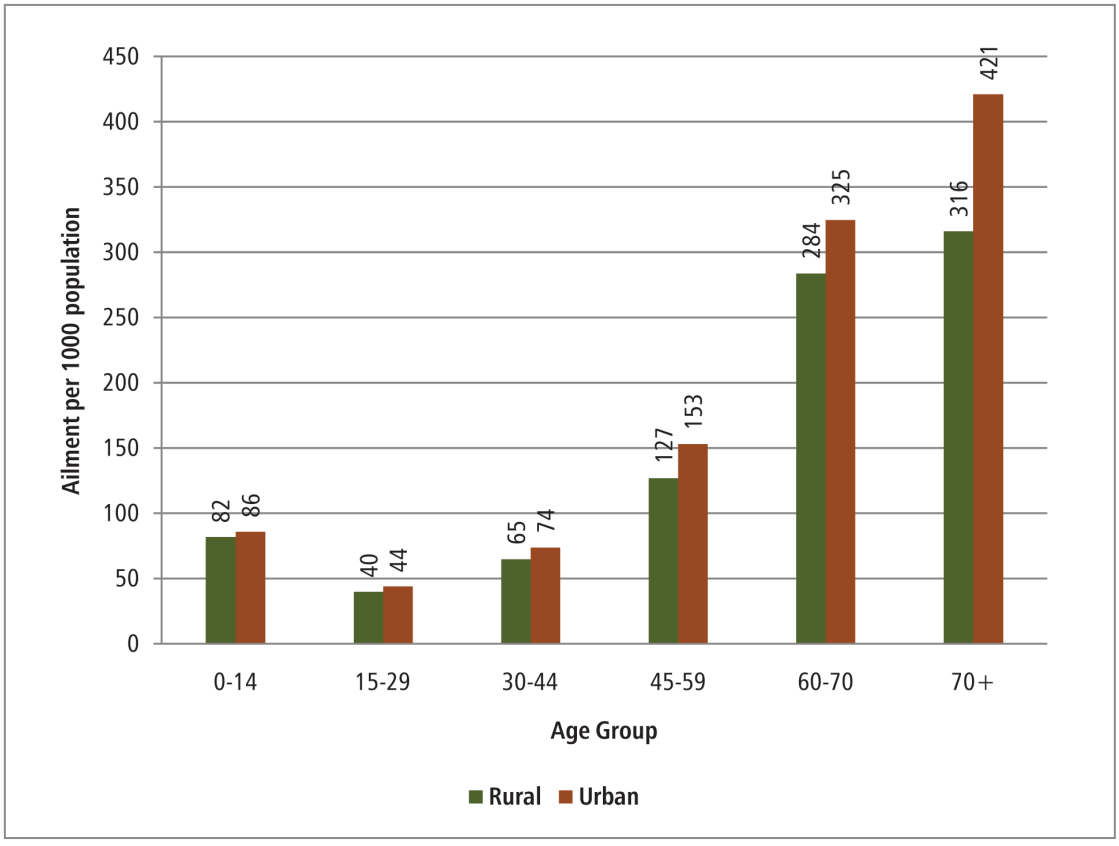
in recent period. **The recent initiatives are innovative and had been instrumental in increasing the institutional delivery in the State substantially.**

Not only in terms of infant and maternal mortality but even more attention is needed in adult and old age mortality also. The adult mortality in the State is even higher than the all India average and old age mortality is almost close to the all India level. This is despite the fact that Karnataka has been much above the all India in terms of fertility level and infant mortality.

Morbidity Pattern

Mortality presents only one aspect of the health status while the morbidity prevalence indicates the conditions of ill-health that disables from day to day activities. Figure 5.6 presents the ailment level among population of different age groups in the State. It is clear that the ailments are significantly higher among adult and old age population

Figure 5.6
Ailments per 1000 population across age groups, Karnataka, 2014



Source: National Sample Survey 71st Round

It perhaps, also indicates the changing morbidity profile Two parts in the State moving to non-communicable diseases. But such issues are yet to get adequate attention in the State. The Non-Communicable Disease (NCD) programme needs to be strengthened so that the people have access to good quality services for availing health facilities. Table 5.6 presents the percentage of **women and men in adult ages with diabetics and hypertension.**

Table 5.6
Percentage of Women and men adult ages with different NCDs across Districts of Karnataka, 2015-16

Districts	Blood sugar (>140 mg/dl) among Women	Blood sugar (>140 mg/dl) among Men	Hyper-tension above normal among Women	Hyper-Tension above normal among Men	Districts	Blood sugar (>140 mg/dl) among Women	Blood sugar (>140 mg/dl) among Men	Hyper-Tension above normal among Women	Hyper-Tension above normal among Men
Bagalkote	4.0	4.2	7.6	14.8	Kalaburagi	3.6	8.5	6.7	20.6
Bengaluru Rural	6.7	5.9	6.5	18.4	Hassan	8.8	6.8	9.3	9.4
Bengaluru	8.3	10.9	5.3	10.0	Haveri	5.1	5.4	7.6	5.3
Belagavi	6.0	9.0	7.1	9.2	Kodagu	7.6	7.2	8.6	8.3
Ballari	4.0	6.5	6.0	7.1	Kolar	6.4	10.9	7.4	7.9
Bidar	3.9	7.2	9.1	17.1	Koppala	5.4	9.3	5.1	12.0
Vijayapura	3.9	5.4	8.2	20.3	Mandya	7.3	6.4	6.2	14.3
Chamarajnagara	5.3	10.1	8.9	14.4	Mysuru	5.9	7.3	7.1	11.1
Chikkaballapura	6.6	5.6	5.9	15.7	Raichur	5.8	8.2	6.1	15.6
Chikkamagaluru	8.3	10.0	8.9	10.1	Ramanagara	5.5	4.2	6.0	10.2
Chitradurga	5.1	7.2	6.5	9.5	Shivamogga	9.0	5.9	9.2	11.1
Dakshina Kannada	5.5	9.0	9.2	11.4	Tumakuru	6.7	8.9	7.6	14.8
Davanagere	6.5	13.2	9.1	9.2	Udupi	5.6	9.3	7.2	15.8
Dharwad	8.6	8.7	8.2	15.3	Uttara Kannada	6.1	12.8	9.9	11.1
Gadag	3.6	6.4	5.0	15.8	Yadgir	6.8	8.4	4.1	9.0
Karnataka	6.3	8.4	7.1	12.0					

Source: Compiled from NFHS-4 District level fact sheet, International Institute for Population Sciences, Mumbai and Ministry of Health and Family Welfare, Government of India

The data on the burden of NCDs are not easily available for recent years. The National Family Health Survey-4 tested the prevalence of diabetes and hypertension among men and women of adult ages. The blood sugar both among men and women are less than 10 per cent in Karnataka. The variation across districts is rather negligible except in the case of Davangere and Uttara Kannada. However,, this is not true as far as the prevalence of hypertension particularly among men is concerned. Not only that the overall prevalence is relatively high but there is significant district variation also in the prevalence of hypertension. The data show some interesting pattern as there is no direct link observed between demographic changes and NCD pattern. The districts of Kalaburagi and Vijayapura have highest levels of hypertension among males along with districts from the south with advanced demographic indicators like Udupi, Tumakuru etc.

There is no doubt that there is an increasing NCD burden in the State requiring immediate policy attention. There have been efforts in the State with an NCD cell set up and it is apparent that the activities as well as the funding to this division needs enhancement. The NCDs are no more limited to the richer sections of the population but covers all the regions and all socio-economic class. **Therefore, public intervention**

is mandatory not only to reduce the burden significantly in coming years through adequate screening and behavioural measures but also to reduce the considerable out of pocket expenditure incurred often to treat such burden.

I. Health Infrastructure and Manpower

The State has a wide network of health institutions providing health services both in urban and rural areas. Table 5.7 presents information on health infrastructure in the State. There are 21 District Hospitals, 11 Other Hospitals and 34 Autonomous and Teaching Hospitals in the State. The primary health infrastructure has fulfilled the norms required under the "minimum needs programme" at the aggregate level. However, at the district and sub-district levels there are excess as well as scarcity of health institutions reflecting the inequity that exists in the distribution of health facilities. There are 8871 Sub-centres, 2354 Primary health centres (PHCs), 206 community health centres (CHCs) and, 146 taluk hospitals catering to the health needs of the rural population. On an average a public hospital serves over 5000 population in Karnataka. The ratio is favourable in many southern districts while it over 6000 in many northern districts as well as Bangalore urban. But given the density and the existence of considerable number of private hospitals, Bangalore urban district may not face the shortage as much as in other northern districts.

Table 5.7
Number of Public Health Institutions in Karnataka 2016-17

Districts	SC	PHC	CHC	SDH	DH	Tot Govt Hosp	PRIVATE Hosp	Popn-Public Hosp Ratio
Bengaluru	195	104	5	3		307	471	37942
Bengaluru Rural	167	48	2	4		221	43	4832
Chikkaballapura	199	59	2	5	1	266	70	4938
Chitradurga	283	81	11	5	1	381	36	4561
Davanagere	301	101	6	5	1	414	40	4907
Kolar	275	65	2	4	1	347	72	4682
Ramanagara	230	62	4	3	1	300	23	3712
Shivamogga	305	110	7	6		428	92	4241
Tumakuru	487	147	4	9	1	648	99	4223
Bagalkote	234	48	8	5	1	296	82	6843
Belagavi	549	148	16	9		722	258	7050
Vijayapura	309	67	9	4	1	390	77	6121
Dharwad	194	45	0	3	1	243	164	8160
Gadag	168	39	2	4	1	214	50	5212
Haveri	303	69	5	6	1	384	63	4390
Uttara Kannada	343	83	3	10	1	440	73	3365
Ballari	272	73	11	6	1	363	106	7800
Bidar	280	58	8	4		350	60	5171

Districts	SC	PHC	CHC	SDH	DH	Tot Govt Hosp	PRIVATE Hosp	Popn-Public Hosp Ratio
Kalaburagi	347	91	16	6	1	461	147	6043
Koppal	185	48	9	3	1	246	12	6100
Raichur	223	52	6	4		285	58	7251
Yadgir	176	42	6	2	1	227	14	5728
Chamarajnagara	245	64	3	3	1	316	20	3326
Chikkamagaluru	375	90	5	6	1	477	35	2383
Dakshina Kannada	440	71	8	4	1	524	111	4221
Hassan	456	136	15	7		614	41	2948
Kodagu	206	29	7	2	1	245	16	2278
Mandya	385	115	10	6		516	45	3551
Mysuru	438	147	10	6		601	60	5321
Udupi	301	62	6	2	1	372	47	3332
Karnataka	8871	2354	206	146	21	11598	2485	5707

Source: Department of Health, Government of Karnataka

The manpower shortage in public health institutions has been a matter of serious concern of late. While considerable efforts were put in to upgrade the infrastructure facility in public health facilities, it has not been matched by adequate manpower. Various studies have brought out considerable deficit in health manpower existing in different parts of the State. In addition, absenteeism and long leave of health functionaries also affect the effective service delivery. Table 5.8 presents the number of posts vacant in Karnataka in the year 2015.

Table 5.8
Vacant positions of Health staff in Karnataka (as on March 31, 2015)

Designation	Vacant Positions
ANM (Sub-Centre and PHC)	287
Health Worker (Male)	2444
Lady Health Volunteer (LHV)	2794
Health Assistant (Male)	2444
Doctors –PHC	157
Doctors-CHC	322

Source: DH & FW, GOK

The vacant positions particularly of specialist doctors at the CHC level are of a matter of serious concern in the State. There are 322 vacant positions of doctors in 206 CHCs in the State. The number of posts vacant with respect to ANM, LHV and Male health workers is also very high. Invariably, lack of manpower will affect the services within the health facilities seriously with implications to achieve desired health goals in the State. The total magnitude of the lack of manpower is far higher than the vacant positions as there are long leave and absenteeism among the staff. **Therefore, ensuring the presence of required manpower in the health institutions need to be a priority for the State.** Although some steps have been initiated like appointing required staff on a contract basis to avoid delay in filling up positions, these are yet to considerably solve the manpower shortage particularly in the rural areas of the backward districts.

Private Sector

Private sector constitutes a significant proportion for health care providers in Karnataka. The distribution of private hospitals across districts shows wide disparity with Bangalore urban accounts for majority of the hospitals. But it may be pointed out that the private sector is considerably vast in the State with private clinics and dispensaries playing role in many small places. The NSSO survey conducted in various rounds has consistently shown that large sections of the population utilize private health care both for outpatient and inpatient care despite the fact that there is substantial out of pocket expenditure as a result of this. **Nearly 80 per cent of both out-patient and inpatient care is offered through private health facilities in Karnataka. Therefore, neither the role of private sector for the health care provision can be undermined nor it can be left unattended.** However, the private sector is quite vast from a clinic operating at a very small scale to corporate hospitals with all modern facilities. So, the pricing of private health service also varies substantially for each services based on the type of facilities. Therefore, reasonable regulations are necessary to ensure that appropriate standard care is offered to the care seekers. Although there have been several arguments in favour of making suitable control of private sector, it was not quite successful yet. The State health policy also visualized insisting similar standards in the private and voluntary sector. However, it is imperative that a sector that constitutes a significant proportion of health care utilization cannot be ignored completely and suitable legislations are necessary to ensure standards and suitable pricing mechanism within the sector.

Box 5.3
Karnataka State health policy

Karnataka State health policy considered that the role of government is to "facilitate private and voluntary health sector growth as augmenting health care while maintaining professional and ethical standards and keeping in mind distributive justice"

Voluntary Organisations and Civil society

Karnataka has a rich history of involvement of organisations, institutions, and networks (which would be broadly classified as 'voluntary'

ensuring the presence of required manpower in the health institutions need to be a priority for the State.

organisations) who have contributed to health and health care often with a focus on marginalised groups and emerging health issues and challenges. However, there is very little organised knowledge about this sector and in policy, management and development literature. This sector is also run by individuals and teams with different motivations – ideological, religious, professional and humanitarian and this diversity complicate policy overviews.

There were public-NGO partnerships initiated in the State often attracted wide attention. **A striking feature of such partnerships was handing over the functioning of selected PHCs to the NGOs. Karnataka was at the forefront of this initiative in India.** It was argued that this initiative was largely successful and has increased the community participation in the primary health sector. There are also several other interesting initiatives in this regard.

Box 5.4
The Karnataka State Integrated Health Policy of 2003

The Karnataka State Integrated Health Policy of 2003, recognises the role of this sector and keeps it distinct from the private sector. It notes as follows; "Though already existing in an adhoc and often informal manner,..... voluntary partnerships will be further developed in a planned and systematic manner in order to develop in spirit and practice better health care and also for optimal utilization of health resources. District and Taluk health action networks and issue based network will be encouraged with active participation from the public sector in such voluntary sector initiatives."

Box 5.5
Voluntary Organisations and Civil Society

(i) Groups at the grassroots focusing on various initiatives in development in areas of education, health, environment, community organisation, income generation, women's empowerment etc., e.g., Vivekananda Girijana Kalyana Kendra, BR Hills; Swami Vivekananda Youth Movement, HD Kote; Jagruti Mahila Sanghatane, Raichur; SAKHI, Hospet; etc.,

(ii) Groups involved in training, networking and supporting grassroots efforts with technical resource and solidarity e.g., FEVORD-K; VHA-K; JAGRUTI, Dharwad; VIMOCHANA, Bangalore; Karuna Trust, Bangalore; SYYM, H D Kote etc.,

(iii) Groups focusing on advocacy issues, health promotion and communications, policy research and policy advocacy and engagement like Society for Community Health Awareness, Research and Action (SOCHARA); Drug Action Forum – Karnataka; Institute of Public Health (IPH), Bangalore etc.,

(iv) More recently health is also evolving as social movement all over the country including in the State with groups like Jana Aarogya Andolana – Karnataka (JAAK-K); Karnataka Janaarogya Chaluvali; raising community awareness and people's voice in the planning process and the policy debate.

While this sector is often included by policy makers in the term private sector (adding non-profit to emphasise the difference in orientation) it is advisable to keep the 'voluntary' and the private sector separate in policy analysis because of many differences of structure, potential and orientation between these sectors.

II. Social Determinants

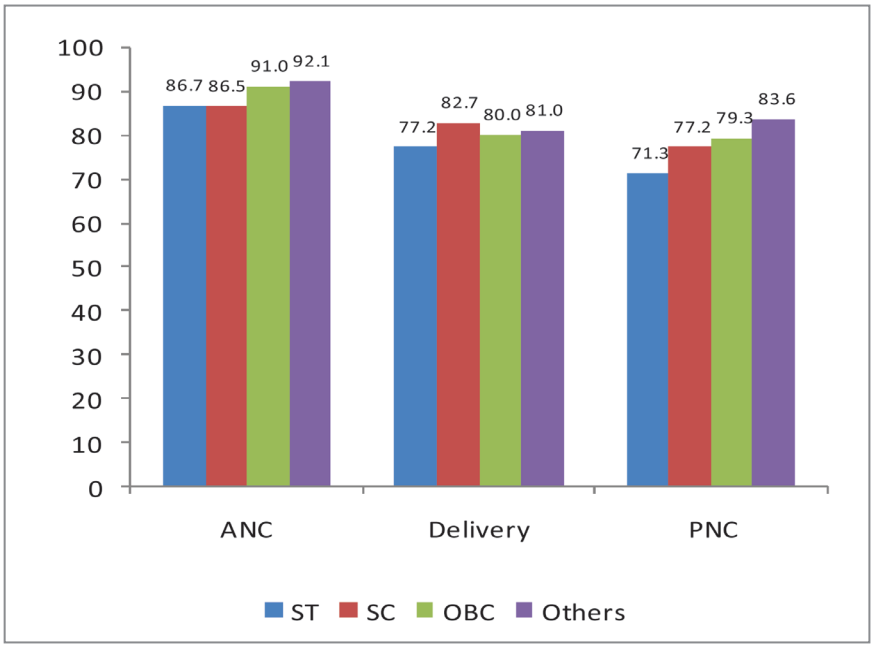
Health is not merely a function of provision of health care facilities but has large influence from several socio-economic factors, environmental factors as well as amenities within the households. The socio-economic in gradient of ill-health is well documented in many contexts. The data from the last decade show striking social and economic differentials in infant mortality as well as in utilization of Maternal and Child Health (MCH) services in the State. However,, undoubtedly, such wide variation has declined over the years. The variation across utilization of MCH services has come down drastically across caste and religious groups in recent times due to several Government programmes (Figure 5.7). However, it is also observed that in those areas where public interventions are not strong, the utilization gap still persists. This is clear from the data on postnatal care. Interestingly, the chronic diseases show a reverse pattern (Figure 5.8). This may be due to reporting errors as well. Moreover, the chronic diseases do have connection with prosperity in many contexts until considerable preventive and positive measures are taken to control them. Thus, the health concerns need to be addressed holistically than mere provision of health care facilities. The public health needs to encompass all those major social determinants of health.

One of the serious public health concerns in India which is true of Karnataka as well is the very poor coverage of basic amenities within the households like safe drinking water, toilet facilities, dilapidated conditions of the housing etc. The information provided on all these indicators from 2011 census enhances our concern for large public health issues in Karnataka. The data shows that only 60 per cent of the houses are in good condition and 4 per cent are even dilapidated. Only 40 per cent of the households in the State has access to safe drinking water (tap water treated) and nearly 45 per cent of the households does not have latrine facility. Over 58 per cent of the households still depend upon fire wood for cooking. A mere 26 per cent households in the State has closed drainage facility. All these have significant impact on health factors which has been well established by various studies.

Many often, in the scheme and discussion on health, social determinants often get neglected and provision of health care for curative services gets predominance. But health needs to be viewed in much wider terms in line with the World Health Organisation's definition that it is not merely an absence of disease but encompasses social, economic cultural and psychological aspects as well. Therefore, it is important that the social determinants also receive adequate and equal attention in the State.

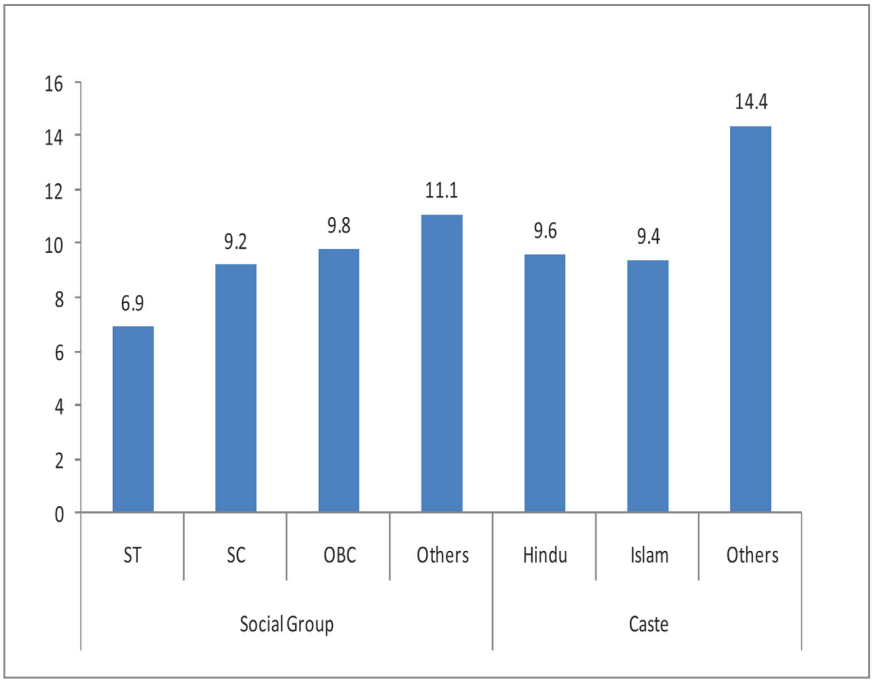
One of the serious public health concerns in India which is true of Karnataka as well is the very poor coverage of basic amenities within the households like safe drinking water, toilet facilities, dilapidated conditions of the housing etc.

Figure 5.7
Utilisation of MCH services by Morbidity Caste, 2014



Source: Computed from NSSO, 71st round.

Figure 5.8
Prevalence of Acute Morbidity by Caste and religion, 2014



Source: Computed from NSSO, 71st round.

III. Health Policy and System Development

It may be noted that the Karnataka Government had set up a **"Task Force on Health and Family Welfare"** as early as in November 1999, consisting of eminent persons in various fields related to Health and Health care with a mandate to improve the public health system in the State. The terms of reference included: proposing policy measures for improving public health care system; measures to stabilise the population; recommendations to improve management and administration of the Department of Health and Family Welfare; recommendations for changes in the education system both clinical and public health; and monitoring outcomes and impacts of these policy recommendations. This process was a very significant one, beginning a new approach to public health system development in the State. It was dialogue based and interactive with multi-sectoral stakeholders. Eminent scientists and professionals in the State from the voluntary sector, academic, research and other sectors were invited to be involved to evolve framework and systems in dialogue with the government systems and departments. The process was multidisciplinary and evidence based and apart from over 50 stakeholder dialogues, the Task Force also commissioned nine short term studies and system reviews which included themes such as - regional disparities in health; review of externally funded health projects; health budget review; Does Karnataka need more Medical Colleges?; and so on etc., **A very comprehensive report entitled "Towards Equity, Quality and Integrity in Health – Focus on Primary Health Care and Public Health" was submitted on April 2001.**

Based on this report, a Karnataka State Integrated Health Policy was passed in April 2003. It included a vision section; a mission statement; health policy perspectives and goals; health policy components and primary health problems and issues. It was the first State in the country to have its own health policy which was evolved through a consultative policy process. After the report and policy were released, the government has set up a small implementation and monitoring committee to take follow-up action on many of the recommendations.

A few years later, the Karnataka Knowledge Commission built further on this interactive, dialogue oriented policy process and set up a Mission Group on Public Health which suggested a State Public Health Chapter and five key policy initiatives including: Universal Access to Free medicines; Evolving an urban primary health care policy; Promoting a plural public health system through a convergence mission with AYUSH; Strengthening Public Health Capacity and HRD; Promoting integrated community based management of chronic illness.

This dialogue and interactive processes in the State since 1999, has led to the evolution of an informal public health education, system development and policy research network in the State engaged with the health department in policy evolution and system development. This includes organisations like Society for Community Health Awareness, Research and Action (SOCHARA); Institute of Public Health (IPH); GRAAM, Mysore; Institute of Health Management Research (IHMR), Bangalore; PHFI, Bangalore Campus; Public Health Units of NIMHANS, St. John's Research Institute, APU and FRLHT; institutions like IIM - Bangalore, ISEC, NLSUI, and more recently the Rajiv Gandhi Institute of Public Health and Centre for Disease Control of RGUHS. **Such a converging policy research and system development network engaging with the government in health policy evolution is a very significant development in both the State and the country.**

IV. Health Financing

The budget provision for the health sector is considerably inadequate in most states in India and Karnataka is not an exception to this. The health budget constitutes less than one percent of the GSDP. In the overall government expenditure, it constitutes only over 3 per cent. All these result in considerable out of pocket expenditure by the household for the health care utilization. As already pointed out, both in the case of out-patient care as well as hospitalization, a significant percentage of household in Karnataka depend on private sector. This implies that the expenditure is met form the meagre household budget resulting in impoverishment. The average hospitalization expenditure per case in Karnataka stands at Rs.17,148/- according to the NSSO survey in 2014. Almost same amount has to be spent for other expenditure relating to hospitalization which is considerable burden for a family. Despite introduction of several schemes to bring down child birth related expenditure, the NSSO survey also found that the expenditure towards child birth in public hospitals stand at Rs.1762 in rural areas and Rs.2,635 in urban areas. Studies have clearly indicated that a significant number of households have impoverished due to financial burden of seeking health care.

Dspite introduction of several schemes to bring down child birth related expenditure, the NSSO survey also found that the expenditure towards child birth in public hospitals stand at Rs. 1,762 in rural areas and Rs. 2,635 in urban areas.

Karnataka was also to a major extent successful in implementing some of the State funded health insurance policies over the last one decade. Although there are other private health insurance schemes, its coverage is abysmally low. The Yeshasvini and the schemes run under the Suvarna Arogya Suraksha Trust such as Vajpayee Arogyashree, **Rajiv Arogya Bahagya, Jyothi Sanjeevi, Mukhyamantrigala Santwana -'HARISH' Scheme and** Rastriya Swasthya Bima Yojana are schemes introduced by the government. Yeshasvini is a cooperative farmers' health care scheme by the government implemented from the year 2003. It is implemented through network hospitals to provide cost effective quality healthcare facilities to the Co-operative farmers spread across the State of Karnataka. Each beneficiary is required to pay prescribed rate of annual contribution every year. The Government of Karnataka provides matching contribution to the Trust for implementation of the scheme. Around 43.5 lakh members are enrolled by 2013-14.

Among other schemes **Rajiv Arogya Bahagya is meant for above poverty line, Jyothi Sanjeevi for government employees and** Mukhyamantrigala Santwana -'HARISH' Scheme intended for accident victims. The other two schemes are oriented towards the poor section of the population and are also supported by the Central Government. Vajpayee Arogyashree Health Assurance Scheme is meant for BPL families and is implemented since 2010. The scheme provides cashless treatment facility in any network of super speciality hospitals for any of the identified seven tertiary ailments like Cardiology, Cancer, Neurology, Genito Urinary, Burns, Polytrauma and Neonatal with paediatric surgery. Normally the tertiary treatment is very expensive and beyond the means of BPL families. Thus, the scheme protects the poor from incurring exorbitant out of pocket expenditure as well as ensuring that qualitative health care treatment is accessible to them in super specialty hospitals. **Similarly, Rashtriya Swasthya Bima Yojana (RSBY) is also meant for the Below Poverty Line families with the objectives to reduce OOP expenditure on health and increase access to health care RSBY was launched in early 2008 and was initially designed to target only the Below Poverty Line (BPL) households, but has been expanded to cover other defined categories of unorganised workers.**

Undoubtedly, greater attention is necessary to address the rising cost of rising costs of medical care and the large out of pocket payments with adverse consequences on the poor. The enhancement of governmental funding, perhaps, is important to provide good quality public health care services. In addition, other innovative methods of health financing like insurance schemes, cost effective strategies of providing drugs etc can go a long way in ameliorating the health burden of a large sections of the population.

V. Future Challenges

With the changing demography and age distribution, the State also faces several challenges as far as the health sector is concerned. Not only that the past efforts in the health sector need to be sustained but new initiatives are necessary given the fast changing requirements for both curative and public health

measures. There are several success experiments in the State like in the case of HIV-AIDS which brought down the prevalence systematically through several innovative initiatives involving Government, NOGs and communities. Such efforts are necessary in the health sector particularly for preventive and promotive health but also in ensuring better provision of health care services.

With the changing age structure there is considerable shift in the disease burden towards non-communicable diseases. The Non-Communicable Disease (NCD) programmes underway in the State are inadequate to cater to the emerging disease pattern change in the State. More importantly, the NCD programme should be widened with larger efforts involving community and voluntary organisations. As control of these diseases is critical through preventive and promotive strategies, mere establishment of service delivery will not help in achieving the desired results.

It is a well - known that the age structure of the Karnataka is on a rapid change with proportion of elderly population likely to go up considerably in the coming decades. In addition, there is also an increasing adult migration resulting in elderly parents forced to live alone. It is important that the State needs to evolve appropriate policy and programme mechanism to address this major challenge. One of the important challenges would he in providing palliative care. The increasing number of older people and insufficient attention to address their health care needs necessitate appropriate palliative care provision and strategy. Palliative care, undoubtedly, demands involvement of a network of organizations, community and family. Palliative care strategy, which is nearly absent in the State, needs to be strengthened with wider involvement of all the stake holders. There are several innovative models in other parts of the country particularly in States like Kerala which will help in devising a better programme for the State.

Despite the fact that demographic changes are faster, the State also lag behind in many maternal and child health indicators. The infant mortality still remains high. Therefore, renewed efforts are necessary to ensure that the basic health care services are strengthened in the public sector. **As majority of the people depend on public hospitals who are from poor sections of the population, there is an increasing need to strengthen the service delivery. This will only help in reducing the inequities both regionally as well as by socio-economic groups in the State.**

Ultimately, the success of any imitative depends critically on investing on the programme with appropriate budgetary allocation. The proportion of money spent for the health care needs to be enhanced to ensure that the service delivery is expanded and are provided in desirable quality. This will make the services more equitable as well. The State also has very interesting experiences with financing of health through insurance and other mechanisms. It is important that these success stories are widened for better coverage of health facilities to larger sections of the population particularly the vulnerable sections.

Therefore, renewed efforts are necessary to ensure that the basic health care services are strengthened in the public sector. As majority of the people depend on public hospitals who are from poor sections of the population, there is an increasing need to strengthen the service delivery.

Food and Nutrition

Chapter-6

Food and Nutrition

Background

Good nutrition is critical to formation of Human Capital and Economic growth, hence its availability, access and utility is fundamental for achieving Human Development. While Nutrition is a vital part of Health and development, it is also a key component impacting lifecycle, from infancy to geriatric , and therefore has a profound influence on not only shaping the quality of human resources of a society, but preserving, protecting, promoting healthy and productive human capital. Indeed the role of nutrition is dynamic in Maternal and Child Health, safer pregnancy and childbirth, stronger immune systems as also in lowering risks of non-communicable diseases. While poor nutrition is a resultant of insufficiency of food or imbalance due to deficiency, both under and over nutrition affects the individual's capacity, be it mental or physical state, resulting in poor health and reduced work performance that directly impacts productivity. Therefore nutritional well-being of all people is a pre-condition for the development of the State and is a key objective of progress in Human Development.

We hope humanity has for a better future. Some challenges are lingering (deprivations), some are deepening (inequalities) and some are emerging (food security),but most are mutually reinforcing. Whatever their nature or reach, these challenges have an impact on people's well-being.

Increasing recognition that good nutrition is a precursor for the achievement of a wide range of developmental issues, investment in human resource potentials is the prerogative of the State to progress and hence improving the nutritional status of population at any given period in the life cycle is extremely important in view of its linkage to the subsequent stage of life. While nutritional vulnerability is a concern, under nutrition is the single largest factor contributing to the death of young children. It increases mortality risks associated with the major killers of children which includes respiratory infection, diarrhoea, malaria, and other infectious diseases. The symbiotic relationship between Health & Nutrition needs recognition, as the intake of balanced nutrition helps population to enjoy longer& productive lives, as also for reduced risk of related diseases.

Karnataka is the first State in India to have given impetus to 'Food &Nutrition' under the framework of Human Development The rationality being that the Nutrition is both an 'Input to'& an 'Outcome of' Human Development. The State has taken the cognizance that Nutrition is a key determinant of quality human capital & not just another crosscutting issue for addressing malnutrition. Nutritional well-being of a population is a reflection of the performance of the Social, Economic conditions & to some extent an indicator of the efficiency of State resource allocation, as also its

Nutrition is a vital part of Health and development, it is also a key component impacting lifecycle, from infancy to geriatric, and therefore has a profound influence on not only shaping the quality of human resources of a society, but preserving, protecting, promoting healthy and productive human capital.

the State has achieved steady economic growth, coupled with impressive strides in poverty reduction with 20.9 percent of the population below poverty line, which is defined as the expenditure needed to obtain, an average of 2400 Kilo Calories (rural) and 2100Kcal (urban areas) per capita per day.

efficient management.Considering the opportunities, targeting nutritional outcomes is a key goal of the State and the approaches are for reducing inequalities for public provisions, quality of food &nutritional support to the poorest, unreached& most exploited group. Given the intent, comprehensive understanding of where Karnataka positions today, is essential for setting milestones for future development. While Karnataka is one of the economically progressive States in India, the poverty estimates for the year 2011-12, positions the State 10th among 20 major States and has the highest poverty among southern States, both in Rural and Urban areas. However, the State has achieved steady economic growth, coupled with impressive strides in poverty reduction with 20.9 percent of the population below poverty line, which is defined as the expenditure needed to obtain, an average of 2400 Kilo Calories (rural) and 2100Kcal (urban areas) per capita per day. The growth rate is higher in the urban than in rural areas. Low Gender wise employment status still prevail although State has planned and implemented various programs for poverty alleviation & surely such efforts are means and to some extent a way forward for enabling the 'Right to food.' However, the diversity within the State in terms of resources, food availability, access & the priority for nutritional well-being, compels the system to address the issues of Hunger, Food insecurity Nutrition insecurity simultaneously, for achieving the broader goals of Human development.

Food consumption pattern

The right to an adequate diet is as fundamental as the right to life itself. Low dietary intake, infectious diseases, lack of appropriate care, and inequitable distribution of food within the household have all implications for quality of human resources. Therefore assuring quality staple diets to all people is central to health and well-being. Nutrients derived through natural food have vital effects on physical growth and development, maintenance of normal body function, physical activity and thus, needed to sustain active life. To facilitate this process the diet encompassing all essential nutrients in the required amounts in tune with the age, gender, physiological status and physical activity is fundamental. Dietary intake lower than requirements of the body can lead to under-nutrition (deficiency diseases) and higher than the body requirements can lead to over-nutrition (diseases of affluence).Certainly both can compromise on quality of life. Intake of inadequate nutritious food during the vulnerable periods of life such as infancy, childhood, adolescence, during pregnancy, lactation & over eating at any given age can lead to detrimental consequences. Thus, an adequate diet, entailing all nutrients, is needed throughout the life, wherein the nutrients must be derive from a judicious choice & combination of a variety of foodstuffs from different food groups.

Given these facts, the Food consumption pattern of different Group of population in the State is

vital in understanding the extent of Availability, Access and Utilization of food at household level. Thus, its disposal and extent of intake is basically the starting point for gauging the trend and for realistic assessment. Hence, the consumption of basic foods is examined, as against the norms, which is Recommended Dietary Intake (RDI) suggested by Indian Council of Medical Research(ICMR). While production and availability presents a macro picture, it is the household consumption pattern that defines the status of nutrition (Table 6.1).The pattern of average household food consumption unit (CU) per day in rural Karnataka is less than the Recommended Dietary Allowances (RDA) on almost all food stuffs. However, the mean consumption of food stuffs is noted to have improved during 2006 to 2012 on all food stuffs except cereals and millets, which itself is a cause of concern (Table 6.2). While the Cereals and millets forms the bulk of the diets of the population in the State, the consumption of milk and its products, green leafy vegetables, other vegetables and roots and tubers are comparatively lower. However, the household consumption unit of pulses and legumes is noted to be satisfactory. An overall situation of household food consumption pattern in Karnataka is assuredly better, when compared to the National average

An overall situation of household food consumption pattern in Karnataka is assuredly better, when compared to the National average

Table 6.1
Average Household consumption of Food in Rural area -Time trend (g/CU/day)

Time trends NNMB 2012	Cereals and, Millets	Pulses & Legumes	Green Leafy Veg.	Other Vegetables	Roots & Tubers	Fruits	Milk & Milk Products	Fats & oils	Sugar and Jiggery
RDA	460	40	40	60	50		150	20	30
2006 (mean)	429	37	8	23	40	36	84	9	19
2012 (Mean)	420	40	13	27	31	40	79	14	20
GAPS	40	-	27	23	19	-	71	6	10

source: National Nutrition Monitoring Bureau (NNMB), 2012

The daily intake of food stuffs in relation to recommended dietary allowances implies the individual food security. While the household consumption pattern is an indicative of cumulative picture, it does not depict the extent of intake of individual consumption pattern, as both the intra household distribution and intake during vulnerable period gets shielded. In order to target any specific intervention for vulnerable period it is inevitable to examine, their existing consumption pattern as against RDI.

Table 6.2

Percent Distribution of Rural population, with daily intake of food stuffs <50% of RDI

Food Stuffs	% RDI	Household	1-3 Years	4-6 Years	10-12 Years		Sedentary worker (≥"18 yrs.)1-3 Years	
					Boy	Girl	Man	Woman (Non Pregnent & NonLactating)
Cereals & Millets	<50	5.3	19.6	12.6	17.4	19.3	12.9	7.6
Pulses & Legumes	<50	33	49.8	41.0	41.3	39.3	41.0	37.1
Green Leafy Veg	<50	82.9	95.4	93.5	90.7	92.1	82.1	91.0
Other Veg.	<50	69	78.6	72.4	54.7	54.3	72.9	65.4
Roots & Tubers	<50	57.9	52.3	62.5	58.7	57.1	57.6	55.5
Milk and Milk Products	<50	63.3	85.1	88.9	91.9	87.1	65.2	48.0
Fats & oils	<50	50.7	92.5	81.6	60.5	62.1	46.9	54.2
Sugar and Jiggery	<50	46.8	43.1	69.3	79.1	83.6	55.5	34.6

Source : National Nutrition Monitoring Bureau (NNMB), 2012

with the introduction of Ksheera Bhaya scheme ,in the State, children in Anganwadi centres & in Govt and aided schools receive & consume milk, which no other State in the country has initiated, on a large scale.

The intake of cereals and millets forms the bulk of the diet and is pivotal in view of its high calories. Children being vulnerable to nutritional deficiencies and other health conditions, it is noted that among the age group of children between 1-3 years only 80 percent are consuming cereals and millets greater than 70 percent RDI. 19.6 percent consume lesser than 50 present RDI which puts them at risk at a very young age. The consumption of cereals and millets by children (both girls and boys) in 10-12 years age group is lesser than RDI. In case of pulses, on an average 40 present of almost all age group of population consumes less than 50 present of RDI and the deprivation is even more among in children between 1-3 years. At the household level, it is even more critical, as more than 50 percent of population consume less the 50 percent of their requirement for all food groups, except for cereals (5.3%) and pulses (33%). As per the NNMB survey the intake of green leafy vegetables is meagre and more than 82 per cent of all age group consumes less than 50 present of RDI. Dependency on roots and tubers among the rural population is although higher, the intake pattern is uneven as more than 52 percent consumes less than 50 percent of RDI .(Table 6.2)The consumption of milk &milk products is although vital for children, over 85 percent consumes less than 50percent of RDI(survey period). However, with the introduction of Ksheera Bhaya scheme ,in the State, children in Anganwadi centres & in Govt and aided schools receive & consume milk, which no other State in the country has initiated, on a large scale.

Adolescence is a critical stage in one's life & the physiological changes during this period are crucial as growth spurt, maturation bone development is significant. The transition in their life, positions their vulnerability & therefore there is greater demand for body building and protective foods. In particular the intake of food stuffs among this age group is even more crucial, as they play a decisive role for intergenerational cycle of life.

The pattern of food consumption of adolescents of both boys and girls are almost similar. Nearly 72 percent consumes cereals and millets as per the RDI, but the quantity of pulses consumed is surely a concern as only 60 percent are able to meet their daily requirement. Minimal Consumption of Green leafy vegetables, Milk and its products, sugar and jaggery are significant trend in this age group. Considering that adolescent population (37.9% census 2011) is a major fraction of the total population in the State, their needs, rights and entitlements cannot be compromised. Even among the adult population, more than 50 percent consume less than 50percent of their RDI, except for cereals (12%) and pulses (41%). Majority sedentary workers both males (68%) and females (78%) consumes cereals &millets more than 70 percent of RDI. The Chronic Energy Deficiency continues to be a grave concern and is also a reflection of the pattern of food intake by adults.

Pregnancy is physiologically and nutritionally a high demanding period. Additional food is obligatory to meet her requirements and that of the foetus . A woman prepares herself to meet the nutritional demands by increasing her own body fat deposits during pregnancy. As per NNMB survey the consumption of cereals is barely 386 grams &26 grams of pulses by pregnant mothers, which is much lower than RDI. Studies have pointed out that nutritional deprivation in pre-pregnancy & during pregnancy is a key factor in steering Maternal & Infant malnutrition. Equally a lactating mother requires extra food for effective lactation performance and to safe guard her own health, which is often disregarded. Nutritionally adequate diet with extra food for childbearing and rearing cannot be compromised, as the vulnerability and the associated risks treks the deprivation to the next generation and the process precedes. The significance of this aspect is recognised by the Government and attempts to bridge the gaps by instituting food supplements to pregnant, lactating mothers and children through ICDS platform, which also aims at augmenting food security to this vulnerable section .The knowledge gap on this vital issue is still enormous among the population. The ICMR dietary guidelines specifies provision of extra food and healthcare to pregnant and lactating women, that needs a wider dissemination in the State.

Dietary diversity as a measure for food security

The right to adequate food is realized when every individual has physical and economic access at all times to adequate food or means for its procurement. Diversity in pattern of food intake especially from defined food groups on a day to day basis is a key component of healthy diets. The food basket needs to ensure both quality and quantity from four major food groups i.e.1.Cereals, millets and pulses 2.Vegetables and fruits, 3.Milk and milk products, egg, meat and fish. 4. Oils, fats, nuts and oilseeds. Water is also to be considered as important, in addition to the four food groups. While choosing a variety of foods within the food groups, the amount appropriate for age, gender, physiological status and physical activity is inevitable. Inclusion of combination of whole grains, grams and greens, jaggery

Minimal Consumption of Green leafy vegetables, Milk and its products, sugar and jaggery are significant trend in this age group. Considering that adolescent population (37.9% census 2011) is a major fraction of the total population in the State, their needs, rights and entitlements cannot be compromised.

Despite upswing in per capita expenditure during 2013-14, the decline in per capita cereal intake in both rural and urban area is a factor that cannot be overlooked. The decline in household consumption of cereals is significant among the deprived and vulnerable sections of the population, and is a key concern.

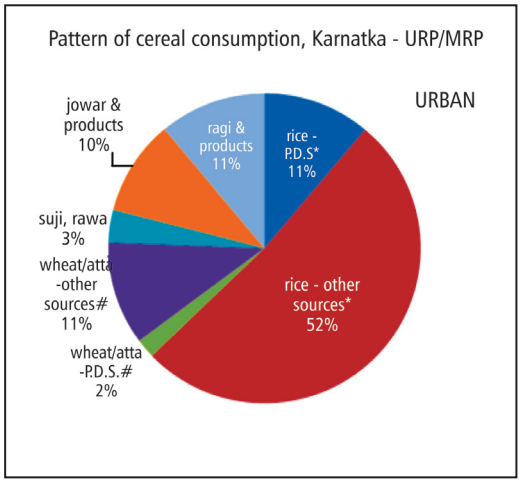
is beneficial. A variety of seasonal vegetables, fruits and inclusion of foods with high fibre and antioxidants improves the quality of diet. Household dietary diversity is strongly associated with household per capita income and access to diverse foods at all seasons. Studies have demonstrated that dietary diversity over a given reference period, individual nutrient adequacy, child growth &household socioeconomic factors reflect the extent of food security at household level. Changes in consumption pattern & demand for non-cereal food are a growing trend in the State. As per NNMB surveys the trends in the household intake of cereals& millets has declined by137gms over a period of 4 decades.

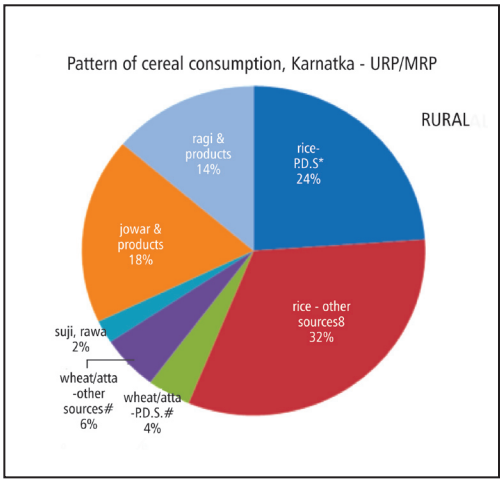
In order of preference, rice, jower, ragi and wheat are the cereal diversity which is based on the geographical regions which is also a cultural priority. Unfortunately the practice of consuming finger millet(ragi) or other minor millets have declined in the State, both urban (11%) and in rural (14%) area. Primarily rice forms the bulk of the diet as the access is better since it is a major component of the PDS. Despite upswing in per capita expenditure during 2013-14, the decline in per capita cereal intake in both rural and urban area is a factor that cannot be overlooked. The decline in household consumption of cereals is significant among the deprived and vulnerable sections of the population, and is a key concern. To attend to this call, the State has made intense effort to improvise PDS for easy access, particularly by identifying the priority households, who are supported with food grains free of costs under Anna Bhagya scheme. The traditional method of blending the cereals at household level is slowly disappearing but requires reinforcement to optimise the nutritive quality of the diet.

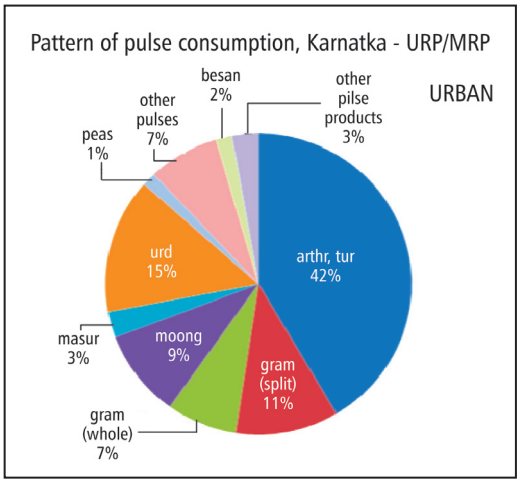
Among the pulses, red gram, green gram, black gram are consumed in the order of preference. While the dependence on red gram (Tur dhal) is heavier in rural and urban areas, both in terms of access and utilisation, is a constraint, given the pricing policy. Conventionally, the State had the best practice of consuming horse gram and cow pea which are nutritionally rich, are unfortunately declining. Needless to mention that they are protein dense and should be part of PDS package as they are relatively low cost. Although Karnataka ranks seventh in the production of vegetables in the country, it does not augur well in terms of consumption. The seasonal and locally available vegetables including greens are steadily decreasing. The myths and misconceptions related to the use of leaves of drumstick, carrot, pumpkin, radish, beetroot, bitter gourd, should be removed & the State should evolve mechanisms to promote the natural foods, as also non-conventional methods of using these unfamiliar foods. The prevalence of consumption of non-cereal food is slowly evolving, but the sensitivity on inclusion of at least four food groups in day to day basis along with potable drinking water is minimal. A rapid appraisal on emerging pattern of consumption of food at district level can define the extent of diversified food basket. The time series data on per capita consumption of rural and urban for Karnataka projected from survey of NSSO (66th Round) presents the pattern of consumption (figure 6.1 to 6.6). However, data at house level is important to understand

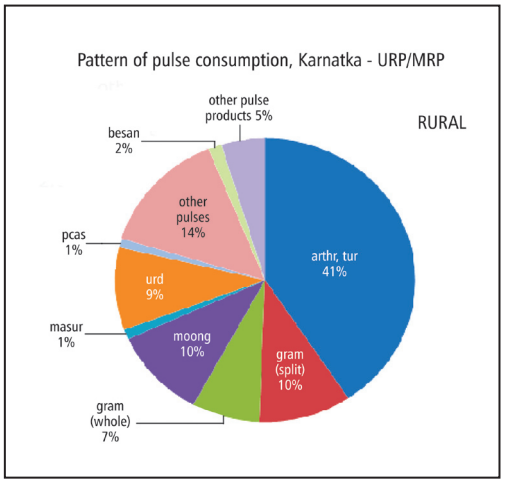
the pattern of food diversity for decentralised interventions for district level, as also for planning and resource management. Although food habits vary in every region in the State, the choice of locally available food item within the food group qualifies for diet quality. Improved nutrition requires not only better access to food for all population segments, but also higher dietary quality and diversity.

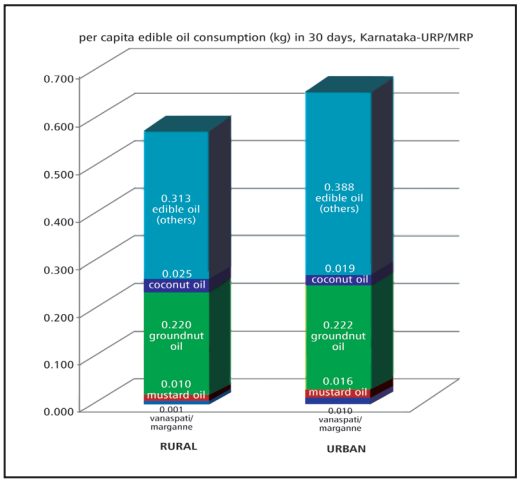
Figure 6.1-6.6
Food consumption Pattern

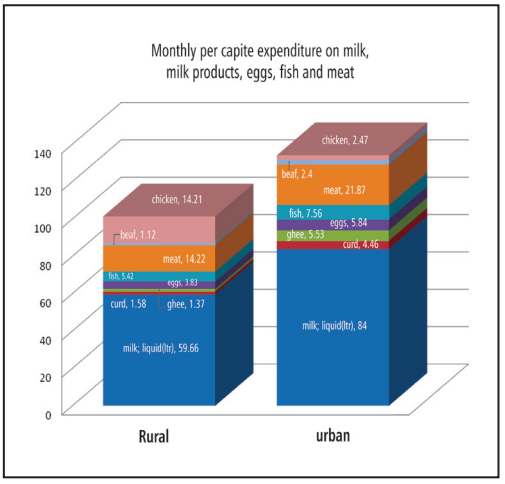












Improved nutrition requires not only better access to food for all population segments, but also higher dietary quality and diversity.

The mean intake of nutrients at household level has improved during 2006 to 2012 on all nutrients.In particular the gap is slight higher for energy in comparison to RDA.

Trend in intake of nutrients

Food consumption pattern fundamentally reflects nutritional well being of individuals and the meal pattern is defined by the culture and food availability.Nutrients have vital effects on physical growth and development, maintenance of normal body function, and overall health and, Thus, needed to sustain healthy life. The intake of diet therefore must ensure all essential nutrients in the required quantities that healthy individuals must obtain from food to meet their physiological needs.The recommended dietary allowances (RDA) are estimates of nutrients to be consumed daily to ensure the requirements of all individuals in a given population and the level depends upon the bioavailability of nutrients from a given diet. RDA is a suggested averages/day&takes into account a margin of safety,to cover variation between individuals, dietary traditions and practices. However,, in practice, fluctuations in intake may occur depending on the food availability&demands of the body. The growth potential achievement is dependent on consumption of adequate calories, proteins and micronutrients.

Table 6.3
Average Household consumption of Nutrients in Rural Karnataka (CU/day)

Mean	Protein (gms)	Total fat (gms)	Energy (K.Cal)	Calcium (mgms)	Iron (mg)	Vit-A (µg)	Thiamine (mgms)	Riboflavin (mgm)	Niacin (mgms)	Vit-C (mgms)	Folic Acid (µg)
RDA	60		2425	400	28	600	1.2	1.4	16	40	100
2006	49.8	19.3	1912	569	13.9	178	1.2	0.7	11.7	28	47.4
2012	52.1	32.4	2047	493	14	286	1.3	0.0	12.2	35	124.1
Gaps in RDA	7.1	—-	378	—-	14	314	—-	0.5	4.2	5.0	—-

SOURCE: NNMB 2012.

The average Household intake of Nutrients (CU/day) in the State is less than the RDA on almost all nutrients in rural area(Table 6.3). The mean intake of nutrients at household level has improved during 2006 to 2012 on all nutrients.In particular the gap is slight higher for energy in comparison to RDA.The mean intake of protein (52g/CU/day) is less than RDA of 60g. While calcium intake is well within the recommended standards,the consumption is noted to have reduced (2006) to 493mg (2012) The gap is higher for micronutrients, particularly for iron. Interventions need to be more focused & area specific.

Common Nutrition Challenges in Karnataka

Among the various nutritional problems, Protein Energy Malnutrition (PEM), Micronutrient deficiencies i.e Vitamin A deficiency (VAD), Iron deficiency anaemia(IDA),Vitamin 'B' complex deficiencies prevail among the rural poor& urban slums, the prevalence rate is not the same across the State.

Table 6.4
Distribution of population according to Protein and Calorie adequacy status (Percent)

Adequacy of protein & calorie	1-3 Years	4-6 Years	7-9 Years	10-12 Years		13-15 Years		16-17 Years		Adult Sedentary		Pregnant women	Lactating mothers
				Boys	Girls	Boys	Girls	Boys	Girls	Male	Female		
N (Sample)	281	261	286	172	140	156	168	107	103	420	1045	47	79
-Protein -Calorie	6.8	3.1	2.4	7.0	12.1	13.5	19.6	19.6	19.4	18.1	10.4	25.5	20.3
+Protein –Calorie	30.2	31.8	32.9	40.7	33.6	53.2	26.2	39.3	35.0	11.9	3.6	0.0	2.5
+Protein +Calorie	63.0	65.1	64.7	52.3	54.3	33.3	54.2	41.1	45.6	69.3	83.9	68.1	69.6

SOURCE: NNMB, 2012

The adequacy of protein and calorie is only to the tune of 64percent in the age group of 1- 9 years. Further reduction is noted among boys and girls (53-54%) in the age group of 10-12years. The decline is even greater among adolescents and such nutrition deprivation can be a risk for their future endeavours. It is alarming to note the protein and calorie adequacy status of pregnant (68%) and lactating (69%) mothers indicates their nutritional vulnerability. Nutrition depletion is a concern especially during pregnancy, in view of eluding from the intrauterine growth retardation that can have a serious consequence on quality of human resources as also the investments, as malnutrition is inter-generational. Significantly more than70 % of pregnant mothers' daily intake of other vital nutrients like calcium, iron, vitamin A, Dietary foliate is less than 50percent RDA(Table 6.5). The intake trend in almost all the age groups is similar.

It is alarming to note the protein and calorie adequacy status of pregnant (68%) and lactating (69%) mothers indicates their nutritional vulnerability.

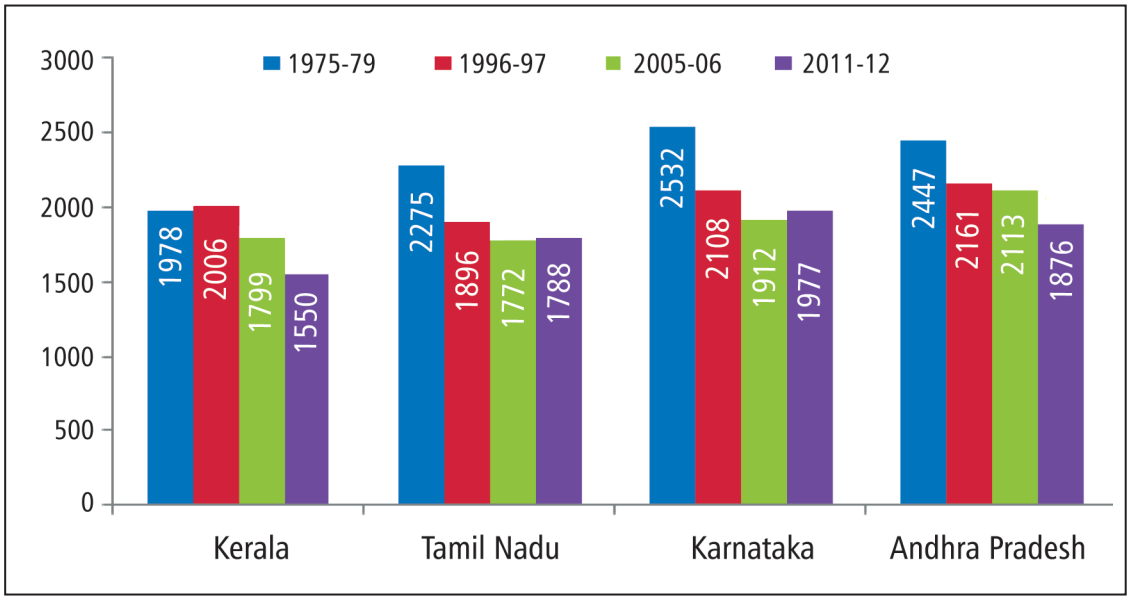
Table 6.5
Distribution of population whose daily intake of vital nutrients, less than 50% of their RDA

Nutrient intake	1-3 Years	4-6 Years	7-9 Years	10-12 Years		13-15 Years		16-17 Years		Adult Sedentary		Pregnant (sedentary)	Lactating (Sedentary)
				Boys	Girls	Boys	Girls	Boys	Girls	Male	Female		
N (Sample)	281	261	286	172	140	156	168	107	103	420	104	47	79
Calcium	77.2	76.2	72	76.4	66.0	74.4	62.6	73.8	38.8	38.2	37.9	70.2	82.3
Iron	42.7	56.3	64.7	64	87.9	80.1	73.8	62.6	74.8	28.8	72.4	85.1	43
Vitamin 'A'	86.1	86.6	88	86.6	87.9	82.1	83.9	85	84.5	77.4	79.8	78.7	92.4
VIT C	83.3	71.6	54.5	48.3	52.9	40.4	51.2	15.9	49.5	41.7	41.4	63.8	77.2
Dietary foliate	36.3	35.2	28.7	28.5	30.0	41.0	53.6	39.3	48.5	46.6	37.5	80.9	49.4

SOURCE: NNMB, 2012

FIGURE 6.7

Time trends in the Consumption of Energy (Kcal/CU/day) Among Rural Population



The time trends in the consumption of energy among rural population indicates, decline in all the southern States. Though, Karnataka has better status as energy intake is higher than all the neighbouring States, Still it is lesser than recommended standards.

The time trends in the consumption of energy among rural population indicates, decline in all the southern States. Though, Karnataka has better status as energy intake is higher than all the neighbouring States, still it is lesser than recommended standards. Report of the NSSO categorically States that the proportion of households with calorie intake under 2160 Kcal per consumer unit per day, in rural and urban sectors has increased over the period 1993-94 to 2004-05. It is seen to have subsequently declined to about 20% in the rural sector and 23% in the urban. On the whole, the distribution of dietary energy intake appears to have experienced a reduction since 1990s. Protein intake per person per day has definitely declined since 1993-94. The tribal population in Karnataka in the past was although self-reliant in their nutritional endowment, there appears to be a change in their life style as well as cultural practices. Both in consumption pattern as well as choice of food have witnessed drastic transformation & thus, depriving them from the basic nutritional needs

On the other hand the peculiarity of urban culture in the State has further dented the pattern of nutritional intake for both who can and cannot afford. For those who cannot afford, the reason is either non-availability or poor access and sometimes both. But more crucially for those who can afford are also slowly moving towards 'substandard quality' of food which are easily available, and involves less time for preparation. This has resulted a change in the lifestyle pattern, impacting on health negatively.

Micro nutrient deficiencies

The major Micronutrients like Iron, Vitamin A, Iodine, zinc and folic acid play a vital role in protecting the body and enables in metabolism which is crucial for overall health and well-being. While they are required in very small quantities, the

lack of micro nutrients can have stern implication for maintaining good health. The Deficiencies of iron and folic acid, vitamin A, iodine and zinc are public health concerns and therefore the State has taken several steps to address the issues, as essential vitamins and minerals are vital to boost immunity and overall health status.

Iron deficiency Anaemia

It is characterized by a low level of haemoglobin in the blood, which can have several implications for health and well-being. Anaemia in young children is a serious concern as it can result in impaired cognitive performance, behavioural and motor development, as well as increased morbidity from infectious diseases. Children in the age group 6-23 months are most vulnerable. The overall prevalence of anaemia among 6-59 months children is 60.9% (2015-16) and the incidence has reduced by 10 percent (2005-06). The trend is the same for married women in the age group of 15-49 Years (non pregnant) wherein the reduction is by six percent (44.8% 2015-16) in ten years (50.8 %) Maternal anaemia is even more serious, considering its negative impact on foetal development. There is an improvement in the reduction in incidence of anaemia among pregnant women (45.4%2015-16). Yet the prevalence in some of the districts like Raichur yadgir, Kalburagi, Koppal, Vijayapura and Haveri is higher than the State average. Even among men the incidence is almost the same, without much reduction (table 6.6)

There is an improvement in the reduction in incidence of anaemia among pregnant women (45.4%2015-16). Yet the prevalence in some of the districts like Raichur yadgir, Kalburagi, Koppal, Vijayapura and Haveri is higher than the State average.

Table 6.6
Anaemia Status by Haemoglobin level (%) of Children and adults

INDICATORN	NFHS-4 (2015-16)			NFHS-3 (2005-06)
	URBAN	RURAL	TOTAL	TOTAL
Children(6-59 months)	57.2	63.4	60.9	70.3
Non pregnant women (15-49 years)	43.0	46.1	44.8	50.8
Pregnant women (15-49 years)	39.6	48.7	45.4	60.4
All women (15-49 years)	43.0	46.2	44.8	51.2
Men (15-49 years)	18.1	18.3	18.2	19.0

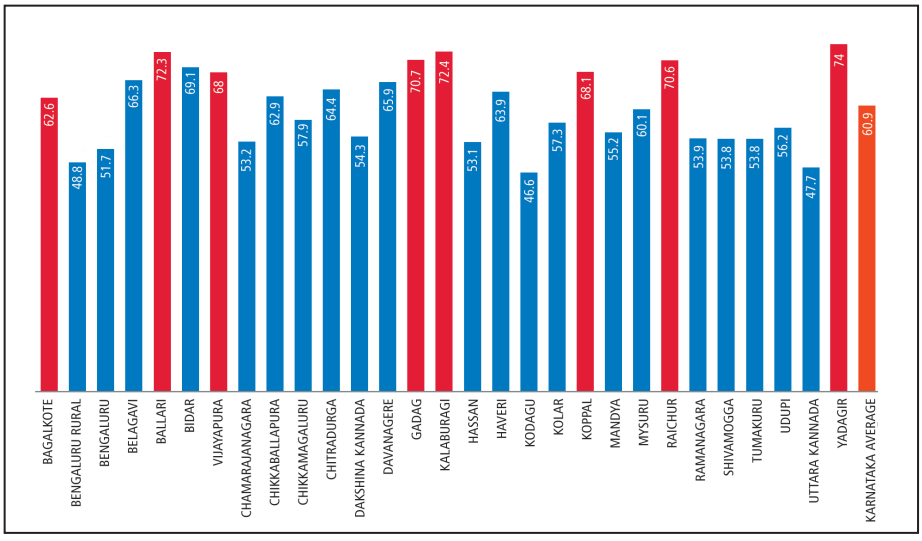
Source: National Family Health Survey (NFHS-3)

While there is reduction in severe anaemia among adolescents, the overall incidence is still high. (51.6%).Prophylaxis against anaemia is a key intervention that the government has undertaken and particularly to address the maternal anaemia. One hundred iron and folic acid tablets are distributed to all pregnant mothers, under the ICDS platform. While the supply and distribution of IFA has improved over a period of time the percentage of mothers who consumed IFA for 100 days or more has also shown improvement between 2005 (28.2%) to 2015 (45.3%). While the compliance has been satisfactory on the supply side, the consumption pattern is not satisfactory. The urban- rural difference in terms of consumption pattern is almost the same. Consistency in terms of follow up and

monitoring the behaviour is imminent, both at consumption and program level. Lack of awareness on the need for iron intake ,the contra indications, the significance of the bioavailability, the intrinsic factors, the promoters, iron inhibitors &other vital information on IFA consumption behaviours are some of the key issues required to be advocated at the ground level. (NIPCCD).

FIGURE 6.8

Anemia among Children 6-59 Months



(SOURCE:NFHS 4)

In order to reduce the prevalence of anaemia among school going children Iron and folic acid supplementation is given to all children till the age of 17 under the WIFS programme for both boys &girls. Although the programme is launched across the State in Government &aided schools as also for school dropouts for girls under the ICDS platform, the programme is yet to take off in full spirits, as school authorities need to equip themselves to the programmatic issues considering its potentials for improving cognition & school performance in children.

Availability and Access to iron rich food both at market and household level is still a challenge in rural and coastal area , as both marine and the farm produce are transported more to Urban or district hubs for further marketing to generate revenue. The weekly shanty is the only source for rural population ,but proximity, reach, timely resource are the dominant factors for accessibility which need attention. The effort to bring in behavioural changes in consumption of green leafy vegetables and fruits is the need of the hour .Information on iron rich food needs vigorous promotion at the household level. IEC activities on local grown green leafy vegetables, sprouts &citrus fruits will be value addition.

Hook Worm infestation being another causative factor for anaemia, awareness on implications of open defecation, walking bare foot needs to be disseminated. There is a huge information gap on hygiene, use of toilets , hand washing , including malaria all of which are also correlates of anaemia .The IFA supplementation along with vigorous interventions for safe drinking water , hygiene and sanitation simultaneously would yield better results to not only reduce but to combat anaemia comprehensively.

Mass Deworming Programme for 18 months to 60 months children in the State is being implemented for pre-school children (18 to 60 months) along with Vitamin 'A' Supplementation

Programme, the total reach is still a challenge. Albendazole tablets are distributed to pre-school children (200mg) and one tablet containing 400mg is given to children of 2 to 5 years of age. The program is aimed at benefitting 40 lakh children. During the year 2014-15 the coverage being 86.2 percent. Under the WIFS program , all children in the school are biannually dewormed by providing albendazol tablets .

Vitamin A deficiency

Being an essential micronutrient, Vitamin A' plays an important role in maintaining the epithelial tissue and needed for the immune system. Vitamin A deficiency is a public health problem affecting the most among young children and pregnant women. Vitamin A deficiency (VAD) is the leading cause of preventable blindness in children and increases the risk of disease and death from severe infections. Supply of adequate vitamin A in high-risk areas can significantly reduce mortality and is crucial for maternal and child survival,. Conversely for pregnant women in high-risk areas, vitamin A deficiency occurs especially during the last trimester. As per NNMB data , the prevalence of Conjuctival Xerosis (XIA) among infants indicated no signs .The prevalence of Bitot Spots (XIB) is lower (0.6%) in Karnataka ,as compared to Tamil Nadu but higher than Kerala among 1-5 years children. The time trend indicates reduction in prevalence of Conjuctival Xerosis but for girls the prevalence is slightly higher .Supplementation of Vitamin A has resulted in reducing the incidence and severity of illness positively and has been associated with an overall reduction in child mortality ,especially from diarrhoea, measles and malaria. According to NFHS data, children in the age group of 9 to 59 months who received Vitamin A dose in the last 6 months is 78.7 percent in Karnataka and the percentage is higher (81.3%) in rural area than in the urban area (75.1%). All social category has received support with the coverage being more among SC (71.%) and ST (62.15) than others. (RSOC2014). The Programme on Administration of Vitamin 'A' is implemented to pre-school children of 9 months to 5 years (Vitamin 'A' 2 lakh IU). Around 47 lakh children are target beneficiaries of this programme. During 2014-15 the achievement was 44percent as against the target. However, the regular supply, till the last point in the district is still a major challenge. Measles linked Vitamin 'A 'Programme is also being implemented, with one ml of Vitamin 'A' Concentrated solution(one lakh IU) is administered orally to the children of 9 months along with Measles Immunization. 11.42 lakh children are target program beneficiaries.

The Programme on Administration of Vitamin 'A' is implemented to pre-school children of 9 months to 5 years (Vitamin 'A' 2 lakh IU). Around 47 lakh children are target beneficiaries of this programme.

Iodine deficiency disorder

As an essential micro mineral Iodine is necessary for the synthesis of thyroid hormone and is vital in regulating metabolism , and deficiency of which results in goitre and a range of disorders categorised as Iodine Deficiency Disorders (IDD) .Iodine Deficiency is the common cause of preventable mental retardation and brain damage. Iodine deficiency during pregnancy is associated with low weight at birth, the possibility of still birth, congenital abnormalities and during the childhood period, it impairs physical growth,

Although 86 per cent of the households are using iodised salt, it still remains as a major public health problem due to deficiency of iodine in the soil as well as Water &consequently the food derived from it.

along with impaired psychomotor skills. By and large the Iodine deficiency is not taken seriously nor is it perceived yet as a serious problem by the community. Iodine deficiency being one of the contributing factor of learning disabilities among children &a trigger to the cognitive impairment. Scientific evidence indicates that, children with iodine deficiency on an average have lower intelligence quotient (IQ) as compared to children with normal iodine levels. A large Majority living in rural and tribal areas in the State still lack information on the consequences of iodine deficiency. Consumption of iodized salt is widely used as a public health measure to prevent Iodine deficiency disorders. While there are sustained efforts to ensure an adequate supply of iodized salt in the State and also reached self-sufficiency in its production, only 86% (NFHS 4)of the households are using iodized salt, which has improved from 2005-06 (66%). The difference in usage varies in urban area (93.0%) but still lesser in the rural area (82.0%). Awareness on the prevalence of Goitre and its control is not adequate. A Majority of the women in rural areas are unaware of storage of iodised salt. Although 86 per cent of the households are using iodised salt, it still remains as a major public health problem due to deficiency of iodine in the soil as well as Water &consequently the food derived from it. Nonetheless, IDD, are easily preventable if slight modifications in behaviour is made by consumption of iodized salt .

Public distribution system is the key platform for easy availability and access to the iodised salt to the common man especially to the marginalised sections of the society. Therefore provisioning of the iodised salt at affordable prices through PDS is essential. Sale of non-Iodised salt has to be completely banned, particularly bringing enforcement with Salt traders &producers to prevent sale of non-iodised salt for human consumption. It is recommended that, at program level be it ICDS, MDM ,other residential schools , hostels & child care institutions to mandatorily use iodised salt in the food preparations.

Prevalence of Malnutrition in Karnataka

"Malnutrition is an obstacle to human development, inflicting irreversible damage on individuals early in life and imposing large economic and social losses on countries for years to come." (UNDP 2012). The term malnutrition encompasses all categories of poor nutrition caused by insufficiency/ deficiency (under nutrition)or excess (over nutrition).Malnutrition is categorized as a result of one or more nutrients essential for survival, growth, reproduction, including learning capabilities. Nutritional status is a measure of the health condition of an individual as affected primarily by intake of food utilization of nutrients. Prolonged malnutrition, both under (stunting wasting) &over nutrition (obesity) leads to non-communicable, chronic diet related disorders, higher levels of morbidity, mortality and poor physical work output. Thus, malnutrition is a great economic loss and weakens the development, which is a burden to the State.

Determinants of Malnutrition

Malnutrition is the outcome of inappropriate dietary intake and unhealthy lifestyles with other contributing factors such as low purchasing power, incorrect feeding and care practices, recurrent infection, lack of health care, poor sanitation, lack of access to potable water and sub-optimal agricultural production. Research studies have clearly established that population residing in deprived conditions, both in rural and urban areas with poor access to public provisions are at a greater risk of malnutrition. The causes of malnutrition span determinants at the individual, community and societal levels. The societal 'basic causes' takes into account the economic structures, and nature of institutions and socio economic resources among other factors. Community level 'underlying causes' include food security and quality, care resources and health services, including water, sanitation and hygiene. At individual Level 'immediate causes' include nutrient intake and individual health status. Care practices, appropriate breastfeeding and complimentary feeding practices, hygiene ,health seeking behaviours, will impact under nutrition. Needless to mention that Social protection programs are good vehicles for improving the underlying determinants of malnutrition, since they are targeted at vulnerable population, who are 'at risk' of malnutrition. For all social protection programs Govt of Karnataka has carefully allocated considerable resources for improved coverage and legal mandate.

As malnutrition is inter-generational, every phase of life is critical and therefore ensuring support at every phase is fundamental. Thus, public nutrition programs need to target for age specific interventions. While Malnutrition is also multi-sectorial in nature it requires the attention of all key stakeholders from different sectors like Agriculture, Horticulture, Food & civil supplies, Health, WCD, Education, RDPR etc, including Department of fisheries &Animal husbandry, as they play a key role in reducing underlying causes of malnutrition.

Prevalence of under nutrition among children

Under nutrition is more common among children of mothers with low body mass index (below 18.5). Maternal nutrition is an important determinant and has direct correlation with the birth weight. Further the birth weight of the child is a significant factor that determines vulnerability for risk of childhood illnesses and survival. The State has shown significant improvements in reducing the cases of Low Birth Weight (LBW) babies over a period of time. As per RSOC data (2013-14) 17.2 per cent children are born with weight less than 2.5 kg in Karnataka who are termed as Low Birth Weight (LBW) babies which is an indication of foetal malnutrition. They are vulnerable in many ways for childhood morbidity and mortality. Researches highlight strong associations between LBW and increased risk of infections, malnutrition, poor academic performance & problems related to behaviour & learning difficulties during childhood. Consequences of LBW trek into adulthood & can cause range of chronic diseases. Damage suffered in

As malnutrition is inter-generational, every phase of life is critical and therefore ensuring support at every phase is fundamental. Thus, public nutrition programs need to target for age specific interventions.

early life leads to permanent impairment and can be a burden on Human development at large. The significance of weighing the child at birth in the State is still a low priority. The percentage of new-born weighed is less in Raichur, Ballari, Yadgir, Kalburagi district. Out of those weighed the percentage of children with LBW is high in Dharwad, Shivamogga and Ramanagara districts & is more than the State average.

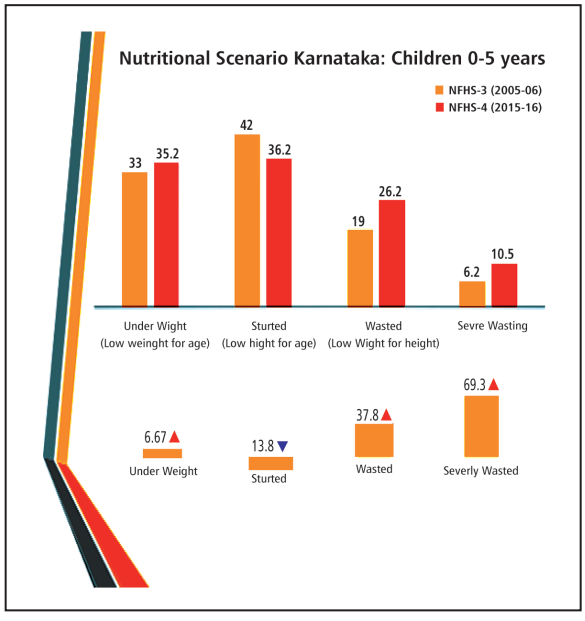
The period for Children below five years is formidable from the point of growth and development. The prevalence of stunting (36.2%), wasting (26.1%) and underweight (35.2%) among children below five years in the State is better than the National average ,but are still higher than the southern States of India.

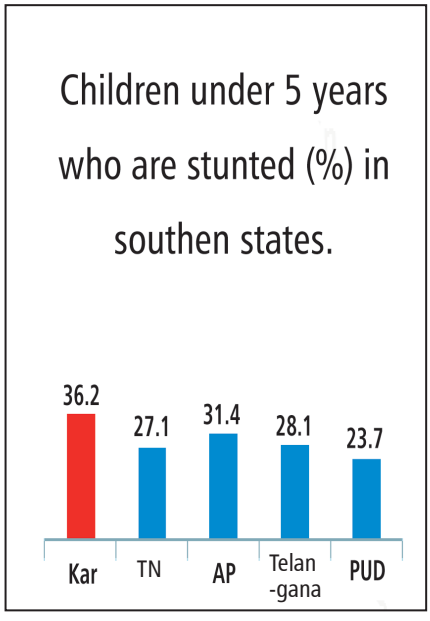
Table 6.7
Nutritional Status of children below 5 years in Karnataka

INDICATOR	2015-16			NFHS-3 (2005-06)
	URBAN %	RURAL %	TOTAL %	TOTAL %
STUNTING (Height for age)	32.6	38.5	36.2	43.7
WASTING (Weight for Height)	24.8	26.9	26.1	17.6
UNDERWEIGHT (Weight for age)	31.5	37.7	35.2	37.6

Source: NFHS-4

Figure- 6.9
Trends in undernutrition of children below five years





The incidence is higher in the rural (36.5%) than in urban area (32.6%). The prevalence of stunting ranged widely from 19 percent in Mandya to over 50 percent in Koppal, Kalaburagi, & Yadgir district. Chronic under nutrition or stunting develops in a very short time frame from conception to 24 months but is called chronic, as it is irreversible. Prevention of stunting does not require long time if the right interventions are used in the window of children's first 1000 days life.

The time trend indicates that the percentage of children in the severe wasting category has reduced .Among the districts, Gadag, Kalaburagi & Yadgir have the higher population of children in the wasting category. Gender classification under five children shows slight improvement in the nutritional status of female children. The State has made an intensive effort to promote girl child with Bhagya Lakshmi scheme, & created awareness on the importance of girl child to some extent.

Nutritional status of children based on the geographical area indicates that under nutrition, be it stunting, wasting or underweight continues to daunt the rural area more than the urban area. Progress is needed in the rural area and is also a reflection of access and reach of public provisions and services in the rural area. Under nutrition is higher among the children from the marginalised communities & particularly higher among ST children. The evidence, based on income groups points out that socio economic factor is one of the key determinants in attaining nutrition outcomes & the incidence of under nutrition is higher among the children of poorest of poor and lowest among children from high-income families which is an issue of equity and justice, that needs concern and attention. Even among rural adolescents 48 percent have low levels of Body Mass Index(BMI) and the concern is vital , as this stage sets the platform for future health & well-being.

Prevalence of Malnutrition among Adults

Anthropometry is the single most portable, easily applied, inexpensive and non-invasive method of assessing body composition. It reflects On both health and nutrition, also predicts performance, health and survival. The use of body mass index (BMI) as a measure of obesity has been widespread, but should also be promoted for assessment of chronic energy deficiency (CED) in adults, as there is no practice of periodic assessment of BMI in the system. CED continues to be a cause of concern as 20.7 percent of adult female and 16.5 percent adult male are Stated to have BMI less than 18.5.

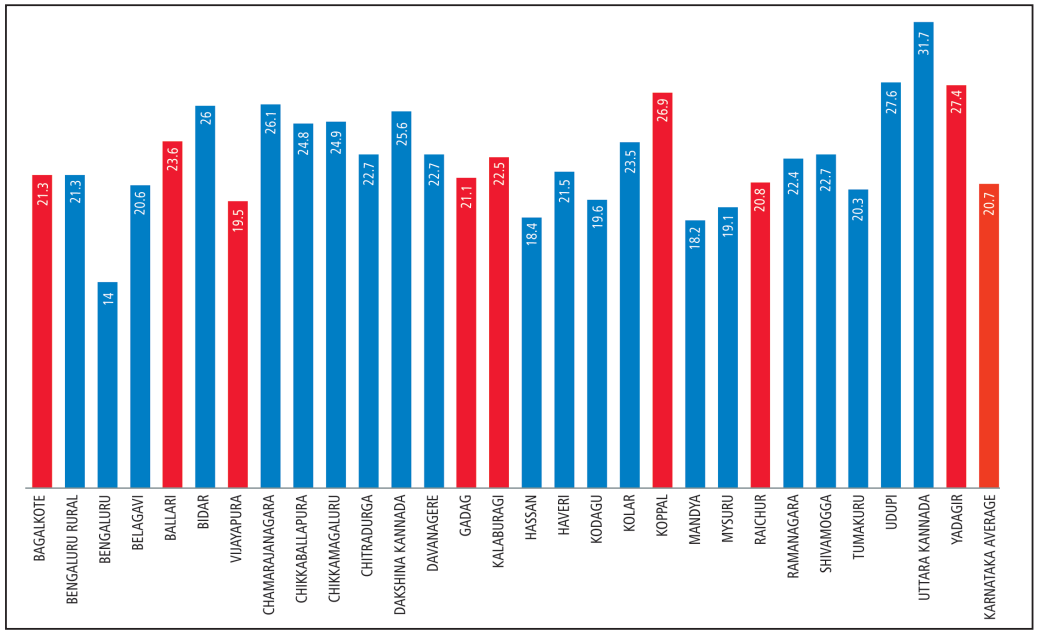
Table 6.8
Status of Adults Nutritional (≥ 18 years) according to BMI (%)

INDICATOR	NFHS-4 (2015-16)			NFHS-3 (2005-06)
	URBAN	RURAL	TOTAL	TOTAL
Women whose BMI is below normal	16.2	24.3	20.7	35.4
Men whose BMI is below normal	14.2	18.4	16.5	33.9
Women who are overweight or obese	31.8	16.6	23.3	15.3
Men who are overweight or obese	28.6	17.1	22.1	10.9

Source: NFHS-4

Figure 6.10

Percentage of women whose BMI is below normal (<18.5kg/m2).



The time trend indicates reduction by 14.7 percent for females and 17.4percent for males during 2006 to 2012. The improvement is although steady, still needs attention, as it can have a direct impact on productivity loss. While percentage of adult population, whose BMI ,is below normal is higher among rural than Urban area, suggesting more initiatives needed in rural area to reduce the disparity and improve access and opportunity in rural area.

On one hand it is a matter of concern to reduce the vulnerability and reduction in CED, the State is also noted to have the population having BMI >25 which is considered as obesity The percentage of women who are overweight or obese has risen from15.3percent to 23.3%(2015-16)& that of men has also shown an increase from 10.9to 22.1percent.The level of obesity is found to be higher in the urban region than the rural areas, which may be due to the difference in lifestyle patterns, faulty food habits that can be a threat to life. This contrast in BMI pattern is to be taken as a warning signal. Corrective measures have to be instituted at the earliest as the State is yet to have preparedness for such consequences.

Maternal & Child Health

As Malnutrition & morbidity are direct causes of Mortality, the State is simultaneously initiating many programs to improve Maternal and Child Health and Nutrition via SHM and ICD .The initiatives taken by Health Department are able to translate the vision of health policy and taken several steps to implement schemes ,which is reflected in improved institutional delivery and targets for specific outcome. The reach of these initiatives however, needs attention in border districts, blocks and

panchayats, where some hamlets are still inaccessible. The other challenges are also the social and behavioural in nature that impedes in accessibility to nutrition & health care provisions. The gravity further intensifies with inadequate water and sanitation services which necessitates reality checks in many districts. There is a need for mapping the clusters and population with high morbidity, malnutrition and mortality among women and children in different districts to prioritise for focused services and to bring the desired behavioural changes. The need for addressing information gap on social service entitlement and its usage, is pivotal for addressing Maternal and child health issues.

Gender and nutrition- Cross cutting issues

The levels of under nutrition among women and children in the State has although reduced over the last decade, they continue to be a cause of concern. The development researchers has acknowledged gender and nutrition as inextricable part of the vicious cycle of poverty. Gender inequality is recognized as a 'cause' as well as an 'effect' of hunger and malnutrition, with higher levels of gender inequality associated with higher levels of under nutrition, both acute and chronic under nutrition. The position of women in Karnataka, who represent 49.14% population (2011census) still needs attention. Several studies have pointed out the prevailing discriminatory practices, their poor access to power & resources, their Control on the income, assets , decisions regarding the purchase, sale, or transfer of land and assets, access to and decisions about credit, money spent on household food items, all of which portrays denial of rights, equity & entitlements.

The social construct itself is a barrier for nutritional attainment, as deprivation commences prior to birth, and often continues into adolescence to adult life which perpetuates to subsequent generations. The intergenerational cycle of under nutrition warrants that an undernourished anaemic mother gives birth to a low birth weight baby(17.2%),which is not only more susceptible to infections, but places 'at risk' with growth failure, thus, to become undernourished anaemic child, experiencing cumulative growth & development deficits, which are largely irreversible. The continuum is even more crucial when undernourished adolescents with anaemia traverse to the next phase of life to continue with deficits. This journey largely precedes with gender stereotypes, coupled with several hurdles for their health & dietary regimens, compounded with early marriage, early & frequent child bearing, being locked in a cycle of multiple deprivation due to gender discrimination, social exclusion and poverty. Even though child marriage is prohibited under Child Marriage Restraint Act of 1929 but it still takes place in the State, as Child Marriage percent in Karnataka is 23 and one out of five girls are married off before they attain 18 years.

The challenges continue throughout the life cycle, particularly for girls &women in view of the depletion of nutrition at every level. Resolving the issues of Chronic energy deficiency (low BMI) anaemia and other micronutrient deficiencies, reduces intrauterine stunting ,the risk of

Gender inequality is recognized as a 'cause' as well as an 'effect' of hunger and malnutrition, with higher levels of gender inequality associated with higher levels of under nutrition, both acute and chronic under nutrition. The position of women in Karnataka, who represent 49.14% population (2011census) still needs attention.

obstructed labour, low weight baby and adverse pregnancy outcomes affecting lactation, postpartum haemorrhage that compromises woman's health along with her baby. The risk of preterm-deliveries & low birth weight, are the results of poor access and 'inequity' at all areas. The association between excessive physical activity during pregnancy& poor birth outcomes are also due to inequalities. The gender differentials in breast feeding practices preferential treatment to the male child, barrier for service access are clear challenges for entitlement. In general the roles, priorities, needs, use of resources, differ between men & women, which affect the nutrition outcome.These facts establish that addressing 'gender' in the context is an opportunity for improving the 'capability' which is one of the key elements of Human Development.

Infant & Young Child Feeding Practices

Child survival, healthy growth, physical, socio - emotional and cognitive development of children in less than two years of age is critical & is largely dependent on their appropriate feeding practices. Exclusively breastfeeding for the first six months &continued breastfeeding, along with complimentary feeding is a key to build a base for healthy life of infant & young child as also to promote optimal development. Universalizing this vital practice can reduce deaths by 9.1 percent by 36 months of age. Although IYCF practices in the State have improved , there is still possibility for improvement, as 44.5 percent(NFHS -4) still do not initiate breast feeding within one hour of birth, and 46.1 percent are still not protected with exclusive breastfeeding. The positive aspect is that early initiation of breastfeeding in Karnataka (56.4%) t, is much higher than National average and also an improvement from NFHS 3 (35.6%). The Practice of giving colostrum is still not widespread in the State as many infants are still deprived of the highly nutritious first milk (colostrums) and the antibodies it contains. The trend is almost similar in both rural and urban area.

Table 6.9
Child feeding practices (%) in Karnataka

INDICATOR	2015-16			2005-06
	URBAN	RURAL	TOTAL	TOTAL
Children under 3 years of age breast fed within 1 hour of birth	53.7	58.2	56.4	35.6
Children under age of 6 months exclusively breast fed	46.9	58.2	54.2	58.6
Children 6-8 months of age receiving solid/semi-solid food breast milk	52.4	42.8	46.0	69.7
Breast feeding children age 6-23 months receiving adequate diet	8.3	4.3	5.8	Na
Non- breast feeding children in 6-23 months receiving adequate diet	16.3	12.5	14.4	Na
Total children age 6-23 months receiving an adequate diet	10.9	6.3	8.2	Na

Source: NFHS-4

The Introduction of appropriate complementary feeding after six months is surely a way to reduce growth faltering and prevents under nutrition in children. Children aged 6-8 months receiving complimentary is only about 46 percent and the practice is better in Urban than rural area. Data with respect to complementary feeding suggest that less than 50percent of children have timely introduction of complimentary foods but good feeding practices are reported in just about 50 percent of children at 12-24 months of age.

Building capacities of vulnerable households is imminent . IYCF practices are still weak and mothers are not familiar with feeding protocols .Faulty feeding habits , Lack of awareness on child rearing, sub optimal feeding, caring, at family and community level, are key issues to deal. Coverage of key nutrition programs for children under two years is although universal, the access and the reach is still a challenge, particularly for behaviour changes, be it for exclusive breast feeding or timely introduction of complimentary feeding. Consistent effort on Nutrition Education, skilled counselling support, changes in family care behaviours, particularly on Quality of complementary food needs attention. While promotion of appropriate IYCF is recommended, the supporting environment for mothers in terms of maternity leave, crèche facilities, baby friendly hospitals etc. have to be in place. The other programmatic challenges like adequate availability of skilled personnel for child care & counselling, demand generation for health services particularly for care seeking behaviours among families, need attention. Karnataka has been one of the few States that have been constantly updating their working systems to implement the NFSA. The Maternity Benefit Scheme (MBS) is one of the core components mandated to further food security, under Section 4 and 5 of the NFSA. For effective implementation, evolving a State strategy and framing State rules , will be value addition.

Nutrition and Development-a critical link

Undernourished children who survive, may enter the vicious cycle of recurring illness and faltering growth, with irreversible damage of their growth, cognitive development, school performance & future productivity of adults. A hungry, malnourished child may have mild to serious learning disabilities, resulting in poor school performance. Equally an ailing and poorly nourished individual will not respond well to the treatment, could lose many working hours and may continue to drain the resources of family and society, which indeed is heavy burden on the State. The critical link between Nutrition and Cognition needs recognition, as it provides a strong base for child's overall personality.

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Table 6.10
Nutrition and Cognitive Credentials

Indicators	Effect on cognition	Status In Karnataka
Low Birth Weight Babies	Likely to have IQ 5 points lower than normal weight children	The percentage of LBW is 17.6% in the State .
Iodine Deficiency Disorder	Dramatic effect on cognitive development & as a leading cause of mental retardation. Results in loss of 10 - 15 IQ points	86.80% of households are using iodized salt
Severe Iron deficiency in pregnancy	Irreversible brain damages	6.4% pregnant women are severely anaemic
Breast feeding associated with cognitive development	A breast feed baby is likely to be 8 IQ point higher than non-breast feed babies	Only 54.2% exclusively breast fed till the age of 6 months.
Malnutrition in young children (1 – 5yr)	Lower motivation level, curiosity, poor interactive & exploratory activities, reduced play, which can be a barrier for learning	35.2 % are underweight, wasting is 26.1% & 36.2% are stunted

Thus, the nutritional well-being of a population is a reflection of the performance of its social& economic sectors &to a large extent, an indicator of the efficiency of State resource allocation.

It is to be acknowledged that sheer negligence & lack of awareness in quality childcare can result in lower IQ among children. On the other hand a well-nourished, healthy workforce is a pre-condition for sustainable development. Thus, the nutritional well-being of a population is a reflection of the performance of its social& economic sectors &to a large extent, an indicator of the efficiency of State resource allocation. The economic costs of under nutrition are substantial .Direct productivity losses are estimated at about 10 percent of life time individuals' earnings and about 2-3percent loss of GDP. Indirect losses are associated with deficits in cognitive development and schooling, and increased costs of health care. In terms of Human Development, Malnutrition particularly stunting in early years is linked to a 4.6cm loss of height in adolescence, 0.7 grade losses of schooling & 7 months delay in starting school. Much of this under nutrition occurs during pregnancy and in the first two years of life .Without appropriate timely interventions, the damage to physical, cognitive development, future economic productivity and human development can be high and irreversible to a great extent. Hence, malnutrition may destabilize investments in education, health and other development sectors.

Achievement of food Security in Karnataka

Karnataka is India's eighth largest State in geographical area covering 1.92 lakh sq. km, with Agriculture as the major occupation for a majority of the rural population. A total of 1,23,100 km^2 of land is cultivated in Karnataka constituting 64.6% of the total geographical area of the State. Agriculture has played an important role in the overall growth of Karnataka's economy despite a fall in its share in the State domestic product. As key determinant of food security ,the State has diligently drawn attention to both economic development for producing adequate food and livelihood security

for affordability of food .The GSDP growth rate of agriculture and allied activities decreased by 4.5 % in the State during 2014- 15 as against a growth of 9.4percent during 2013-14. The fall in the growth rate of agriculture during this period is due to decline in the production of food grains by three percent. (Economic Survey of Karnataka 2014-15) .While the per capita income has depicted significant upsurge in manufacturing and service sectors (8.9%), it has not been promising from agricultural activities. This low staggering trend has resulted in inequalities, especially when a vast majority of workforce depend on agriculture. Undoubtedly it has stern implications for refining the welfare measures, particularly poverty alleviation programs for rural population to complement the efforts for attaining food security.

Although the States' cropping pattern is predisposed by agro-climatic conditions like rainfall, soil, temperature, etc the policies & programs of the government for crop production in the form of subsidies, support prices, tariffs as also speed of infrastructure development etc have substantially contributed in improving the sector. The overall situation as for area allotted for various crops during last five decades indicate the domination by food crops. Rice, sorghum and finger millet Ragi were major cereals till 2000-03 and the area under cereals declined, acreage of millet crops like sorghum and pearl and minor millets declined consistently. Reviving & giving high prominence to production of minor millets is undoubtedly the need of the hour, considering that all varieties of millets are high in calories and protein, fiber,with low glycaemic index and show high antioxidant activity-all of which are potential enablers for good nutrition. The area under pulses and oil seeds has shown a marginal increase. Fruits, vegetables &plantation crops, have increased but not to the desired extent.

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TABLE 6.11
Annual Growth Rates of Area, Production and Productivity

CROP	1991 -2000			2001 – 2011		
	Area (million hectares)	Production (Million Tonnes)	Yield (Kg./ Hectare)	Area (million hectares)	Production (Million Tonnes)	Yield (Kg./ Hectare)
Rice	1.72	3.64	1.89	1.66	2.83	1.15
sorghum	-1.55	0.09	1.67	-3.76	2.10	6.09
pearl millet	0.21	1.83	1.61	-0.20	3.36	3.57
maize	10.25	10.49	0.21	8.63	10.60	1.81
finger millet	-1.13	1.91	3.07	-2.38	0.29	2.74
wheat	3.21	3.96	0.73	0.76	4.91	4.13
small millets	-7.76	-8.08	-0.34	-10.66	-13.35	-3.01
total cereals	0.33	3.43	3.10	0.21	4.28	4.05
total pulses	0.68	3.44	2.75	3.01	6.26	3.15
food grains	0.56	3.38	2.81	1.03	4.48	3.41
total oil seeds	-3.11	-2.13	1.01	-0.11	0.02	0.14

Source: Statistical Abstracts of Karnataka (various issues), Government of Karnataka

Considering the varied topographical characters, four marked sub-regions viz. northern dry region, central , southern hilly and coastal region with each area are endowed with dominant crop that are not only based on agro climatic conditions but also a principle staple food in the region. These cropping dynamics not only depicts the availability of varied foods that are consumed locally but culturally resilient & instrumental in providing the main source of nutrition to the State's population .

TABLE 6.12

Comparative picture of area, productivity and yield of food grains in southern States.

STATE	AREA (Million hectares)		PRODUCTION (Million Tonnes)		YIELD(Kg./ Hectare)		Area under Irrigation (%) 2010-11*
	2012-13	2011-12	2012-13	2011-12	2012-13	2011-12	2010-11
Karnataka	7.42	7.43	10.93	12.10	1472	1629	27.00
Aandhra Pradesh	6.85	7.43	17.93	18.36	2616	2519	63.50
Tamil Nadu	2.89	3.21	6.29	10.15	2175	3162	62.20
India	120.16	124.75	255.36	259.29	2125	207	847.80

Source: Agricultural statistics. (2013) DES

The gains from horticulture produce is promising as the State is ranked fifth position in terms of total area under horticulture in India. Both in production of vegetable crops (fifth position) fruit crop(third position) are high on yield & account for the production of 12 per cent of total fruits, eight per cent of total vegetables. Among the other crops, the State is the third largest producer of sugar and ranks fourth in production. Horticulture crops cover area of18.35 lakh hectares with annual production of 149.59 MT, although the extent of consumption of these produce is dismal.. As of 2012-13,the area allotted for vegetable crops is 436.6 '000 Ha, which is lesser compared to the previous years ,but the production has seen an increase during the period. The State is always known for its capabilities in dairy and farming. It is the second largest milk-procuring State in the country. The production of milk in the State was 5.99 MT during the year 2013-14 & is notably the highest when compared with other States .It is successfully supporting as nutrition supplementation for children in ICDS and MDM scheme by giving milk, which no other State has taken such an initiative in the country.

Food grain production

Attainment of self-sufficiency in food grains in the State is a threshold toward targeting social security. The growth of Food grain production in the State is steady since early sixties& during 2010-11, the production increased to 14 percent over the previous years. A glance at the trend of Production of Cereal indicates an increase by 4.3 per cent per annum between 2000 and 2011 as against 3.4per cent per annum during 1990 and 2000. A comparison with other southern States with respect to productivity , indicate cropping area is

higher in Karnataka (7.42 million hectare) than A.P and Tamil Nadu. Whereas the food grain production and yield ,in A.P and Tamil Nadu are higher than Karnataka .A review of the past 10 year's agriculture production shows significant increase in production of Cereals, Pulses, Cotton, Sugarcane and Tobacco, with a slight decline in production of Oilseeds, which is mainly due to diversion of area to other crops.

While food production depends on a wide a range of factors , including access to fertile land availability of labour, appropriate seeds ,tools , climatic conditions, there are several challenges that need tackling on a day to day basis. Low growth rate in agricultural sector, Fragmentation of land holdings and deteriorating soil health, Dry land Agriculture, low efficiency in Irrigation, Technological &Extension Constraints, Slow capital formation, Inadequate Safety Nets, Low level of Farm Mechanization and Agro processing (Economic survey of India) also indirectly affect food security. In order to enhance the productivities of the crops, the State has made allocation of additional resource for implementation of novel ,mission-mode programmes such as Bhoo Chetana, Suvarna Bhoomi Yojane, interest subsidy, watershed programmes and provision of inputs, free electricity and prudent use of irrigation water. As they are still nascent in its initiatives, they need to be monitored regularly with viable and qualitative indicators, for strengthening the programs.

Demand and supply projections of food

The total availability of food for the population of the State (table 6.13) clearly depicts the gaps in production of certified crops as against the estimated requirement. In particular there seems a mismatch between the cereal requirements vs production, the gap needs to be reduced.While the availability of food depends on internal production, imports from surplus regions, it is also driven by robust Public Distribution System. Ensuring sustainable agricultural production & productivity to meet the increasing demand for food is although fundamental, a realistic estimation of the requirement is prerogative. The competence for internal production to meet the domestic demand is inevitable given the situation for achieving self-sufficiency in food production.

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TABLE 6.13

Crop wise Certified Seed production during 2010-2014(in metric tonnes)

CROP	2010-11		2011-12		2013-14	
	Required	Production	Required	Production	Required	Production
Total cereals	39473.3	32428.288	41510.9	32960.094	66929.6	30581.8
Total pulses	17030.2	19868.947	18465	12942.528	28726	16954.8
Total oilseeds	29,819.00	17,510.23	33,491.30	14,868.46	35,607.50	14,079.14
Grand total	86,322.50	69,807.46	93,467.20	60,771.09	131,263.10	61,615.74

Source; Karnataka State Agriculture profile (Oct-2013) KSDA

The procurement of food grains from farmers at remunerative prices, building up & maintenance of buffer stocks ,storage movement, distribution of food grains to consumers at affordable prices, have been given prominence in the State

Food grain management : The State is steadily working towards building a system for management of food grains &particularly to achieve food security for the vulnerable, through timely and efficient procurement and distribution of food grains. The procurement of food grains from farmers at remunerative prices, building up & maintenance of buffer stocks ,storage movement, distribution of food grains to consumers at affordable prices, have been given prominence in the State although, the price instruments, specific economic cost is determined by GOI policy objective of food management.

Balances food grain in Karnataka

Arriving at the exact figures for the food balances at the State level is a big challenge given the open borders for the producers as well as consumers. The barriers for trading, has eased out to a large extent especially on internal trading with the enactment of the model market Act 2003.The removal of restriction on internal trade has provided opportunities for farmers to sell their produce in the regulated markets within the State or sell to the traders/agro processors within or outside the State .Likewise the consumers are also not bound by the State restrictions for their needs and procurements. With this development, capturing data on import, export of food items within the State boundary is a big challenge (FKCCI).Considering this scenario it is a hard to derive the exact position of the State for food security.

Nevertheless it is possible to foresee if the State is food surplus or deficit by computing the aggregate demand and supply of food grains within the State, assuming the internal trade is only within the State boundaries (Pramod2015). By this methodology the demand for food grains is derived by multiplying per capita consumption of food items by the population of the State. The time series data on per capita consumption of rural and urban for the State are taken from 69th round of NSSO, along with the population data (census 2011) of Karnataka for the present exercise .The source of data for production is derived from the Agriculture Statistics at a glance and Karnataka State Government.

TABLE 6.14

Trend in Demand & Supply of Food Grains (Million tonnes)

PRODUCTION	2009-10		2010-11		2011-12		2013-14	
	SUPPLY	DEMAND	SUPPLY	DEMAND	SUPPLY	DEMAND	SUPPLY	DEMAND
RICE	4.19	4.12	3.96	4.12	3.36	4.12	3.57	4.12
WHEAT	0.28	0.99	0.19	0.99	0.18	0.99	0.21	0.99
COARSE REALS	7.85	2.02	6.81	2.02	6.06	2.02	6.83	2.02
PULSES	1.57	0.55	1.13	0.55	1.26	0.55	1.60	0.55
FOOD GRAINS	3.88	7.67	12.10	7.67	10.86	7.67	12.21	7.67

FKCCI –Updated volume2015

The trends in net balances of food grains in the State for the period of 2010-2014 are presented in Table 6.14.While a small quantity of surplus rice is noted during the period 2010-11, the State has remained deficit in rice from 2011-14.Karnataka although has a large production of rice ,it is also the State where rice is the staple cereal consumed in both rural and urban area. The high consumption is also a demand factor that needs to be recognized and fulfilled as this has tended towards deficits, although the extent is meagre. The contrast is with wheat which is neither a major consuming cereal nor produced in large quantity in Karnataka , Thus, positions on the deficit side.

While there is huge amount of surplus of coarse grain, it is mainly due to its increase in production but relatively low demand for the same, as also possibly is the net exporter to other States .In case of pulses the State is not only self-sufficient, but also with a net surplus in small amount. It is to be noted that the main source of protein for the vegetarians are from pulses.

In order to maintain the positive balance it necessitates a long run food policy in the State.

TABLE 6.15

Trends in Net Balances of food grains

Name of the Food Grins	2010-11	2011-12	2012-13	2013-14
Rice	0.07	-0.16	-0.75	-0.54
Wheat	-0.71	-0.79	-0.81	-0.78
Coarse Cereals	5.83	4.80	4.04	4.81
Pulses	1.01	0.58	0.71	1.05
Foodgrains	4.47	2.91	1.83	3.01

Source:-Pramod, Kumar-2015.

It is reiterated that this commodity balance sheet, although discounts the amount of food grains used for seed and feed , the net balance of food grains in the State is still surplus for all the reference period. On the basis of this the State seems to be self-sufficient in food grains at the aggregate level, However, might turn vulnerable to unexpected fluctuations or other adversaries like drought and other natural calamities ,especially if there is low or no preparedness for such emergencies. A mapping exercise indeed is the need, for timely estimation & for taking measures to sustain food security. In order to maintain the positive balance it necessitates a long run food policy in the State.

TABLE 6.16
Performance of Districts on 'Food availability'

High performing districts	Food Availability Index		Low performing districts	Food Availability Index	
	Value	Rank		Value	Rank
Dharwad	0.868	1	Kodagu	0.049	30
Mysuru	0.649	2	Bangalore rural	0.054	29
Kalaburagi	0.546	3	Chikkaballapur	0.068	28
Gadag	0.514	4	Uttarakannada	0.070	27
Bidar	0.465	5	Ramanagar	0.080	26

(Source-HDD,GOK.2013-14)

The report categorically States that most States have a "serious" hunger problem which is alarming and Karnataka is not exception to this order.

The extent of food availability at district level is key to accelerate the processes of development. The performance of districts on food availability is one of the key dimensions of food security for which seven indicators under the parameter are identified for computing the index value & for ranking. (Human Development division, GOK). Based on the computed data the relative performance is captured & presented for area specific interventions. Dharwad, Mysuru, stands in first two positions of high performing districts while Kodagu & Bengaluru rural are low performing districts .

Emerging trends in 'Access to food'

Access to food at individual and at household level is critical from the point of food security and gaining access to enough food for an active and healthy life consistently is a bigger challenge. At both these levels the State has either from its own production, or procurement from market access, or from Govt transfers mechanisms, have been able to contribute to food security. While adequacy means to purchase the food is also a key factor in achieving food security, affordability of the needy is a challenge, given the socioeconomic status. The report of India State Hunger Index, points out lack of systematic appraisal for estimating the population who are 'at-risk owing to gravity of hunger & lack of visibility of extent of its severity in many regions. The computation based on key parameters i.e. Inadequate food consumption, child underweight, child mortality for ranking of States highlighted the continued overall severity of the hunger situation in India.

While Karnataka is ranked in 11th position, it is below in its ranking as regards other southern States. The report categorically States that most States have a "serious" hunger problem which is alarming and Karnataka is not exception to this order. The Report on the State of Food Insecurity in Rural India, (2008) jointly prepared by World Food Programme and MSSRF indicates the position of Karnataka, along with other States. On the composite index of food insecurity of rural India, Karnataka is yet to perform well & even though

economically developed, it positions in the category of 'high food insecurity zone'. While Constant attention to mitigating agrarian crisis is fundamental and the poverty ratio that manifests food insecurity at the household level and social protection schemes a specifically needs focussed attention .

Access to Food through PDS

Karnataka has renewed the deliberations on food security and functioning of Public Distribution System (PDS), consequent to the enactment of National Food Security Act (NFSA) in August, 2013 in India .While PDS is a key public intervention program and an instrument to augment food security at household level , its effective operation becomes vital in achieving the success of NFSA. To complement RDA and Nutritional support PDS provides rationed amount of basic food items at subsidized prices to the consumers through designated "fair price shops". Although the access to PDS was universal until 1992, it necessitated repackaging the program as TPDS to reach the unreached with an aim to target the poorest households by segregating the access quantities and at affordable prices. The beneficiaries are categorized as priority households based on their economic status, including the State-specific poverty lines.

Despite the massive coverage of PDS and its vital role in ensuring food security, its relevance & effectiveness in reducing poverty, including food transfers & improving food security has always remained a challenge.

TABLE 6.17
Contribution of PDS in household consumption of food grains

State	% households accessing PDS for cereals				Share of PDS in cereal consumption (%)			
	1993-94	2004-05	2009-10	2011-12	1993-94	2004-05	2009-10	2011-12
Karnataka	54.6	47.1	56.4	60.3	17.1	34.5	32.9	26.0
Andhra Pradesh	57.5	54.6	72.2	73.9	20.3	20.4	28.5	27.1
Kerala3	78.3	36.7	57.1	76.8	44.8	18.7	26.3	34.0
Tamil Nadu	65.7	68.2	84.2	82.6	19.3	35.1	47.9	47.8
INDIA	27.3	23.3	39.4	44.7	8.5	9.8	17.8	19.7

Source -NSSO survey –Kumar

For TPDS , the State has taken cognizance of the region to provide10 kg of cereals per month(rice and wheat) per person depending on the region. Antyodaya cards benefits a larger subsidy (35kg) than BPL households, and are meant for the poorest of the poor. Govt of Karnataka has identified 1034812 families for providing the support .With launching of Annabhagya Yojane, in Karnataka, four kg rice and one kg of wheat per person is benefited by the priority household, free of cost to mitigate food insecurity. State has covered 108.98 lakh priority households since May 2015.Despite the massive coverage of PDS and its vital role in ensuring food security, its relevance & effectiveness in reducing poverty, including food transfers & improving food security has always remained a challenge. The reach of people to PDS food grains is (1993-2012) higher than National figures, with user percentage higher in rural area, but

While aspects of quality and reach are vital, the overall performance is dependent on the good governance and informed participation of the public.

needs improvement in terms of share and access in comparison with southern States (table 6.17).

There are several studies which suggest the need for regular monitoring of the PDS to ensure transparency, accountability and responsiveness for effective functioning. Particularly, curtailing the access barriers ,improving quality of the supplies, reducing the Gaps in declared norms of service, leakages ,diversions, and most importantly improving public awareness of their rights and entitlements are key factors that directly impacts access to food. The State can surely make a difference if the variation in service dimensions between the districts are addressed and the deficiencies in operation are reduced .Periodic review for proper targeting and classification of the poor and weeding out of any irregularities including improvement in service delivery standards are crucial for overall gains of the program. Access to food in addition to the PDS , are from the other flagship programs like ICDS, Akshara Dasoha which have supported in food supplementation. These programs have also contributed in reducing the stress & also in addressing the food insecurity to some extent & the status is presented in later part of this chapter.

Relative performance of districts in 'Access to food'

Accessibility and accountability are the principal pillars around which the implementation mechanism is strategized in the State. To cater to the specific needs of the regions, both planning and operations of PDS are decentralized to target the timely distribution of food grains. While aspects of quality and reach are vital, the overall performance is dependent on the good governance and informed participation of the public. The parameter of accessibility and relative performance of the districts based ranking points out , D.K, Kodugu, Udipi, with better performance and they are also the top performing districts according to HDI. Incidentally, both in terms of availability & Accessibility index, the scores & ranking of Bengaluru rural & Chikaballapur falls in the category of low performing districts. It is relevant to State that access is grounded by the set of entitlement and it is in this context that programs on social protection draw immense attention.

TABLE 6.18
Ranking of the districts on Accessibility index

High performing districts	Food Accessibility Index		Low performing districts	Food Accessibility Index	
	Value	Rank		Value	Rank
D.Kannada	1.000	1	Chikkaballapura	0.049	30
Kodagu	0.880	2	Bengaluru rural	0.083	29
Udipi	0.867	3	Hassan	0.091	28
Belagavi	0.787	4	Tumakuru	0.153	27
U. Kannada	0.763	5	Shivamogga	0.183	26

Source: Human Development, Performancs of Districts, Taluks and Urban Local dodies in Karnataka, 2014- A snapshot

Performance on 'Absorption indicators'

Absorption is the ability to biologically utilize the consumed food, which is reflected on health and well-being. Essentially the composition of the food basket and its timely reach decides the extent of its benefits to the body .To complement the process, availability of safe drinking water, Sanitation, Hygienic Environment, Primary Healthcare, Nutrition Awareness & appropriate practices play a crucial role in determining the Nutrition security. Anthropometric indices, assessment of nutritional intake status have been adequately elaborated earlier. In particular the decline in per capita intake of cereals and calorie consumption is lower than the prescribed norms. Micro nutrient deficiencies, particularly anaemia due to iron deficiency is a serious concern and impacts directly On productivity. While decline in Vitamin A deficiency indicates improvement , the pace appears to be slow, but is also the crucial links of absorption indicators. Anthropometric indices clearly point out to the nutrition outcome, which are key indicators of absorption. Nutritional status of the population, particular in the vulnerable periods in life cycle clearly indicate that Karnataka has progressed, when compared with the earlier data of two decades, but needs further improvement in comparisons with the other southern States.

TABLE 6.19
A Snapshot on Absorption with Relative Indicators of Nutrition

CHILDREN	ADOLESCENTS	ADULTS
17.2% babies are born with low birth weight & it is almost the same for rural & urban (17.3%) area. Among the social category, LBW is highest among ST(33.8%), SC (21%),OBC (13.5%) others (16.4%)	58% of Adolescent Girls (15- 18years) have BMI less than 18.5(low) & is high among Rural (61.2%) than Urban area.(52.6%), with highest among SC (46.7%) category.*	More than a third of women (20.7%) have a BMI less than 18.5 & less than half suffer from Chronic Energy Deficiencies
35.2% children (0-59months) are underweight	Anaemia among boys and girls is 61% in 6-9years but is higher among girls(60.4%) than boys(48%) in the age group of 10-19years (DLHS-4)	16.5% males have a BMI below 18.5 & suffer from Chronic Energy Deficiencies. Women suffer from double burden of malnutrition. Women who are overweight (23.3%). 22.1% men are overweight
36.2% children (0-59months) are stunted	58% are married and 30% have given first birth before age of 18 years contributing to High MMR and anaemia	
26.1% children (0-59months) are wasted	Malnutrition levels are higher among girls in the age group of 15-19 years, who are likely mothers as 13.5% are already married in this age group	44.8% non- pregnant women are anaemic in the age group of 15-49 years.18.2% Men are anaemic in the age group of 15-49 years.
60.9% children (6-59 months) are anaemic.		45.4% pregnant women are anaemic in the age group of 15-49 years.

The relative performance of districts on the parameter of 'absorption. and ranking indicates Udupi Bengaluru urban Dakshina Kannada Uttarakannada Shivamogga are high performing districts

Nutritional outcome at a glance in the above table -6.19 clearly indicates economic growth alone is not sufficient for poverty reduction, although it may augment food availability and access to some extent, but the same need not instantly expedite improvements in child nutrition and mortality reduction. It is imperative to recognize that more direct investments are equally beneficial to hasten the rapid reductions in under nutrition, by not just having interventions at the level of child, , but more consistently on critical periods of life cycle. Therefore, programs for poverty alleviation, direct investments in improving food availability and access for poor households, as well as direct targeted nutrition and health interventions to improve nutrition outcomes for young children, are certainly a value addition to raise the hunger index scores and rankings of the State. More than the other two underlying variables, child under nutrition, is crucial and effects the hunger index score. Hence addressing child under nutrition deserves greater merits. Given this scenario, similar exercises are essential for all districts in Karnataka in view of decentralized & local specific actions to eradicate hunger and Malnutrition.

As Stated earlier absorption is a key parameter for computing food security index. The relative performance of districts on the parameter of 'absorption. and ranking indicates Udupi Bengaluru urban Dakshina Kannada Uttarakannada Shivamogga are high performing districts (table 6.20) which are based on Child mortality rate (0-5 years), Percentage of HHs with access to water ,Percentage of pregnant women with anemia, children born low birth weight, under nourished & Female literacy rate.

TABLE 6.20
Ranking of the districts on Absorption index

High performing districts	Absorption Index		Low performing districts	Absorption Index	
	Value	Rank		Value	Rank
Udupi	0.970	1	Raichur	0.086	30
Bangalore urban	0.967	2	Yadgir	0.164	29
Dakshina Kannada	0.930	3	Koppal	0.275	28
Uttarakannada	0.808	4	Kalaburagi	0.324	27
shivamogga	0.782	5	Ballari	0.339	26

Source: GOK

It is noteworthy that Udipi, DK districts are better in performance & are also the top performing districts according to HD. Incidentally Raichur,yadgir,Koppal,Kalburgi and Ballari are with low scores on absorption index & their ranking falls in the category of low performing districts, although their ranking on availability parameter is far better than high performing districts on 'absorption ' parameter. The overall performance of the districts on Food Security Index' is established based

on all three parameters, for arriving cumulative picture of FSI in Karnataka. The relative performance of the districts on all three parameters clearly States that none of the districts positions in 'better performance 'category while only Dakshina Kannada, Dharwar, & Udupi, are ranked in 'good performance 'districts.' Majority of the districts positions are in moderately or poor performing category. Bengaluru Rural, Chickkaballapur, Koppal & Raichur spot in the category of very poor performance. The analysis clearly states, the need for specific intervention strategies on different dimensions given the multicultural & regional imbalances within the State.

Intiatives taken for addressing Malnutrition

The State, has taken several steps to deliver and transform the population for nutritional well-being , particularly to address those challenges , that confronts under nutrition by considering the following actions.

1. A life cycle approach

The State recognizes the need for enhancing human development potential and breaking the intergenerational cycle of under nutrition. Hence, planning, resources ,expenditure and the program support is driven from a life cycle approach, with a focus on critical periods of nutritional vulnerability .

2. Preventive actions

The State places emphasis on preventing under nutrition, across the life cycle as growth and development deficits compromises child health, survival and optimal learning outcomes, which are cumulative and largely irreversible. In recognition of this need, the State has designed many interventions like mathrupoorna and necessary budgetary provisions from its own funds.

3. Inclusive and gender sensitive

Equity and gender justice being vital for human development parameters, the State has always given a priority to focus on reaching the most vulnerable and deprived sections, ensuring social inclusion of marginalized communities as nutritional vulnerability is compounded by multiple deprivations. Hence the impetus is for rights based framework and for promoting gender justice for survival, development, protection and participation, without discrimination. Several policies like child , girl child policy (in pipeline), women's commission which are indicative of States commitment.

4. Community empowerment

Creating platform through various programs for imparting Nutrition education and food related issues for improved care behaviors of children and women by mobilising the community and engaging women SHGs. The State has taken initiatives to empower women through MSPCS and linked them to Nutrition programs for provision of quality services and to contribute to increased service utilization as also to participate in community based monitoring.

5. Human Resources capability

Improving the Human Resources capability of program implementers

The analyses clearly states, the need for specific intervention strategies on different dimensions given the multicultural & regional imbalances within the State.

The State has given a priority to research endeavours, evidences, innovations, best practices, pilots and reforms to build and strengthen the programs strategies related to food & nutrition, as also for scaling and universalising the strategies.

both vertically and horizontally, by capacity building and skill upgradation for nutrition assessment, improved program coverage , monitoring and nutrition rehabilitation process.

6. Decentralization and flexibility

Karnataka is the pioneering State to provide autonomy and greater flexibility to the districts to decide on the choice of menu and food supplementation in the ICDS program.The decentralized approach has taken the consideration of regional based food habits, contextually relevant, culture specific, target based within the prescribed nutritional norms for all the public nutrition programs.

7. Evidence based Program strategies

The State has given a priority to research endeavours ,evidences, innovations , best practices , pilots and reforms to build and strengthen the programs strategies related to food & nutrition, as also for scaling and universalising the strategies.

8. Expending for Nutrition

Improving efficacy of nutrition expenditure is one of the key concerns of the State .Karnataka is one of the very few States that has spent substantial amounts of its own resources on nutrition in the recent years in the form of various State flagship programs, as well as higher State share for schemes such as the ICDS. The State government spends about 70 per cent of total expenditure on the ICDS and about 72 per cent of total nutrition expenditure through its own resources.

9. Key nutrition interventions

As envisaged in the National Nutrition Policy 1993, both direct or nutrition specific interventions and indirect or nutrition sensitive interventions are instituted, through flexible implementation framework. A number of programmes, which have the potential to improve the current nutrition security & situation, directly or indirectly are being implemented by various Departments in the State, which are both nutrition specific and nutrition sensitive programs.

BOX 6.1

Nutrition specific interventions ('direct')	Nutrition sensitive interventions ('indirect')
-Child health and nutrition (NRHM) -Child development and nutrition (ICDS&MDM) -Women Empowerment and Nutrition (RD) -Food aid &subsidies -PDS(Food & Civil supplies ,NFSM)	-Water, hygiene and sanitation (reduce infection) -Girls' education (reduce gender disparities) -Child protection (prevent child marriage/early pregnancy) -Agriculture& food security (increase access to food) - Social protection (increase equity)

Table 6.21

Existing programmes and schemes to support nutrition direct and indirect

Existing programmes and schemes to support nutrition(direct and indirect)		
Target group	**Schemes**	**Additional State schemes/ programs**
0-3 Years children	ICDS, RCH, NRHM, Rajiv Gandhi National Crèche Scheme	Ksheerabhagya
3-6 Years children	ICDS, RCH , NRHM, Rajiv Gandhi National Creche Scheme, TSC, NRDWP	Ksheerabhagya
6-14 years school going children	NP-NSPE (AKSHARA DASOHA) SSA, WIFS Program, SABLA	Ksheerabhagya
11-18years –adolescent girls	RMNCHA+A,RGSCAG (SABALA), Kishore Shakti Yojana, TSC, National Rural Drinking Water Programme. WIFS Program, AKSHARA	
Pregnant Lactating mothers	ICDS, RCH , NRHM, JSY, IGMSY – The CMB Scheme	Mathrupoorna
Adults Male & female	NFSM, TPDS, AAY, MGNREGS, Women Welfare & Support, Programme,RKVY TSC, NHM, NIDDCP, Nutrition Education & Extension,, Rashtriya Swasthya Bima Yojana	Annabhagya Yojane

10. State Flagship programs

The existing programs & schemes in the State support nutrition throughout the lifecycle, from infancy to the aged .The commitment and the priority of the State is also to improve nutrition has resulted in designing State flagship program in the sector of WCD, Health & Agriculture. These programs fortify the spirit and commitment, bestowed upon the vulnerable section, to mitigate the stress & to reduce vulnerabilities to some extent. Three major flagship programs to support food security and Nutrition of vulnerable population includes Annabhagya, Ksheerabhagya scheme, Mathrupoorna yojane, including the recent initiative like Indira Canteen. Needless to State that ,all the flagship programs have received immense attention as also community response and acclaim.

11. Monitoring

The State has taken several initiatives to uphold the 'right to food' especially to address hunger, deprivations to reduce under nutrition. Periodic assessment at intervention platforms are undertaken using anthropometric tools.

12. Other key institutional mechanisms

The other feature to improve the situation includes, creation of statutory bodies including commissions to play a proactive role and advising the department for efficient administration and provide support for general redressal. The following are some achievements

- Food Commission, Nutrition Mission, food safety commission, Karnataka State commission for protection of child rights have been established in the State.
- Legislation like NFSA-2013 mandates food and nutrition security in a 'life cycle approach' ,maternity benefits

entitlements, FSSAI, consumer protection ,MGNREGA etc

- Numerous policies like, health, agriculture, child & particularly girl child policy is in the agenda.
- Judiciary and Quasi- Judicial Bodies are taking up issues on malnutrition. In particular Karnataka legislation forum, Women's' commission

One of the key innovations is that the State has implemented end-to-end computerization of TPDS operations. A beneficiary data base is created which other States are yet to begin .While this has enabled in weeding out the irregularities, it has also aided in de-duplication of the beneficiaries.

Strengthening Existing Nutrition programmes in the state

The State has been able to provide due attention to all category of population and more consistently to the socially deprived class. However, there are still gaps in access to public provisions & entitlements. To begin with an intensive drive to cover the uncovered population in hamlets & panchayat borders for all the schemes/program can be a starting point. Gramsabha should also be the focal point for discussing issues of Nutrition & particularly for the reach of the deprived section. To begin with a social audit of Nutrition Specific & Sensitive programs is beneficial. The following are some of the key program features .

Implementation of National Food Security Act-2013 (NFSA)

National Food Security Act-2013 is in force wef January-2014 in the State. with the objective to provide for food & nutritional security in human life cycle approach, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity. The Act provides for coverage of up to 75% of the rural population and up to 50% of the urban population for receiving subsidized food grains under TPDS, covering about two-thirds of the population. The eligible persons receive 5 Kgs of food grains per person per month at subsidised prices for rice/wheat/.. The existing Antyodaya Anna Yojana (AAY) households, which constitute the poorest of the poor, receive 35 Kgs of food grains per household per month .With the concept of "Priority families" instead of erstwhile concept of BPL, receive food grain free of cost, under Annabhagya scheme to address food security. Under PDS system there are 4.4 Crores beneficiaries which is as per the directions of the Central Government. Karnataka is one of the earliest States to have taken prompt action and implemented the NFSA& the experience of the State showed that implementation of NFSA has improved the PDS in the State. One of the key innovations is that the State has implemented end-to-end computerization of TPDS operations. A beneficiary data base is created which other States are yet to begin .While this has enabled in weeding out the irregularities, it has also aided in de-duplication of the beneficiaries. Most significantly 3,000 FPSs have been automated & the data base of beneficiary,FPS wise allocation details, also supply-chain has been computerized and are on the portal.These system strengthening arrangements, to some extent have enabled both transparency greater accountability. It is a reality that PDS has become a lifeline for many rural households and an effective means to mitigate hunger& food insecurity to

some extent.

The launch of NFSA, is a major paradigm shift from welfare to a rights based approach to address food insecurity. An overall 20400 FPS are operating in the State of which 9 are mobile FP' in hilly areas of D.K, Kodagu, Raichur, Mysuru, Chamarajnagar district. As an early intervention & for timely distribution ,Padithara Khatari scheme has been introduced since 2014, which guarantees the availability of food grains in fair price shops from first of every month till 10th from 8 a.m. to 8 p.m. enabling the card holders to draw the food grains, in addition to the regular operating hours on the other days. MIS- is instituted to track all transactions on line, under Section 27 of NFSA & under Section 4.1 of RTI Act and to bring transparency in the system, which renders support to reduce stress and food insecurity to some extent. Yet Information gap in the context of the National Food Security Act 2013,is a concern & concerted effort to build awareness on all aspects of the delivery system including instilling accountability at every level is imminent. Mandatorily area specific, monthly monitoring down the supply chain is vital. While the grievance redressal mechanism is in place, there are many hurdles for the system to address. A community monitoring mechanism on pilot basis is worth attempting & ensuring procured food is consumed by the family. It is pertinent to state that food security is a key input for Nutrition outcome and therefore is concerned with physical and economic access to food both sufficient quality and quantity in a socially and culturally acceptable manner. TPDS is a vital strategy and an instrument to augment food security. The massive coverage of PDS & its dynamic role in ensuring entitlements ,its effectiveness in reducing poverty and hunger has always remained a challenge .Inclusion of minor millets ,multigrain fortified flour with soya, Nutrient dense pulses like horse gram ,cow pea and double fortified (iron &iodine)salt in PDS package will surely boost the efforts of Nutrition security. The available data depicts that districts that have fared well in reducing underweight among children are also districts that have made extensive use of TPDS. The newly created commission in the State has to be more proactive

Integrated Child Development Services (ICDS) program

India's primary response to the Nutrition & Developmental needs of children, is addressed in a comprehensive approach through the ICDS program. NFSA has also created a valuable legal entitlement to children, pregnant and lactating mothers through ICDS Platform and it is a key intervention of the government to augment the nutrition challenge to accommodate, the intergenerational concern, whereby Maternal and Child Nutrition is given attention.The program is pivotal, especially in reducing the under Nutrition among children. While nutrition supplementation in the program is significant, it is vital to recognize that, just the single intervention cannot by itself bring about drastic changes in nutrition outcome. A simultaneous support of Health, Water, Sanitation & other complimentary services brings greater dividends.

As an early intervention & for timely distribution, Padithara Khatari scheme has been introduced since 2014, which guarantees the availability of food grains in fair price shops from first of every month till 10th from 8 a.m. to 8 p.m.

At present there are 62,580 Anganwadi centres and 3331 mini AWCs functioning in the State.During the year 2014-15, 57.66 lakh beneficiaries availed the benefits, of Supplementary nutrition under the ICDS program.

State operates the program in 204 ICDS blocks covering 181 rural 12 tribal and 11 urban projects covering all the 175 Community Development blocks. At present there are 62,580 Anganwadi centres and 3331 mini AWCs functioning in the State .During the year 2014-15, 57.66 lakh beneficiaries availed the benefits, of Supplementary nutrition under the ICDS program. With revised Nutrition norms of 500 Calories of energy & 12-15 gms of protein to 6months to six years children, 800 KCAL to severely underweight children,600 KCAL for Adolescent girls under SABLA scheme .In addition, boiled egg and milk supplementation from Ksheerabhagya scheme is the State contribution to enhance Nutrition support to children attending the Anganwadi centre. While many studies have indicated that more than 85 percent of under three years children were residing in the operational area of Anganwadi centres, yet the access is still a challenge. RSOC 2013-14 in Karnataka has indicated that, Percentage availing Supplementary food in Anganwadi centres is less than 56 percent. The user percentage in rural area is better than urban, despite easy access in urban area. Among the different social category user percentage is only 60 among the SC & ST community. The access to the children from the poorest of the poor communities or the most vulnerable varies from region to region. Even where access is good there is no linear relationship between performance of ICDS & outcomes in terms of reduction of under nutrition. The ICDS has been generally noted for its relative lack of focus for below 3 year children who are most vulnerable to slip into under nutrition .In practice it is seen that most ICDS activity transpires at the Anganwadi centre itself, where children aged above three are brought, thereby the crucial period to combat under nutrition elapses. Some of the salient features of evaluation studies pinpoint the need for focussed monitoring and supervision, upgradation of specific skills of the AWWs on nutrition counselling to mothers, follow up for post discharged cases of Severely Acute Malnourished children (SAM)from Nutrition Rehabilitation Centres,(NRC) timely &quality provision of supplies, hygienic way of preparation of cooked meals service and the compliance of food safety issues(NIPCCD) for delivering effective nutrition services.

Table 6.22

Percentage availing Supplementary food in Anganwadi centres

Sl. No.	Category	Residence			Social category			
		Total	Rural	Urban	SC	ST	OBC	OTHERS
1	Children aged 6-35 months	56.3	65.0	41.6	62.6	62.7	58.9	48.9
2	Children aged 36-71 months	47.1	53.7	34.2	60.9	58.9	42.4	44.7
3	Pregnant women	48.8	66.4	20.4	(60.5)	*	47.7	37.5
5	Lactating mothers	52.3	60.6	33.5	59.5	(45.7)	57.7	38.4

(RSOC 2013-14)

While the skills for convergence with the line Department is inevitable, role clarity, operational guidelines, monitorable indicators for programmatic issues are crucial in achieving the Nutrition outcome. Most significantly the reforms & action pertaining to restructured ICDS is yet to be complied in the State. The analysis & insight drawn from a (ISEC2015) study clearly brings out the issue for technical efficiency, as the benefits are not distributed as per the needs of the districts. The program expenditure pattern, indicates several points for consideration. The report categorically States that the physical infrastructure, availability of human resource capital seems to have achieved better levels of nutrition, given the expenditure. Southern Karnataka as compared to northern region have achieved better levels of nutrition given the expenditure. The report also indicates that Belagavi & Kalburagi districts are attempting to meet the demand of ICDS more profoundly.

One of the commendable action taken to improve the situation of under nutrition among children is by the way of administrative recourse in Karnataka, which emerged from the report prepared by Justice Patil committee(2013) for improvisation of ICDS in the State. The outcome of the initiatives paved a way for several improvements on overall ICDS package consistently. The reforms pertaining to food supplementation in Angawadi centres have resulted in decentralized pattern of feeding where district administration decides based on local needs & culture. The second vital action has been on the initiative of providing rehabilitative services to SAM children, which was grossly inadequate. Today there are rehabilitation facility in every district,with 30 NRC & 27 MNRCs(10 bedded)forwhich,structures,resources, trained manpower & logistics have been created for system strengthening mechanisms. While this has not only regulated many actions but explicitly brought much needed convergence between Department of Health & WCD. Karnataka is a pioneering State in this direction, despite many initial teething problems ,the commitment is worth recognizing.The ICDS program requires effective transaction for nutrition outcomes.

An overall improvement in the quality of food in the program needs attention, giving weightage to the Nutritional norms, rather than the cost norms. On a priority basis, the provision of safe food be made mandatory ,not compromising on the quality. Enforcing the operational guidelines of food safety norms is obligatory in view of the vulnerabilities of the target population. SHGs/women collectives responsible for SNP should follow the FSSA protocols.

Mathrupoorna Yojane. The scheme provides one complete hot meal through ICDS platform and other essential services to women during their pregnancy and first six months, post-delivery. The specific service rendered during this period includes one hot full meal which consists of Rice, Lentils, leafy green vegetables, boiled egg, milk and a groundnut chikki, which is provided for 25 days in a month. Besides provision of hot meal in the anganwadi centre, antenatal, post natal care, Iron &Folic Acid tablets, deworming, calcium

The reforms pertaining to food supplementation in Angawadi centres have resulted in decentralized pattern of feeding where district administration decides based on local needs & culture.

Karnataka is one of the very few States invested substantial amounts of its own resources on nutrition in the form of various State schemes such as Anna Bhagya, Ksheera Bhagya, Mathru poorna as well as higher State share for schemes such as ICDS.

supplementation, counselling on diet and Nutritional Care are some of the specific services facilitated in the same platform . The uniqueness of the yojane is the provision of hot cooked meal, that targets the dietary diversity and meets 40-45 percent of daily calories, protein and calcium requirement of pregnant women and lactating women. The scheme started with a pilot in four backward talukas(Manvi, Jamkhandi, H.D.Kote,and Madhugiri) and based on the lessons learnt the Mathrupoorna yojane is now universally implemented since October 2017. Apart from 58.36lakh ICDS benefeciries at 6,59,111 AWCS in the State the universal scope of the scheme targets over 10 lakhs pregnant women and breastfeeding mothers across Karnataka, strengthening its potential for transforming Nutrition scenario of Karnataka.

Ksheerabhagya Yojane A State sponsored program is most popular among children in both rural and Urban area. Children from Anganwadi centres, as well as School children are served with milk to supplement nutrition. Both children as well as the community at large is highly satisfied with the inputs as per the scheme evaluation. Based On its success, the scheme has been enhanced to five days a week covering over One crore children. This State sponsored scheme is further linked to Mathrupurna scheme to benefit pregnant and lactating women to provide 200ml milk for 25 days in a month , which is first of its kind in the country.

Srishti Yojana: A state Sponsered program in which eggs are provided twice a week to all children attending Anganawadis 3 years and 6 years of age, to reduce Malnutrition among children

Karnataka is one of the very few States to have invested substantial amounts of its own resources on nutrition in the form of various State schemes such as Anna Bhagya, Ksheera Bhagya, Mathru poorna and Srishti well higher State share for schemes such as ICDS.

National Program for Nutritional Support to Primary Education (NP-NSPE)- Popularly known as Mid-Day Meal Scheme (Akshara Dasoha) is a key Government of India's flagship programme for achievement of Universalization of Elementary Education (UEE) & is being implemented in partnership with State Government. The program has covered in the entire Karnataka and caters from class one to 10th . As part of this scheme, cooked meals with a minimum content of energy i.e 450 calories &12 grams of protein are being provided to children in school. An overall 61.40 lakh children are benefited by the program. While Government of India is funding the scheme for children of classes 1 to 8, Government of Karnataka has recognised the importance of addressing classroom hunger and extended the services of hot cooked meals to the children of even 9th & 10th standards of government and government aided schools. Besides 150 ml of milk is also provided to the children under the ksheerabhagya scheme, out of the State resources. The system has enabled the school meals to use iodized salt mandatorily. The program has created a platform to address food security to school children to a large extent, by complying to NFSA

in the State. One of the key innovations in Karnataka is the varied models tried and tested both with centralized and decentralized kitchens for implementing the program.In fact this is known to be one of the best models for PPP, in view of the representation of a large number of Voluntary organizations and corporates supporting in Govts' endeavours. Today an overall 78 NGOS in the State, cover 5640 schools and cater to 10.46 lakh school children. Some of the NGOs have taken keen interest to enhance the quality of food& raised the standards for Nutrition by contributing the matching grants to the program. Particularly the role of Akshaya Patra is vital, quality optimisation and in building value to the program.While some partners in the system are encouraging the children to be aware of the benefits of nutrition&value of kitchen garden, it is not uniform across the State. A committed effort to raise the awareness on Nutrition to children in school is crucial, be it through the school curriculum & in engaging children proactively in school meal program.

Several evaluations have pointed the positive impact on the program on not only attendance, scholastic improvement and retention in school, but contribution of the program on nutrition and wellbieng of under privileged population to some extent. While it has addressed classroom hunger effectively, it has also fostered eqity and social values, including reduction in gender gaps. Nutrition security encompasses other key elements like safe drinking water & sanitation which finds a place in the program. This has created good habits in children by washing hands before and after eating, use of clean water and good hygiene. One take-home point from several evaluation/studies is the fact that most schools are still adhering to the prescribed 'cost norms' & hence nutritional norms based on the age of the child gets compromised in view of the prevailing market prices of the commodities. Linked to MDM in schools, weekly Iron folic acid tablets &albendozol tablets are given to all children under WIFS program, which aims in reduction in anemia and improved cognitive abilities. Two key actions that could further improve the system is to bring in more food safety measures to comply with the Food safety Standard ACT & secondly the schools should adhere to the nutrition norms and not just follow the cost norms. Linking the WIFS program effectively with MDM is more beneficial. Developing separate operational guidelines for linking the two would enable school authorities to take the program forward more explicitly.The State is yet to have a database on nutritional status of children attending the school & receiving MDM. Expediting the process is recommended for necessary interventions in view of the link between nutrition and cognition.

State Health Mission- Some of the key health services under NRHM and health sector interventions have relevance to the objective of addressing Malnutrition, which includes services of Immunisation, health care facilities, Universal Vitamin A administration, Paediatric Deworming and Anaemia management, programme for Universal Iodisation of salt & the National Control Programme, School health programmes with weekly IFA supplementation & six monthly deworming, Nutrition

One of the key innovations in Karnataka is the varied models tried and tested both with centralized and decentralized kitchens for implementing the program.In fact this is known to be one of the best models for PPP, in view of the representation of a large number of Voluntary organizations and corporates

The Households using improved sanitation facility in the State has improved from 33.5 (2005-06)to 57 percent (2015-16).The user percentage of toilets in rural area is less than 50 percent, although better than national average.

Rehabilitation centres for the sick and Severely Malnourished Child, Programmes of adolescent health that address nutrition counselling & anemia, Maternitybenefit scheme, Janani Suraksha Yojanapackage,State specific programmes like bala sanjjevini. Most of these programmes have adequate outreach. Morbidity driven malnutrition is most common across the State and therefore health sector's intervention needs not only 'push 'but a clear roadmap for convergence In addition AYUSH Pusti Karyakrama,a pilot project, aims at addressing malnourished children aged between 3 to six years where AYUSH medicines are provided.The on-going prophylaxis program on Vit 'A' deficiency & anaemia has promoted positive response in the State. While IFA ,supplementation is steady, the supply of Vit 'A ' still needs to be consistent in many districts & demands attention for large scale monitoring

Total sanitation campaign launched in 1999,is a comprehensive programme to ensure sanitation facilities in rural areas with broader goal to eradicate the practice of open defecation. It is the largest public hygiene campaign. Absence of sanitation is the biggest blot on the human development portfolio. The Households using improved sanitation facility in the State has improved from 33.5 (2005-06)to 57 percent (2015-16).The user percentage of toilets in rural area is less than 50 percent, although better than national average.

The National Horticulture Mission has been launched since April 2005 as a centrally- sponsored scheme to promote holistic growth of the horticulture sector through area based regionally differentiated strategies. The scheme is completely funded by the Government of India. The mission objectives strategies do not directly attempt at addressing nutrition security, but the potentials of enhanced consumption of fruits vegetables contribute to micro nutrients. At the household level there is marked deprivation of micronutrients. The Availability & Access of nutrient dense vegetable, roots & tubers to the deprived families in rural area is a concern. Revival of HOPCOMS & further extension to rural area is inevitable.

MGNREGS came into force in February 2006, the objective being creation of durable assets and securing livelihood of rural households which is facilitated through Convergence of MGNREGA works with resources of other programmes / schemes available with Panchayaths and other line departments. The program has covered the entire State ,with Job Cards issued to 57.24 lakh, &14.47 lakh of HHs have been benefitted by the Employment (RDPR 2014). Yet a large majority of population is unable to avail full 100 days of guaranteed employment and in the context of Human development many opportunities are either overlooked or not fully utilized.The scheme has served as a delivery platform for nutrition sensitive intervention to some extent by increasing the minimum purchasing power for food in families living below the poverty line.The direct evidence of the impact of the scheme on nutrition is although limited, it is to be recognized that unless the individuals are healthy and well nourished,they cannot invest in eight hours of manual labour to earn the wages under the scheme which implies that productivity is dependent

on nutrition and health status of the individual & vice versa.

Rajiv Gandhi Scheme for the Empowerment of Adolescent Girls (RGSEAG) SABLA

To accommodate & address intergenerational issues for health& well-being the Scheme for the Empowerment of Adolescent Girls has been launched by the ministry of WCD. Merging the erstwhile two scheme i.e Kishori Shakti Yojana & NPAG schemes. SABALA attempts to address the multi-dimensional problems of the adolescent girls in the age group of 11-18 years. Using the ICDS platform, the scheme attempts to provide SNP & integrated package of services, particularly for 'out of school' girls. The scheme is covering nine districts in the State.

Pradhan Mantri Matrutva Sahyog Yojana

GOI has launched the Conditional Maternity Benefit Scheme with the overall vision of contributing towards improved health and nutritional status of mothers & children, The scheme is implemented in all districts of the stafe. Pregnant women of 19 years of age & above for first live birth are eligible for cash incentive of Rs.5000/ in three instalments from early registration & till the child attains the age of 6 months subject to fulfilment of conditions. The scheme aims to compensate women for the wage loss during antenatal & post natal period. It also intends increasing the demand for mother & child health services .

Sneha Shivir

A community based care and Nutrition counselling initiatives to mothers and Care givers is introduced by GOI .Rehabilitation of the malnourished children through camps, and house visits for follow up is the main scheme objective. The catchment point is the cluster level of four Anganwadi centres of high burden districts. The mothers and care givers of severe and moderately malnourished children are counselled and supervised for feeding protocols for 12 days in a month, with 18 days follow up. Bagalkote, Kalaburagi, Kolar, Ballari district are the high burdened districts, implementing the scheme.

Balasanjivini (State sponsored) The program was initiated during 2010-11, which focuses on the rehabilitation and treatment of severely malnourished children. Many hospitals in the State are aligned with this program which is initiated by Department of Women and Child Development(DWCD). It has been able to motivate community to take the benefits of the program. Karnataka is the first State to evolve this unique concept & brought greater convergence between Department of Health and DWCD.

Karnataka Comprehensive Nutrition Mission

This pilot project was initially undertaken during 2012-13 in three blocks i,e Ballari Rural, Gubbi & Shikaripura of Shivamogga District, with Specific Objectives to Reduce under-nutrition among children, low body mass index among adolescent girls and women in the project areas by following the inter-generational, lifecycle approach. In particular the initiatives are aimed at reduction of the incidence of low birth weight

SABALA attempts to address the multi-dimensional problems of the adolescent girls in the age group of 11-18 years. Using the ICDS platform, the scheme attempts to provide SNP & integrated package of services. The scheme is covering nine districts in the State.

Balasanjivini Karnataka is the first State to evolve this unique concept & brought greater convergence between Department of Health and DWCD.

Decentralized planning & flexibility in the flagship programs to respond to the varied needs in diverse vulnerable pockets have to be hastened to ensure greater accountability.

babies, anemia & other micronutrient deficiencies among children, adolescent girls & women. Most pertinently the key actions to, spread information & awareness in the communities, to enable behavioural change on child care practices, care for the girl child throughout her life cycle, care during pregnancy, lactation period,& also appropriate dietary practices within existing family budgets are the key strategy interventions of the pilot project. The second phase of pilot is being initiated at Devdurga and Chincholi blocks of Raichur and Kalburagi district to improve nutrition levels by providing Energy Dense Fortified supplementation, as also make available low cost nutritional supplements to the target beneficiaries. The pilot project is being supported by the World Bank .

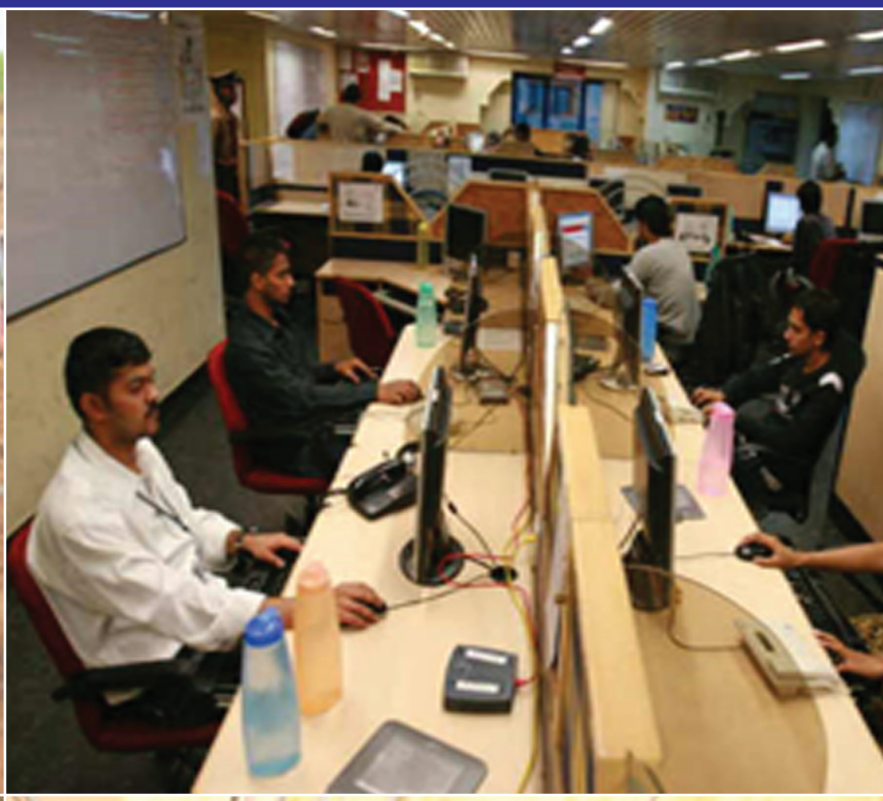
Nutritional support to institutions under Juvenile Justice ACT

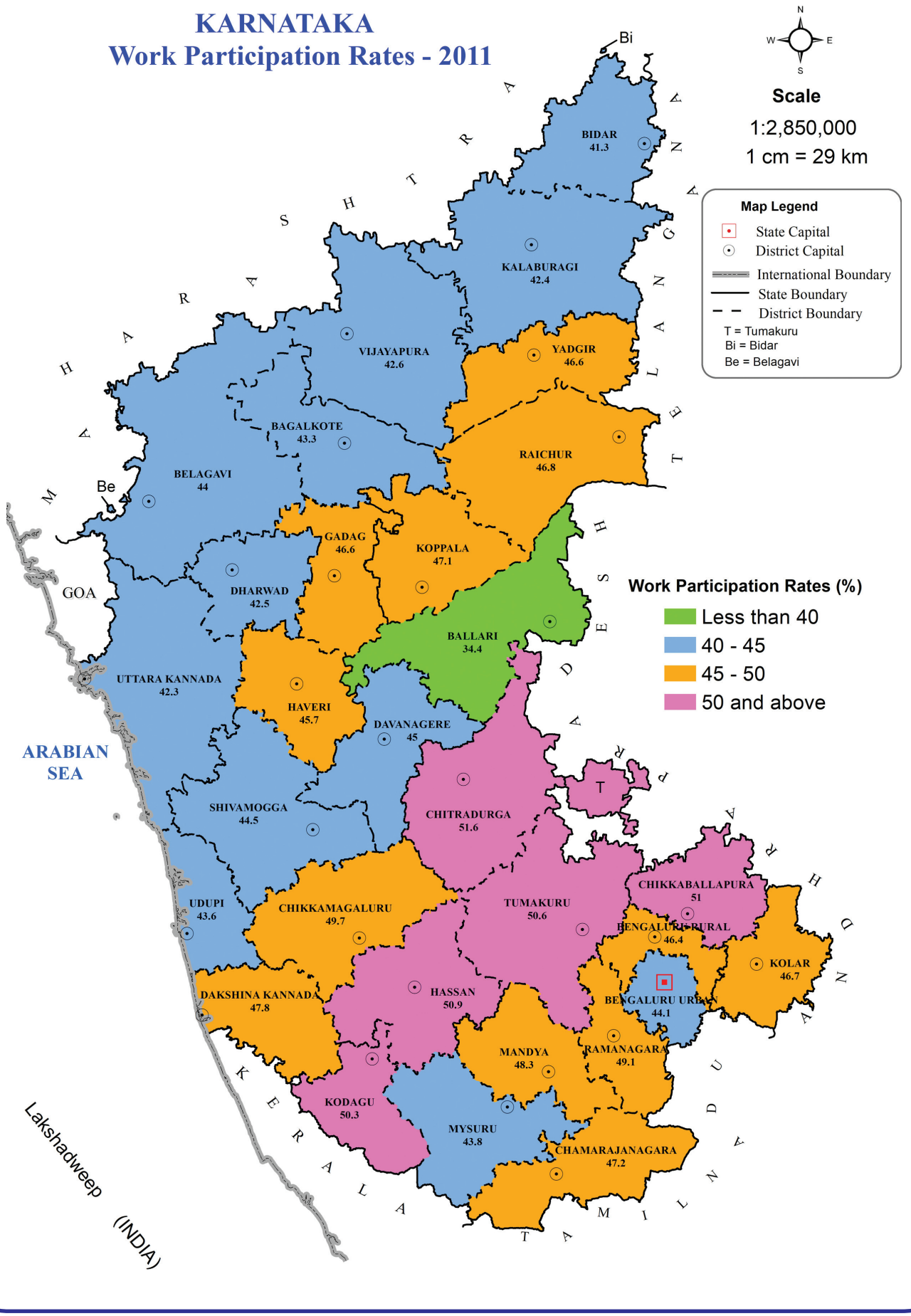
Access to holistic nutrition is the rights of all children & therefore its promotion should extend to all children in the State. The other structures, systems that support children like crèches, child care institutions under Juvenile Justice system need to follow nutrition norms recommended by ICMR and enforce the standards for nutrition in all the institutions under its umbrella.

Conclusion

Karnataka is a progressive State, proactive with many advances, initiatives which have shaped & backed 'Development'. With all its concerns & commitments there is still ample scope to prioritize actions & bring reforms for the larger goals of development. Although, during the Eleventh Five-year Plan 'nutrition' received some attention, the agenda of ensuring better nutritional status for its population is still fragmentary & requires to be taken forward. Considering the trend, and the intent of the vision document, the target for the year 2025 will have to positively aim at reducing stunting by ten percent & wasting by five per cent from the current status. Correspondingly targets for domain wise reduction levels for Anaemia, low birth weight & improvement for exclusive breastfeeding rate by 20percent from the current status. Decentralized planning & flexibility in the flagship programs to respond to the varied needs in diverse vulnerable pockets have to be hastened to ensure greater accountability.

Employment and Skill Development




KARNATAKA
Work Participation Rates - 2011
N
W
E
S
Scale
1:2,850,000
1 cm = 29 km
Map Legend
State Capital
District Capital
International Boundary
State Boundary
District Boundary
T = Tumakuru
Bi = Bidar
Be = Belagavi
Work Participation Rates (%)
Less than 40
40 - 45
45 - 50
50 and above
BIDAR 41.3
KALABURAGI 42.4
YADGIR 46.6
VIJAYAPURA 42.6
BAGALKOTE 43.3
RAICHUR 46.8
BELAGAVI 44
GADAG 46.6
KOPPALA 47.1
DHARWAD 42.5
BALLARI 34.4
UTTARA KANNADA 42.3
HAVERI 45.7
DAVANAGERE 45
CHITRADURGA 51.6
SHIVAMOGGA 44.5
UDUPI 43.6
CHIKKAMAGALURU 49.7
TUMAKURU 50.6
CHIKKABALLAPURA 51
BENGALURU RURAL 46.4
KOLAR 46.7
DAKSHINA KANNADA 47.8
HASSAN 50.9
BENGALURU URBAN 44.1
MANDYA 48.3
RAMANAGARA 49.1
KODAGU 50.3
MYSURU 43.8
CHAMARAJANAGARA 47.2
Bi
Be
T
GOA
ARABIAN SEA
Lakshadweep (INDIA)
MAHARASHTRA
TELANGANA
ANDHRA PRADESH
TAMILNADU
KERALA

Chapter-7

Employment and Skill Development

Introduction

Providing productive and quality employment for increasing labour force is a major challenge for all governments including that of Karnataka. High economic growth is necessary condition for creating new work opportunities but it is the pattern of economic growth which has important implication for productive and quality employment for the large section of labour force.

In Karnataka, agriculture still employs almost half of the total workforce. The challenge is to shift employment structure towards more productive non-agricultural sectors so that better and sustained source of livelihood for the working population can be sustained.

In this chapter we analyse the growth and patterns of employment generation in this millennium as well as skill structure of the working population and suggest possibilities for further improvement.

Work Participation Rate

Work participation rate (WPR) or worker to population ratio is the basic parameter that captures contribution of workers in the economic life. Two sources of information of WPR exist in this context. These are from National Sample Survey (NSS) and decadal census. NSS rounds pertain to the years of 2004-5 and 2011-12 , a gap of seven years and censuses are for the year 2001 and 2011, a gap of one decade[4] .

We compare between Karnataka and all India for main or principal workers. These two measures belong to census and NSS respectively that consider workers who have worked for major part of the year. The definitions are similar in both cases. But for Karnataka and India, WPR is higher from NSS (principal[5]) compared to census (main) but the difference between these two sources declined around 2011(Table 7.1). In Karnataka principal WPR showed substantial decline whereas main workers WPR showed some increase. In India, principal WPR showed lesser decline, but in main WPR also there is marginal decline.

[4]In addition, in recent years Labour Bureau have started bringing out annual employment-unemployment survey reports from 2009-2010. The latest report (4th Survey Report) is for the year 2013-14. In this chapter as we are examining employment trends over longer periods, we did not include report of 'Labour Bureau' in our analysis.

[5]The definitions of principal and main workers are the same. Both these categories of worker report that they worked for major part of the year which means more than 182 days in a year.

Table 7.1
Work Participation Rate, all Ages for Principal (NSS) and Main Workers (Census)

Principal

WPR		Rural			Urban			Total		
		M	F	P	M	F	P	M	F	P
Karnataka	2004/05	61.7	41.7	51.8	57.2	16.9	37.8	60.3	34.1	47.5
	2011/12	61.1	27.4	44.4	57.5	15.8	37.1	59.7	22.9	41.5
India	2004/05	53.5	24.2	39.1	54.1	13.5	34.6	53.6	21.5	38.0
	2011/12	53.5	17.6	36.0	54.2	12.5	34.1	53.7	16.0	35.4

Main

WPR		Rural			Urban			Total		
		M	F	P	M	F	P	M	F	P
Karnataka	2001	52.1	24.8	38.6	50.8	13.8	32.9	51.6	21.1	36.6
	2011	52.9	27.3	40.2	51.7	17.2	35.3	52.8	23.4	38.3
India	2001	44.3	16.7	30.8	47.2	9.4	29.3	45.1	14.7	30.4
	2011	41.6	16.7	29.5	48.7	11.9	30.9	43.9	15.2	29.9

Source: NSSO and Census documents

The main reason for decline in principal WPR in Karnataka and India in the last decade is due to decline in rural female WPR. Since decline in Karnataka was by 14 percentage points compared to 7 percentage point decline in India, the overall principal WPR declined faster in Karnataka compared to all India.

In case of main WPR (census) in Karnataka, 1.7 percentage point increase in the last decade, which has been caused by 2 to 3 percentage points increase in female WPR in rural and urban areas (Table 7.2). In India, marginal decline in main WPR in last decade has been largely caused by WPR decline of rural male.

In nutshell, in Karnataka large decline in principal (NSS) rural female WPR caused decline in overall principal WPR whereas noticeable increase in both rural and urban female main WPR led to increase in overall main (Census) WPR. However,, female WPR around 2011 in Karnataka by both NSS and census measures are very close to each other hovering around 23 per cent.

Table 7.2
Work Participation Rate, all Ages for Principal+ Subsidiary (NSS) and Main+ Marginal Workers (Census)

Principal + Subsidiary

WPR		Rural			Urban			Total		
		M	F	P	M	F	P	M	F	P
Karnataka	2004/05	62.3	45.9	54.2	57.6	18.1	38.6	60.8	37.4	49.3
	2011/12	61.2	28.7	45.1	57.9	16.3	37.6	59.9	23.9	42.1
India	2004/05	54.6	32.7	43.9	54.9	16.6	36.5	54.7	28.7	42.0
	2011/12	54.3	24.8	40.0	54.6	14.7	35.4	54.4	21.7	38.5

Main + Marginal

WPR		Rural			Urban			Total		
		M	F	P	M	F	P	M	F	P
Karnataka	2001	58.1	39.9	49.1	53.8	16.4	35.7	56.6	32.0	44.5
	2011	59.8	38.8	49.4	57.8	20.8	39.7	59.0	31.9	45.6
India	2001	52.1	30.8	41.7	50.6	11.9	32.3	51.7	25.6	39.1
	2011	53.0	30.0	41.8	53.8	15.4	35.3	53.3	25.5	39.8

Source: NSSO and Census documents

In terms of overall WPR which in case of NSS is principal plus subsidiary and in case of census it is main plus marginal. Since the marginal workers (census) coverage is broader than subsidiary workers (NSS)[6], the gap of WPR in terms of all workers are narrower between NSS and census.

Inter-district Variation in WPR

We now proceed to analyse the inter-district variation of WPR. Reliable estimate of district level WPR are available from census, we limit ourselves in analysis at overall WPR (main plus marginal).

Table 7.3
WPR (All) across Districts (Rural and Urban) 2011

District	Top 5 Districts			District	Bottom 5 Districts		
	Total	Rural	Urban		Total	Rural	Urban
Chitradurga	51.6	55.1	37.4	Viajayapura	42.6	45.4	33.3
Chikkaballapur	51.0	54.3	39.3	Dharwad	42.5	51.1	36.0
Hassan	50.9	54.6	37.2	Kalaburagi	42.4	46.6	33.5
Tumakuru	50.6	53.9	39.1	Uttara Kannada	42.3	45.5	34.7
Kodagu	50.3	52.0	40.6	Bidar	41.3	44.3	32.0

WPR of all districts are given in appendix table 7.25.
Source: Census, 2011

Across district (Table 7.3) substantial variation was seen in WPR with highest in Chitradurga (51.6%) and lowest in Bidar (41.3%). This inter-district variation was substantially more in case of females than in case of males (Table 7.4). Still, Mandya (63.6%) and Vijayapura (52.2%) reflect considerable inter-district variation even for males. High WPR in Chitradurga, Chikkaballapur and Tumakuru districts were largely due to high female WPR and that of Hassan was due to high male WPR.

[6]Subsidiary workers are defined as those workers who worked for at least one month and less but less than 183 days in a year. Marginal workers are those workers who worked for any period but less than 183 days in a year.

Table 7.4
WPR (all) across Districts, (Male) 2011

District	Top 5 Districts			District	Bottom 5 Districts		
	Total	Rural	Urban		Total	Rural	Urban
Mandya	63.6	64.5	59.1	Bagalkote	53.8	54.0	53.5
Hassan	63.4	64.9	57.8	Yadgir	53.7	54.5	50.3
Chamarajanagara	63.3	64.4	58.3	Bidar	52.7	54.3	48.0
Chikkamagaluru	63.2	64.3	59.0	Kalaburagi	52.2	53.7	49.3
Ramanagara	62.8	64.5	57.7	Vijayapura	52.2	52.9	49.8

WPR of all districts are given in appendix table 7.25.
Source: Census, 2011

Table 7.5
WPR (all) across Districts, (Female) 2011

District	Top 5 Districts			District	Bottom 5 Districts		
	Total	Rural	Urban		Total	Rural	Urban
Chitradurga	41.9	47.8	18.7	Shivamogga	28.1	35.4	15.1
Chikkaballapura	41.3	47.0	21.6	Dharwad	26.5	40.4	16.2
Yadgir	39.5	43.6	21.6	Mysuru	26.4	32.2	18.1
Tumakuru	38.9	44.1	20.9	Uttara Kannada	25.0	29.4	14.5
Raichur	38.7	45.2	19.3	Bengaluru	24.6	28.0	24.3

Note: WPR of all districts are given in appendix table 7.25.
Source: Census, 2011
Interestingly, Bengaluru district in spite of having highest WPR in urban areas among all districts ranked lowest in female WPR because of lowest female WPR across districts in rural areas (Table 7.5).

Table 7.6
Division Wise Work Participation Rate (WPR) all and number of Workers, 2011

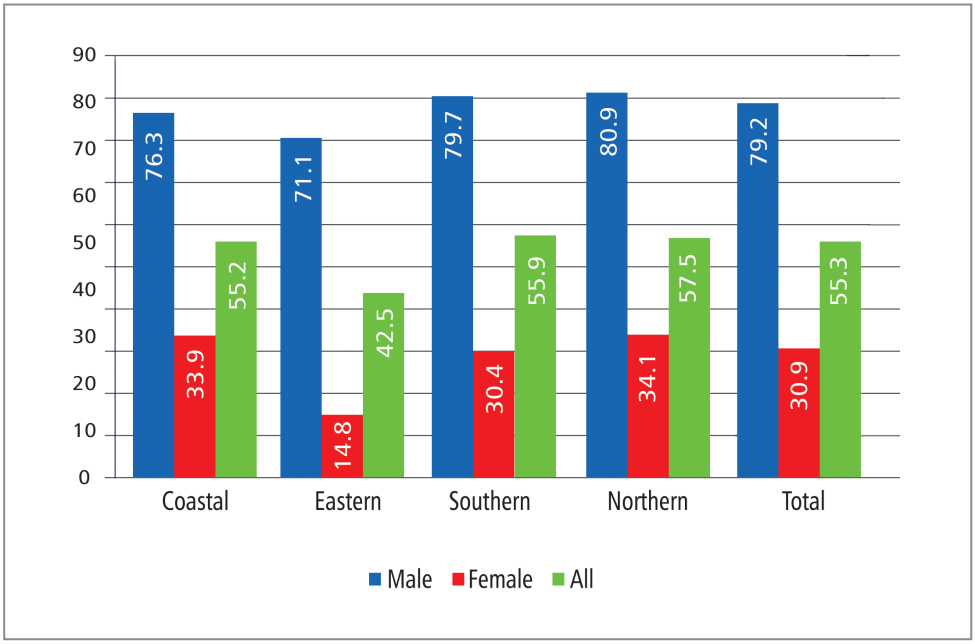
Division	Total Population	Total Workers	WPR (%)
Kalaburagi	11,215,224	5,012,391	44.7
Bengaluru	22,523,301	10,462,965	46.5
Mysuru	12,563,598	5,926,623	47.2
Belagavi	14,793,174	6,470,618	43.7
State	61,095,297	27,872,597	45.6

Districts under jurisdiction of different divisions are given in appendix table 7.26.
Source: Computed from Census, 2011

Since districts are large in number, we examined WPR across administrative divisions to get the picture at more aggregated level with the State. Across divisions, Mysuru division had highest WPR and Belagavi division had the lowest WPR. Inter-division variation in WPR is not substantial unlike across districts. Please see Table 7.25, 7.26 & 7.27 for the list of districts falling in different divisions. The division level analysis did not give any noticeable differences. So, we moved to NSS regional level analysis to get some consolidated picture. The NSS regions are based on agro-climatic divisions, so the number of districts that is covered under different NSS regions vary substantially. The districts that fall under different NSS regions is given in appendix Table7.25, 7.26 & 7.27

Figure 7.1

Work Participation Rate (WPR) for Principal Workers across NSS Regions, 2011-12, (15 Years and above)



Note: Districts falling under different NSS regions are given in appendix table 7.27.

But when we examine in terms of NSS regions it shows greater variations. The figure 7.1 presents WPR for principal workers across NSS regions.

Region wise work force participation rate (WPR) for both male and female were similar in coastal, northern and southern regions but substantially lower in eastern region. There was a significant difference between male and female WPR, the former is several times of the latter. The gender difference in WPR was highest in eastern and lowest in northern.

Labour Force Participation Rate (LFPR)

Labour force participation rate (LFPR) discussed here covers all participants in the labour market from NSS. In 2011-12, LFPR of Karnataka was higher than all India but lower than neighbouring States of Andhra Pradesh, Maharashtra and Tamil Nadu. Particularly for rural female LFPR was lower by at least 10 percentage points from these three States (Table 7.7). In case of urban female LFPR it was 3 percentage point lower than Tamil Nadu but almost similar to Andhra Pradesh and Maharashtra. However,, as observed earlier, female LFPR in Karnataka was higher than all India in both rural and urban areas.

Across divisions, Mysuru division had highest WPR and Belagavi division had the lowest WPR.

Table 7.7
Labour Force Participation (Principal+ Subsidiary), all ages, 2011-12

State	Rural			Urban			Total		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
Karnataka	62.0	28.9	45.4	59.4	17.1	38.8	61.0	24.6	43.0
Andhra Pradesh	61.2	44.8	52.8	57.6	18.0	38.0	60.0	36.1	47.9
Kerala	58.3	25.8	41.0	56.7	22.2	38.6	57.9	24.8	40.3
Tamil Nadu	60.7	38.6	49.5	59.9	21.1	40.3	60.4	30.8	45.4
Maharashtra	58.2	38.9	49.0	56.0	17.2	37.4	57.2	29.0	43.7
All India	55.3	25.3	40.6	56.3	15.5	36.4	55.6	22.5	39.5

Source: Employment and Unemployment Schedule, 68th Round, 2011-12, NSSO

Table 7.8
Labour Force Participation (Principal+ Subsidiary), from 1993-94 to 2011-12 for Karnataka and all India, all ages

Area	Gender	Karnataka					India				
		1993-94	1999-2000	2004-05	2009-10	2011-12	1993-94	1999-2000	2004-05	2009-10	2011-12
Rural	Female	43.2	38.1	46.2	37.2	28.9	33.0	30.2	33.0	26.5	25.3
	Male	60.9	60.1	62.8	62.7	62.0	56.1	54.0	55.4	55.6	55.3
	Persons	52.1	49.1	54.6	49.9	45.4	44.9	42.3	44.5	41.4	40.6
Urban	Female	19.1	18.6	19.2	17.7	17.1	16.5	14.7	17.8	14.6	15.5
	Male	55.8	56.2	58.7	59.0	59.4	54.3	54.2	57.0	55.9	56.3
	Persons	37.9	37.8	39.7	39.3	38.8	36.3	35.4	38.7	36.2	46.7
Total	Female	36.4	32.9	38.0	30.4	24.6	29.0	26.3	28.8	23.3	22.5
	Male	59.4	59.0	61.5	61.4	61.0	55.6	54.0	55.8	55.7	55.6
	Persons	48.0	46.0	49.9	46.1	43.0	42.8	40.6	42.8	40.0	39.5

Source: Employment and Unemployment Schedule, 68th Round, 2011-12, NSSO

Comparing changes in LFPR over the years (1993-94 to 2011-12) with All India, the decline was much faster in rural female LFPR in Karnataka. Even in case of urban female LFPR relatively larger declining trend can be observed compared to All India (Table 7.8).

The trend is similar to WPR that was observed in earlier section. The decline in WPR over the years originated from lower LFPR (Table 7.8). Recent studies pointed out several factors such as higher educational enrolment of females, withdrawal from precarious agricultural activities as household income rises and lack of suitable job opportunities. Examining specific evidence, substantial decline was observed in the subsidiary work force,

participation rate for females particularly in the rural areas in between 2004-5 and 2011-12. It was argued that it might be due to better economic situation of the households that led to withdrawal of unpaid family labour who work for minor part of the year. There has been much greater withdrawal of this category of workers. The share of unpaid family labour in rural female subsidiary workforce drastically declined from 57 to 37 per cent in between 2004-5 and 2011-12. At NSS regional level similar trend was observed as in case of work participation rate.

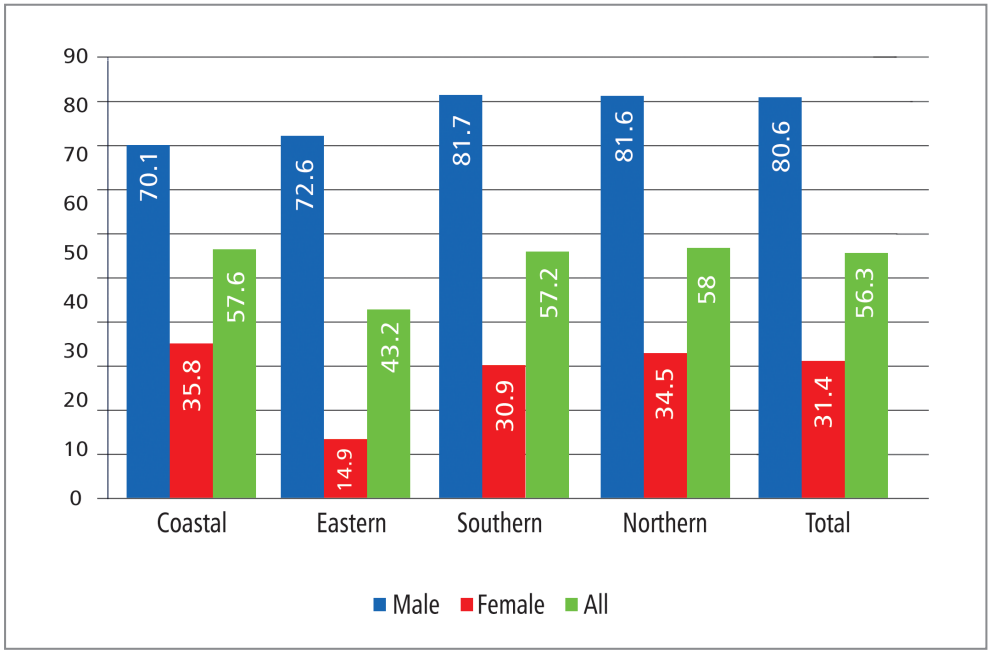
female LFPR, the former was multiple times higher than latter. The gender difference was highest in eastern and lowest in coastal. The female LFPR in eastern region was less than half of that of all other three regions

Unemployment Rate

Similar to analysis of LFPR, unemployment rates are also examined through NSS rounds. Two measures of unemployment rates are considered namely all (principal plus subsidiary, UPSS) and current daily status (CDS). UPSS unemployment rates capture the chronic unemployment as under this concept a person is considered unemployed if he/she is unemployed for better part of the year. On the other hand, CDS unemployment captures the intensity of unemployment.

Figure 7.2

Labour Force Participation Rate (LFPR) for Principal Status across NSS Regions, 2011-12, (15 Years and above)



Source: Employment and Unemployment Schedule, 68th Round, 2011-12, NSSO

The female LFPR in eastern region was less than half of that of all other three regions

Region wise the labour force participation rate (LFPR) was almost similar in northern, southern and coastal with comparatively lower in eastern region. There was a significant difference between male and

Table 7.9
Unemployment Rate (Principal+ Subsidiary) all ages by Selected States, 2011-12

State	Rural			Urban			Total		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
Karnataka	1.2	0.4	0.9	2.4	4.4	2.9	1.6	1.4	1.6
Andhra Pradesh	1.7	0.5	1.2	3.9	5.4	4.3	2.4	1.3	2.0
Kerala	3.1	14.2	6.8	2.7	13.9	6.1	3.0	14.1	6.6
Tamil Nadu	2.1	1.9	2.0	2.1	4.5	2.7	2.1	2.7	2.3
Maharashtra	0.9	0.3	0.7	1.8	3.8	2.3	1.3	1.2	1.3
All India	1.7	1.7	1.7	3	5.2	3.4	2.1	2.4	2.2

Source: Employment and Unemployment Schedule, 68th Round, 2011-12, NSSO

The UPSS unemployment was less in more industrialised State of Maharashtra and was very high in low industrialised State of Kerala whereas in Karnataka, Andhra Pradesh and Tamil Nadu fell in between (Table 7.9). Growth of labour intensive manufacturing activities seems to be an important factor for low level of unemployment.

CDS unemployment of Karnataka over the years has been lower than all India. Interestingly female unemployment has been far lower than all India counterpart compared to male unemployment (Table 7.10). Unlike in all India where rural female CDS unemployment was higher than male counterpart in most of the year and in Karnataka it was the other way round. In the year 2011-12, it was just half of all India. It partly supports the phenomenon that large decline in female LFPR in Karnataka compared to All India during the period 2004-5 to 2011-12, led to the situation where existing participants in labour market were able to get more days of work. It is because the CDS unemployment captures fully the underemployment of casual workers and to a certain extent that of self-employed.

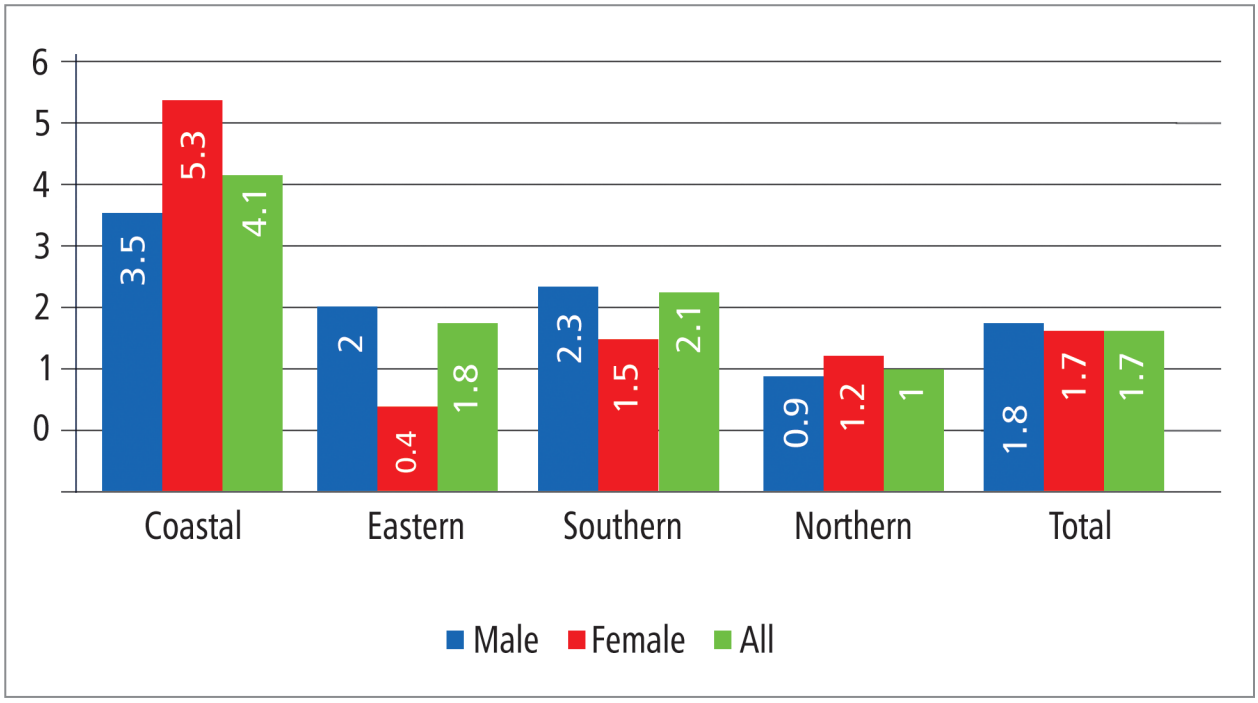
Table 7.10
Unemployment Rate in Karnataka and India (CDS), 1993-94 to 2011-12, all ages

Area	Gender	Karnataka					India				
		1993-94	1999-2000	2004-05	2009-10	2011-12	1993-94	1999-2000	2004-05	2009-10	2011-12
Rural	Female	3.9	4.0	7.2	4.1	3.1	5.6	7.0	8.7	8.0	6.2
	Male	4.7	4.4	6.3	3.9	3.6	5.6	7.2	8.0	6.4	5.5
	Persons	4.4	4.3	6.7	4.0	3.4	5.6	7.1	8.2	6.8	5.7
Urban	Female	8.9	5.9	9.4	6.0	5.6	10.5	9.4	11.6	9.1	8.0
	Male	5.6	5.3	5.1	4.4	3.7	6.7	7.3	7.5	5.1	4.9
	Persons	6.3	5.4	6.0	4.7	4.1	7.4	7.7	8.3	5.8	5.5

Source: Employment and Unemployment schedule, several rounds, NSSO
Across NSS region substantial variation can be observed.

Figure 7.3

Unemployment Rate (UR) for Principal Status across NSS Regions, 2011-12, (15 Years and above)



Source: Employment and Unemployment Schedule, 68th Round, 2011-12, NSSO

The unemployment rate was highest in coastal region and comparatively lower in other three regions. The lowest unemployment was observed in eastern region. In particular, female unemployment rate in coastal and northern shows a contrasting picture, much higher than their male counterpart. However, the unemployment rate among female in eastern region was almost negligible and 1.5 per cent in southern.

Employment Status

The composition of status of employment in 2011-12 was not very dissimilar between Karnataka and India at an aggregate level. The share of regular worker was higher in Karnataka by about 3.6 per cent and the share of self-employed was lower by 2.8 per cent (Table 7.11). The main difference at disaggregated level was for urban female where the share of regular and casual employment respectively were 6 and 2 per cent higher in Karnataka compared to all India and the share of self-employed were correspondingly lower. It reflects higher share of paid female employment in urban Karnataka compared to all India that is often argued as better employment scenario for female workers as the payment for their labour directly reaches them.

The unemployment rate was highest in coastal region and comparatively lower in other three regions. The lowest unemployment was observed in eastern region.

Table 7.11
Status of Employment in Karnataka and India, Principal Status aged 15 years and above

Status of Employment		Rural			Urban			Total		
		Male	Female	Person	Male	Female	Person	Male	Female	Person
Karnataka										
2004-05	Self Employed	49.4	44.5	47.4	41.5	41.0	41.4	47.0	43.9	45.9
	Regular Worker	6.4	3.2	5.1	39.1	39.3	39.1	16.2	8.7	13.5
	Casual Worker	44.3	52.3	47.5	19.4	19.7	19.5	36.8	47.4	40.6
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2011-12	Self Employed	53.0	47.9	51.5	41.9	28.5	39.1	48.8	42.7	47.1
	Regular Worker	13.4	8.6	12.0	42.7	54.5	45.2	24.6	21.0	23.7
	Casual Worker	33.5	43.5	36.6	15.5	17.0	15.8	26.6	36.3	29.3
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
India										
2004-05	Self Employed	57.6	56.4	57.3	44.6	40.4	43.8	54.2	53.9	54.1
	Regular Worker	9.1	4.8	7.8	40.8	42.2	41.1	17.4	10.7	15.5
	Casual Worker	33.3	38.9	35.0	14.6	17.4	15.1	28.4	35.5	30.3
	Total	100.0	100.0	100.0	100. 0	100.0	100.0	100.0	100.0	100.0
2011-12	Self Employed	54.1	53.5	54.0	41.6	36.8	40.7	50.1	49.4	49.9
	Regular Worker	10.2	7.6	9.6	43.6	48.7	44.5	20.8	17.7	20.1
	Casual Worker	35.7	38.9	36.5	14.9	14.6	14.8	29.1	33.0	29.9
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Employment and Unemployment schedule, 61st and 68th Round, NSSO

The structural change in the status of employment in Karnataka was substantial between 2004-5 and 2011-12 compared to all India (Table 7.12).

i) During this period, the share of regular employment in Karnataka went up by 10 per cent compared to 4.6 per cent for all India.

ii) For urban female the share of regular employment in Karnataka went up by substantial 15.3 per cent compared 6.5 per cent in case of all India during the same period. Correspondingly the share of casual employment in Karnataka declined by the similar margin and Thus, kept the self-employed share virtually the same. In absolute numbers it led to more than 5 per cent rise in the number of regular workers and similar decline in the absolute number of casual workers. The trend in all India was different. The net shift of status of employment took place from self-employment to regular workers keeping the share of vulnerable casual workers virtually the same.

iii) In Karnataka, substantial rise in the share of regular employment was also observed

in rural areas both for males and females. It seems to be contributed by creation of relatively stable non-agricultural jobs in rural areas and the greater contribution of State government expenditure in the social sector.

Table 7.12
Change in the Status of Employment in Karnataka and India, Principal Status aged 15 years and above

Change in Status of Employment		Rural			Urban			Total		
		Male	Female	Person	Male	Female	Person	Male	Female	Person
Karnataka										
2004-5 to 2011-12	Self Employed	3.7	3.4	4.0	0.4	-12.5	-2.3	1.8	-1.3	1.2
	Regular Worker	7.1	5.4	6.8	3.6	15.3	6.0	8.5	12.3	10.1
	Casual Worker	-10.7	-8.8	-10.9	-4.0	-2.8	-3.7	-10.2	-11.1	-11.3
India										
2004-5 to 2011-12	Self Employed	-3.5	-2.9	-3.3	-3.0	-3.6	-3.1	-4.1	-4.5	-4.2
	Regular Worker	1.1	2.8	1.8	2.8	6.5	3.4	3.4	7.0	4.6
	Casual Worker	2.5	0.1	1.5	0.3	-2.8	-0.3	0.7	-2.5	-0.4

Source: Employment and Unemployment schedule, 61st and 68th Round, NSSO

Sectoral Composition of Employment

In the year 2011-12, employment in agriculture was almost similar in both Karnataka and all India. But employment in service sector was 5 percentages more in Karnataka compared to all India and so it is more service oriented (Table 7.13).

Table 7.13
Sectoral Composition of Employment in Karnataka and India, Principal Status aged 15 years and above

Sectors of Employment		Rural			Urban			Total		
		Male	Female	Person	Male	Female	Person	Male	Female	Person
Karnataka										
2004-5	Agriculture & Allied	77.7	87.0	81.4	5.8	15.7	8.0	56.2	76.3	63.3
	Industry	8.8	6.8	8.0	32.9	30.1	32.3	16.0	10.4	14.0
	Services	13.4	6.1	10.5	61.3	54.2	59.8	27.8	13.4	22.7
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2011-12	Agriculture & Allied	65.9	79.4	70.2	7.7	8.1	7.8	43.5	60.4	48.2
	Industry	15.6	11.4	14.3	28.8	31.7	29.4	20.7	16.8	19.6
	Services	18.5	9.2	15.5	63.6	60.2	62.8	35.8	22.8	32.2
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sectors of Employment		Rural			Urban			Total		
		Male	Female	Person	Male	Female	Person	Male	Female	Person
India										
2004-5	Agriculture & Allied	66.2	81.4	70.8	6.0	14.7	7.6	50.5	70.9	56.1
	Industry	15.8	10.8	14.3	34.6	30.3	33.8	20.7	13.9	18.8
	Services	18.0	7.8	14.9	59.4	55.0	58.6	28.8	15.2	25.1
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2011-12	Agriculture & Allied	59.4	74.9	64.1	5.6	10.9	6.7	42.3	61.4	47.5
	Industry	22.0	16.8	20.4	35.6	34.2	35.3	26.3	20.4	24.7
	Services	18.6	8.3	15.5	58.8	54.9	58.0	31.4	18.1	27.8
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Employment and Unemployment schedule, 61st and 68th Rounds, NSSO

The large structural shift of employment away from agriculture, no doubt, is positive as it it frees labour from low productive agriculture but it provides a greater challenge to policy makers because it requires much larger creation of productive jobs in non-agriculture.

The structural transformation of employment was more in Karnataka compared to all India. During the period 2004-5 to 2011-12, the employment share of agriculture and allied declined by 15 per cent which was almost double that of all India where its employment share came down by 8.6 per cent. This is the period when India experienced absolute decline in the number of agricultural workers. In Karnataka the rate of decline in absolute number of agriculture workers was much higher. In Karnataka, the shift of employment share was more towards service sector rather than towards industry sector as observed for all India.

Since Karnataka experienced stronger structural shift of employment from agriculture to non-agriculture compared to All India, similar share of shift of employment (5-6 per cent) towards industry in both Karnataka and India led to different direction of this shift. In India, the structural shift from agriculture to non-agriculture was towards industry and within industry not towards manufacturing but towards construction. In Karnataka, the larger shift of employment from agriculture was towards services and services absorbed much larger proportion of net shift of employment compared to industry.

The large structural shift of employment away from agriculture, no doubt, is positive as it it frees labour from low productive agriculture but it provides a greater challenge to policy makers because it requires much larger creation of productive jobs in non-agriculture.

Table 7.14
Change in the Sectoral Composition of Employment in Karnataka and India, Principal Status aged 15 years and above

Change in Sector of Employment, UPS		Rural			Urban			Total		
		Male	Female	Person	Male	Female	Person	Male	Female	Person
Karnataka										
2004-5	Agriculture & Allied	-11.8	-7.7	-11.3	1.8	-7.6	-0.2	-12.7	-15.9	-15.0
to	Industry	6.8	4.6	6.2	-4.1	1.6	-2.9	4.6	6.5	5.6
2011-12	Services	5.0	3.1	5.0	2.3	6.0	3.1	8.0	9.4	9.5
India										
2004-5	Agriculture & Allied	-6.9	-6.5	-6.8	-0.4	-3.8	-0.9	-8.2	-9.5	-8.6
to	Industry	6.3	5.9	6.2	1.0	3.9	1.5	5.7	6.6	5.9
2011-12	Services	0.6	0.5	0.6	-0.6	-0.1	-0.6	2.6	3.0	2.7

Source: Employment and Unemployment schedule, 61st and 68th Rounds NSSO

Distribution of Workers in Census

We have earlier observed that the main (census) WPR of females has gone up substantially between last two censuses. It resulted in the substantial increase in the share of main workers among females as similar increase of marginal workers among females was not observed.

Table 7.15
Distribution of Workers into Main and Marginal (in %) in Karnataka

Main	Total			Rural			Urban		
	2001	2011	Change	2001	2011	Change	2001	2011	Change
Persons	82.3	83.9	1.7	78.6	81.4	2.8	92.1	89.0	-3.2
Male	91.2	89.5	7	89.7	84.4	-5.3	94.4	91.2	-3.2
Female	65.9	73.4	7.5	62.1	70.3	8.3	84.2	82.5	-1.7
Marginal									
Persons	17.7	16.1	-1.7	21.4	18.6	-2.8	7.9	11.0	3.2
Male	8.8	10.5	1.7	10.3	11.6	1.2	5.6	8.8	3.2
Female	34.1	26.6	-7.5	37.9	29.7	-8.3	15.8	17.5	1.7

Source: Census, 2011

In rural areas the share of main workers among females increased by 8.3% - leading to 7.5% increase in the share of main workers in the State as a whole. The share of marginal workers naturally declined by the same percentage points and that is a highly welcoming change. But, this shift in female WPR from marginal to main was not observed in urban areas. In urban areas, the share of female main workers declined by 1.7%. It reflects even higher proportionate increase in marginal WPR.

Table 7.16
Percentage Distribution of Category of All Workers by Location, 2011

Category of Workers	Persons					
	2001			2011		
	Total	Rural	Urban	Total	Rural	Urban
Agriculture Labourers	26.5	34.5	5.1	25.7	36.4	4.5
Cultivators	29.3	39.0	3.1	23.6	34.3	2.6
Household Industry	4.1	3.5	5.7	3.3	2.8	4.2
Other Workers	40.2	23.0	86.1	47.4	26.5	88.8
	Males					
Agriculture Labourers	17.2	23.9	3.3	18.0	26.9	3.4
Cultivators	31.7	45.6	3.2	26.0	40.4	2.7
Household Industry	2.7	2.4	3.1	2.4	2.0	3.0
Other Workers	48.4	28.1	90.3	53.6	30.7	90.9
	Females					
Agriculture Labourers	43.5	50.2	11.2	40.3	51.3	7.6
Cultivators	24.7	29.3	2.8	19.0	24.7	2.1
Household Industry	6.7	5.1	14.6	4.9	4.1	7.6
Other Workers	25.2	15.5	71.6	35.7	19.9	82.7

Source: Census, 2011

As the increase in the share of main workers had been substantial among rural females, it would also reflect in the changing share of different categories of women workers in the inter-census period of 2001-2011. The share of other workers went up by 4.4% among rural female in the last decade (Table 7.16).

It showed there had been new work avenues for women workers outside agriculture and household industries. In urban areas, the share of other workers among females went up by more than 10% accompanied by 4% decline in share among agricultural labour and larger decline in the share of household work by 7%. In urban areas these occupational changes were shared by both main and marginal workers. Among males, substantial changes in occupation could be observed in rural areas as other workers among urban males already constituted more than nine-tenth share even in 2001 census. In rural areas a clear shift of male workers from cultivator category to agriculture labour and other labour category was observed in the inter-census period. The analysis from Census data corroborates the evidence than has been presented in previous section from NSS data.

Sectoral Distribution of Workers and Labour Productivity

The sectoral distribution of workers across industry shows that about 49 per cent of the workers in Karnataka and 53.8 per cent of workers at all India level were engaged in agriculture and allied sector for their livelihood during 2011-12 (Table 7.17). The corresponding share in the Karnataka and India was 61 per cent and 58.2 per cent respectively in 2004-05. This shows that the share of agricultural employment in Karnataka and all-India level declined between 2004-05 and 2011-12, which is a positive trend towards structural transformation. This means workers are moving from farm to non-farm sector employment, which needs to boost further by devising appropriate policies to ensure structural transformation in coming years.

The overall labour productivity in Karnataka was Rs.163 thousands for 2011-12. However, given the sectoral composition of employment, there are wide variations in the labour productivity across the sectors of the economy. Labour productivity in services was Rs.288 thousands per worker which was almost 5 times that in agriculture & allied (Rs.54 thousands per worker). At the same time, labour productivity in industry (Rs.235 thousands per worker) was more than 4 times that of agriculture. Across the sub-sectors of the economy, labour productivity was the lowest for agriculture and highest for financial intermediaries and business services. Electricity & water supply utilities sector was the most productive with labour productivity of Rs.814 thousands.

The sectoral distribution of workers across industry shows that about 49 per cent of the workers in Karnataka and 53.8 per cent of workers at all India level were engaged in agriculture and allied sector for their livelihood during 2011-12

Table 7.17
Sectoral distribution of Workers (in %) and Labour Productivity (Rs.) of Karnataka and India - 2011-12

Industry	Karnataka			India			Labour Productivity (in Rs.)	
	Rural	Urban	Total	Rural	Urban	Total	Karnataka	India
Agriculture & allied	70.2	7.8	49.0	64.1	6.7	53.8	54,028	49,875
Mining & Quarrying	0.3	0.3	0.3	0.5	0.7	0.5	4,00,911	7,06,804
Manufacturing	9.4	18.4	12.4	8.6	23.6	11.3	2,03,593	1,93,958
Construction	4.3	9.7	6.1	11.1	9.3	10.7	2,51,739	1,16,728
Electricity, gas & water supply	0.2	0.8	0.4	0.2	1.3	0.4	8,14,274	6,26,747
Transport, storage & communication	3.3	13.8	6.9	3.0	9.9	4.2	1,49,567	2,56,700
Trade, Hotel & Restaurant	6.2	24.5	12.4	6.5	23.4	9.5	1,82,914	2,89,444
Finance, Business & Real EState etc.	1.0	8.3	3.5	0.8	6.5	1.8	1,109,350	1,387,406
Pub Admin, Health & Education	5.1	16.4	8.9	5.3	18.4	7.6	2,22,670	2,80,027
Total	100.0	100.0	100.0	100.0	100.0	100.0	1,63,340	1,52,812
Employment (in millions)	18.6	9.6	28.2	448	98	546	-	-

Source: Employment from the results of 68th NSSO round data (UPSS) and First Revised Estimates GSDP & GDP for 2011-12 from DES Karnataka and CSO, New Delhi.

The productivity per worker in manufacturing of Karnataka was higher than that of India by small magnitude of 5% but productivity per worker in India in the sector of trade, hotel & restaurants was 58% higher than Karnataka. It is a reflection of existence of substantial underemployment in Karnataka in this sector.

Two major sectors of employment outside agriculture in both Karnataka and India were manufacturing and trade, hotel & restaurants. These two sectors employed one-fourth of all workers in Karnataka and over one-fifth of all workers in India in 2011-12. The productivity per worker in manufacturing of Karnataka was higher than that of India by small magnitude of 5% but productivity per worker in India in the sector of trade, hotel & restaurants was 58% higher than Karnataka. It is a reflection of existence of substantial underemployment in Karnataka in this sector. Similar situation exists also in the sector of transport, storage & communication.

In contrast, we observed that between 2004-5 and 2011-12, construction absorbed large proportion of incremental employment in India but not in Karnataka. Consequently, worker productivity in construction sector in Karnataka was more than double that of all India. The larger shift of workers from agriculture to services in Karnataka in the last decade is no doubt a positive phenomenon but this absorption have occurred at a low level of workers productivity. Low level of workers productivity leads to lower level of earnings that defeats the very purpose of structural transformation. One possible reason could be low level of skill among workers that shifted from agriculture to service sector that did not allow them to get absorbed at relatively higher productivity level.

Wages and Earnings

The wages and earnings is one of the important indicators to judge the quality of paid employment. It is an important determinant that has profound implications for quality employment with higher productivity of the workers. In this context, regular employment is considered better, secure, durable and higher earnings compared to casual and intermittent nature of employment. At the overall level, the average wages and earnings per day received by the regular workers were significantly higher in the State compared to that of other southern States (Economic Survey, 2014-15).

The average wage of regular workers (Rs.247/-) in rural Karnataka was lower than that of rural India (Rs. 299/-), while in urban Karnataka average wage of regular workers (Rs.487/-) was higher compared to urban India (Rs.450/-) in 2011-12 (Table 7.18). Similarly, average wages of male regular workers in Karnataka was almost same as at all-India (Rs.417/-) level, whereas in case of female regular workers average wage (Rs.312/-) was higher as compared to their counterparts at all-India level (Rs.308/-). The noticeable difference was visible between casual and regular wages both in rural and urban areas, the gap was significantly higher in latter (Rs 313/-) compared to former (Rs 105/-) in 2011-12. In addition, the male and female differences also exist in both casual and regular wages in rural as well as urban areas.

At the overall level, the average wages and earnings per day received by the regular workers was significantly higher in the State compared to that of other southern States

Table 7.18
Average Daily Wages or Regular and Casual work (in Rs.), 2011-12, 15-59 years

	Rural		Urban		Total	
	Regular	Casual	Regular	Casual	Regular	Casual
Karnataka						
Male	238	163	519	192	417	170
Female	152	100	392	102	312	99
Person	247	142	487	174	391	148
India						
Male	322	149	470	182	417	159
Female	201	103	366	111	308	105
Person	299	138	450	173	392	143

Source: Employment and Unemployment Schedule, 68th Round, 2011-12, NSSO

Level of Skill and Skill Promotion Activities

In the globalised era, the diffusion of technology and the pace of innovation have accelerated. New and emerging occupations are replacing the old. Even within the same occupation, the skill requirements are also changing. The future growth of any country or State greatly depends on the productivity of the workforce which, in turn depends

on levels of worker skills and how effectively they are utilised.

Any analysis of requirement of skills of the workforce in Karnataka with an eye to the future must rest on the skill composition of the present workforce. In this section, the skill composition of workforce in Karnataka as well as some other States of India by the beginning this decade has been obtained on the basis of the occupational characteristics of the working population (15 years & above). No distinction is made as to whether workers were formally trained before joining a particular occupation or whether they went through formal/ informal on-the-job training.

In this classification occupational division 1 (legislators, senior officials and managers) has been left out because it is difficult to classify such persons into a single skill level. For similar reason, division X (workers not classified by occupation) are left out from the skill distribution of workers.

The remaining occupations have been classified following the procedure adopted in National Classification of Occupation (NCO) 2008 of India (Table 7.19).

Table 7.19
Skill Classification of Workers

Occupational Code	TITLE	Skill Level
1	Legislators, Senior Officials and Managers Skill	Not Defined*
2	Professionals	IV(Professionals)
3	Associate Professionals	III (Associate Professionals)
4	Clerks	II(Low and other medium skills)
5	Service Workers and Shop & Market Sales Workers	II(Low and other medium skills
6	Skilled Agricultural and Fishery Workers	II(Low and other medium skills
7	Craft and Related Trades Workers	II(Low and other medium skills
8	Plant and Machine Operators and Assemblers	II(Low and other medium skills
9	Elementary Occupations	I (Elementary occupations)

The classification of occupations in skill groups (as given in Table 7.19) led to the skill composition of workforce as presented in Table 7.20.

From Table 7.20 it can be seen that the skill composition of workforce in Karnataka and Maharashtra was similar. Gujarat had a much higher share of skill level II (low and medium skill) due to most of the manufacturing workforce being classified as belonging to low and medium skill level. Tamil Nadu had almost similar skill level as all India although it has somewhat higher proportion of workers in skill level I (elementary occupation). The differences in skill level are consequence of different growth path being followed. Karnataka and Maharashtra were more oriented to high skilled service activities in contrast to Gujarat with thrust to labour intensive manufacturing.

Table 7.20
Skill Composition of Total Work Force in India and Karnataka, 15 Years and above (Percentage)

Skill Level	India 2011-12	Karnataka 2011-12	Tamil Nadu 2011-12	Gujarat 2011-12	Maharashtra 2011-12	India/Karnataka (in %)
IV (Professionals)	4.0	5.7	4.4	2.2	6.1	141
III(Associate Professionals)	3.6	3.8	3.8	3.6	4.1	105
II (Low and other medium skills)	61.8	59.3	58.5	66.0	59.6	96
I(Elementary occupations)	30.6	31.3	33.3	28.2	30.2	102
Total	100	100	100	100	100	

Source: Employment and Unemployment Schedule, 68th Round, 2011-12, NSSO

No distinction has been made whether a worker was formally trained before joining a particular occupation. However,, lack of an adequately skilled workforce could be an important obstacle to sustain even current rate of growth. Without education and skill level good proportion of persons in the working age might not able to get gainful employment. The requirement of skill training is not only for those entering in the labour market but also existing work force in order to maintain their employability. Another shortcoming of formal training at present is that most formal training requires a minimum of 10th standard as entry requirement that leaves a large number of school dropouts.

Examination of skill level across NSS regions of Karnataka presents contrasting picture. Professional skilled persons were located in southern region that includes Bengaluru city and professionals constitutes one-tenth of all jobs in this region. In coastal and northern regions the share of professionals in all workers was one-fourth of southern region. Analysing it from another perspective, three-fourth all workers in eastern region were involved in elementary skilled occupation that is likely to provide them with much lower earning opportunities compared to all other regions.

Professional skilled persons were located in southern region that includes Bengaluru city and professionals constitutes one-tenth of all jobs in this region.

Table 7.21
Skill Composition of Work Force across NSS Regions, 15 Years and above

Skill Level	Coastal 2011-12	Eastern 2011-12	Southern 2011-12	Northern 2011-12	Total
IV (Professionals)	2.2	4.0	10.8	2.6	5.7
III (Associate Professionals)	2.7	2.3	5.0	3.2	3.8
II (Low and other medium skills)	66.0	33.7	60.2	61.0	59.3
I (Elementary occupations)	29.1	59.9	24.1	33.2	31.3
Total	100.0	100.0	100.0	100.0	100.0

Source: Employment and Unemployment Schedule, 68th Round, 2011-12, NSSO

Analysis on skill till now is based on occupation without considering whether they have formal technical qualification. Table 7.22 presents the share of workers who have formal technical qualification of degrees or diploma at any level above graduation or below graduation. Formal technical qualification is largely confined to Skill level IV and III. A small section of skill level II workers also possess formal technical qualification.

Table 7.22
Share of Workers with any Formal Technical Qualification, 15 Years and above

	Coastal	Eastern	Southern	Northern	Total
IV (Professionals)	38.1	13.0	68.5	24.7	55.3
III (Associate Professionals)	31.9	1.0	19.2	11.2	16.0
II (Low and other medium skills)	5.4	4.7	5.2	2.1	3.6
I (Elementary occupations)	0.0	0.0	0.1	0.7	0.4
Total	5.3	2.1	11.5	2.5	6.0

Source: Employment and Unemployment Schedule, 68th Round, 2011-12, NSSO.

To improve skill level of workers, special emphasis needs to be given in substantial scaling up of formal technical training to workers already in Skill level III and II occupations.

Again, the share of formally trained workers in Southern region is way above other regions. It is due to combination of two factors. First, as shown earlier, the share of professionals (Skill level IV) workers are much higher in this region. Last, the share of professionals with formal technical qualification is more than two-third which was much higher than other regions. The share of workers with formal technical qualification is second highest in coastal region even with much smaller share of skill level IV and III workers largely because of more than one-third of both skill level IV and III workers have formal technical qualification. Rather, the share of skill level III workers with formal technical qualification in this region was substantially higher than even southern region. To improve skill level of workers, special emphasis needs to be given in substantial scaling up of formal technical training to workers already in Skill level III and II occupations.

Compared to overall skill composition of workers, the composition of both skill and educational requirement is lower in two large potentially job creating sector of manufacturing and construction.

On the basis of 2011-12 data of NSSO it can be seen that if we exclude owners and managers of enterprises the construction sector virtually create almost all employment in elementary occupation and in low & medium skill category and its workforce had preponderance of up to primary educated and middle school pass workers. But the share of elementary occupation workers was substantial (45 per cent) in construction who hardly required any training The share of up to primary educated workforce in construction was overwhelmingly large with 54 percent and that of middle school educated workforce was 20 per cent. However,, construction sector employs large number of temporary and migrant

workers.

Compared to it, manufacturing creates better quality of jobs. Following the same procedure, we can see that manufacturing sector mostly created low and medium skilled jobs (81 per cent) and 36 and 22 per cent of workers are up to primary educated and middle school educated respectively. Even it employed 19 per cent of secondary educated. Unlike in faster growing tertiary sector of finance and business services (with 65 per cent graduate & above) and community services (42 per cent graduate & above) where college educated constitute bulk of its workforce. So, promoting manufacturing and construction activities could create jobs that would absorb larger proportion of primary and middle school passed persons.

The Karnataka State Government has taken up skill development as major development initiative since 2008-09. The government of Karnataka has set up the Skill Development, Entrepreneurship and Livelihood Department (SDEL) in 2016 to help the youth to acquire necessary skills and expertise for employment. The Department has prepared a Skill Development Policy for Karnataka to address issues confronting skill development in the State, such as market failure, information asymmetry, coordination failure and exclusion of marginalised groups. The Policy also intends to ensure the success of the national policy at the State level.

The aim of the policy on skill development in Karnataka is to:

- Design and implement skill development, entrepreneurship and livelihood activities on a mission mode, converging all the relevant schemes and programmes under the Skill Development, Entrepreneurship and Livelihood Department;
- Achieve the economic and social integration of target groups by enabling them to acquire employable skills by developing a skill ecosystem in close coordination with industries and industry bodies, sector skill councils, civil society and bilateral/multilateral agencies;
- Standardize the curriculum in line with quality parameters and market demands, and improve certification norms for improving employability and free movement of the workforce;
- Set cross-sectoral and internationally acceptable standards of skilling, with a sound quality assurance and qualification framework;
- Ensure speedy provision of qualitative skills to harness the demographic dividend and meet industry needs;
- Strengthen the quality as well as ensure the long term sustainability of the skill development infrastructure – both in the government and private sector; and,
- Provide skills to strengthen livelihoods and promote entrepreneurship with increased emphasis on innovation, and provide adequate support and conducive environment to them.

Objectives

1. Provide information to youth, entrepreneurs and workers in the informal sector on employable skills and institutions providing such skills, and mobilise them for acquiring the skills.
2. Make vocational training aspirational to both youth and employers so that youth perceive vocational training as a career choice and employers, realising the productivity potential of skills, offer remunerative employment to skilled workers.

3. Standardise the curriculum in line with quality parameters and market demand, and improve certification norms to promote quality, employability as well as facilitate free movement of workers.

4. Strengthen and enhance the capacity of training infrastructure and trainers at all levels to provide high quality and relevant training.

5. Ensure equitable and easy access to skill training programmes for every needy person in the State.

6. Ensure vocational training to those completing school education, informal sector workers, low paid workers and young homemakers, to enable them to improve their employability and access to growth opportunities through skilling, re-skilling and upskilling.

The number of youth requiring vocational education from 2017 to 2030 is projected at 1.88 crores, comprising of 75 lakhs of the workforce existing in 2016 and 113 lakhs of fresh entrants.

7. Facilitate mobility between vocational and general education by aligning degrees with the National Skill Qualifying Framework.

8. Provide suitable skills to improve entrepreneurship and promote livelihood security.

9. Provide an institutional base and set up a Labour Market Information System (LMIS), which enables the potential workforce to articulate, represent and secure their interests for wage employment and self-employment options, and to use this information in the preparation of curriculum for skill training.

10. Achieve convergence of existing State and non-State initiatives, provide clarity of roles of all stakeholders in the ecosystem, including the government, so that they can all contribute to the achievement of goals relating to skill development for wage and selfemployment based on their comparative advantage.

11. Achieve improved supply and quality of the workforce for industry, contributing to increased productivity.

12. Provide services on career guidance and placement, and facilitate overseas employment of skilled persons.

The number of youth requiring vocational education from 2017 to 2030 is projected at 1.88 crores, comprising of 75 lakhs of the workforce existing in 2016 and 113 lakhs of fresh entrants. These two groups consist of informal workers in agriculture and non-agriculture, school dropouts, those completing secondary and higher secondary education and young homemakers (women). Those completing higher education and formal vocational training are excluded.

The goal of the skill development policy is to annually skill 13.4 lakh existing members of the workforce and new entrants who yearn to achieve a sustainable livelihood either through wage employment or self-employment options.

For skill development, the Department will undertake the functions of providing awareness on marketable skills and institutions providing such skills, monitoring the government and private vocational education courses and informal training programmes, standardising the curricula, improving certification norms, setting up the NSQF, providing placement services, improving overseas job opportunities, and so on.

The establishment of HRDCs (Human Resource Development Centres) was one of the activities of KVTSDC (Karnataka Vocational Training and Skill Development Corporation) that provides value added services to both employers and job seekers.

Table 7.23
Activities carried out by various HDRCs during April 2014 to December 2014

HRDC	Graduate Registered	Employers Registered	Assessed	Training	Placed
Mangalore	417	8			120
Vijayapura	463	27	21	60	269
Kolar	992	37		67	406
Mandya	1676	25		170	1179
Chamarajnagar	855	14		74	248
Hubli	1362	13		52	348
Ballari	4514	24		307	1237
Kalburagi	3933	27		351	685
Total	14212	175	21	1081	4492

Source: Compiled from Economic Survey of Karnataka, 2014-15

The table 7.23 puts together the activities of various HDRCs in the first nine months of the financial year 2014-15.

Table 7.24 provides the consolidated training details of major training programmes conducted through various organisations and government departments undertaken since 2008-09. It shows that substantial jump in training was observed in 2012-13 that, to a great extent, was contributed by different line department of the government. The information on 2013-14 was incomplete. It needs to be mentioned that skill development training and initiatives provided by various public and private sector organisations could not be included in this table.

Table 7.24
Consolidated Skill Development Training Provided

HRDC	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Total
MES training through ATP's	9,698	35,088	26,577	4,583	306	-	76,252
ELIP training at Govt ITI	-	-	13,887	12,884	11,906	-	38,677
NAVT & SCVT (CTs and MDTS)	68,438	74,676	71,275	58,675	86,821	-	359,885
Apprenticeship training (ATS)	8,776	8,567	9,415	8,752	20,865	-	56,375
Other line department	29,089	25,660	-	-	124,858	-	179,607
Through VTP's (MES)	13,402	20,374	4,425	22,179	57,215	-	117,595
Others	0	1,600	33,773	48,407	5,016	8,847	97,643
TOTAL	129,403	165,965	159,352	155,480	306,987	8,847	926,034

Source: Compiled from Economic Survey of Karnataka, 2014-15

Conclusion

The question remains how to employ a substantial proportion of primary and middle school educated young persons who are unemployed or likely to enter labour market in the near future.

Karnataka has been experiencing structural change in the composition of state Domestic Product with the share of primary sector declining in favour of the tertiary sector over a long time. Only in the last one decade or less, the structural change in employment has started showing up with share of agriculture and allied declining by 11Percent in all workers and 15 per cent in principal worker category. Correspondingly the share of industry and tertiary sector has gone up. But unlike India, the shift of employment from agriculture has moved largely towards services and not industry.

Women's work participation particularly in marginal or subsidiary employment shows clear decline. It reflects decline in the precarious nature of employment where women were forced to work for some days in the year to meet the shortfall in household expenditure. But for female workers working for major part of the year, Census and NSS shows conflicting result that does not conclusively establish decline in this category of women workers. Positive side of this type of development has been decline in the CDS unemployment that captures reduction in underemployment particularly that of casual labour category of workers. This is the consequence of withdrawal of female labour from labour market.

The question remains how to employ a substantial proportion of primary and middle school educated young persons who are unemployed or likely to enter labour market in the near future. The dynamic sections of service sector provide productive employment to the more educated ones. The option for skilled jobs for less educated ones lie primarily in manufacturing sector and to a certain extent in construction sector.

The shift of employment observed in last several years has increased the requirement of training of the workers in acquiring skill in non-agricultural occupations. It requires more effective skill training programme. As substantial proportions of Jobs in Karnataka are still self-employed in nature, greater thrust of entrepreneurship training is also required. Further, increasing share of service workers among employed necessitates further focussing of training of workers in service oriented occupations.

Table 7.25
Work Participation Rate across Districts in Karnataka, (Census 2011)-RURAL

Name of District	WPR (Persons)			WPR (Male)			WPR (Female)		
	Main	Marginal	All	Main	Marginal	All	Main	Marginal	All
Bagalkote	37.5	8.5	46.1	48.0	6.0	54.0	27.0	11.1	38.0
Bengaluru	41.6	5.6	47.2	58.1	5.9	64.0	22.8	5.3	28.0
Bengaluru Rural	40.5	8.0	48.6	55.7	6.9	62.6	24.4	9.2	33.7
Belagavi	38.0	9.0	47.0	51.5	5.8	57.2	24.1	12.3	36.4
Ballari	43.2	7.4	50.6	51.9	5.5	57.4	34.2	9.4	43.6
Bidar	34.3	10.0	44.3	45.1	9.3	54.3	23.1	10.9	33.9
Vijayapura	37.2	8.2	45.4	46.7	6.2	52.9	27.2	10.3	37.5
Chamarajnagara	38.3	10.7	49.0	53.5	10.8	64.4	22.8	10.6	33.5
Chikkaballapura	45.3	9.1	54.3	54.6	6.9	61.5	35.7	11.3	47.0
Chikkamagaluru	44.3	8.3	52.6	58.6	5.7	64.3	30.2	10.9	41.1
Chitradurga	42.1	13.0	55.1	53.3	8.9	62.3	30.6	17.2	47.8
Dakshina Kannada	46.9	5.1	52.0	57.7	4.3	62.0	36.2	5.9	42.2
Davanagere	39.0	9.7	48.7	53.1	8.0	61.1	24.5	11.4	35.9
Dharwad	44.2	6.8	51.1	56.9	4.3	61.2	30.9	9.5	40.4
Gadag	43.0	7.6	50.6	53.9	4.9	58.8	31.9	10.3	42.1
Kalaburagi	35.7	11.0	46.6	45.1	8.6	53.7	25.9	13.5	39.4
Hassan	44.9	9.7	54.6	59.5	5.5	64.9	30.5	13.8	44.3
Haveri	39.4	8.8	48.2	54.6	6.4	61.1	23.3	11.4	34.7
Kodagu	48.2	3.7	52.0	59.9	3.4	63.3	36.8	4.0	40.9
Kolar	40.8	10.8	51.6	51.6	8.8	60.4	29.8	12.8	42.6
Koppal	37.6	11.5	49.1	46.7	8.8	55.6	28.3	14.3	42.5
Mandya	40.7	9.3	50.1	57.6	6.8	64.5	23.7	11.9	35.6
Mysuru	38.0	9.9	47.9	54.4	8.8	63.2	21.2	11.0	32.2
Raichur	40.0	10.5	50.5	48.3	7.6	55.9	31.7	13.5	45.2
Ramanagara	44.7	7.5	52.2	58.6	5.9	64.5	30.4	9.1	39.5
Shivamogga	39.9	9.2	49.1	56.0	6.7	62.8	23.6	11.8	35.3
Tumakuru	42.1	11.7	53.9	55.8	7.6	63.4	28.3	15.9	44.1
Udupi	39.6	5.1	44.6	55.3	4.7	60.0	25.4	5.4	30.8
Uttara Kannada	36.4	9.1	45.5	53.9	7.4	61.3	18.5	10.9	29.4
Yadgir	38.8	10.2	49.1	47.4	7.1	54.5	30.2	13.4	43.6

Table 7.26
Work Participation Rate across Districts in Karnataka, (Census 2011)-URBAN

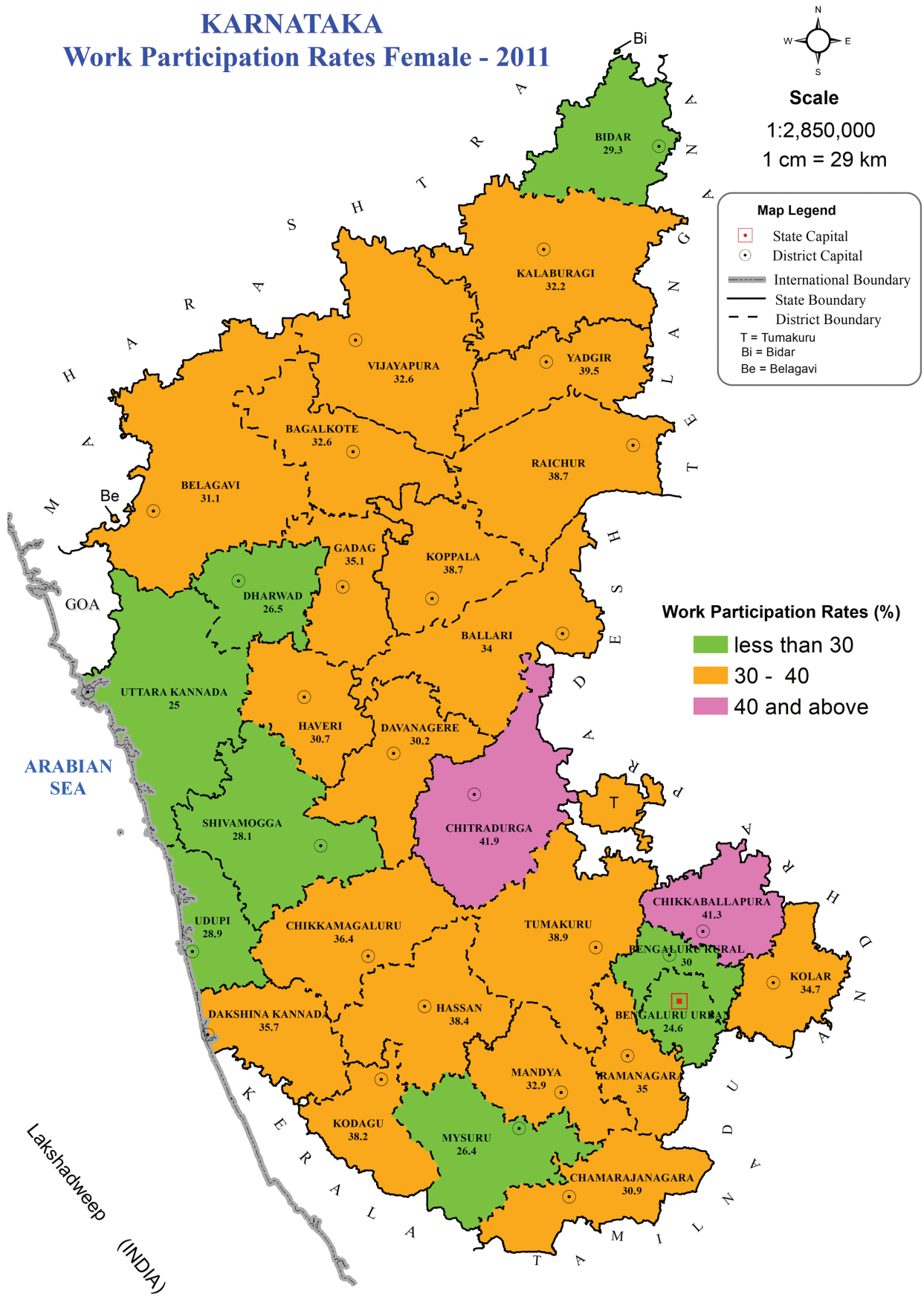
Name of District	WPR (Persons)			WPR (Male)			WPR (Female)		
	Main	Marginal	All	Main	Marginal	All	Main	Marginal	All
Bagalkote	32.0	5.2	37.2	47.8	5.6	53.5	16.1	4.8	20.9
Bengaluru	40.0	3.9	43.8	57.6	4.3	61.8	20.8	3.5	24.3
Bengaluru Rural	36.3	4.4	40.7	54.8	5.4	60.2	16.7	3.4	20.1
Belagavi	31.3	4.2	35.5	49.9	4.9	54.9	12.3	3.4	15.7
Ballari	33.5	3.7	37.1	51.8	4.2	55.9	14.9	3.2	18.1
Bidar	26.7	5.3	32.0	41.5	6.5	48.0	11.1	4.0	15.0
Vijayapura	27.4	5.9	33.3	42.6	7.2	49.7	11.9	4.7	16.5
Chamarajnagara	33.1	5.4	38.5	51.2	7.0	58.2	15.0	3.8	18.7
Chikkaballapura	33.7	5.7	39.3	50.3	6.5	56.7	16.7	4.9	21.5
Chikkamagaluru	34.1	4.7	38.8	53.7	5.3	58.9	14.8	4.1	18.9
Chitradurga	32.6	4.9	37.4	50.7	5.4	56.1	14.3	4.4	18.7
Dakshina Kannada	40.3	2.8	43.1	54.7	3.1	57.8	26.2	2.4	28.6
Davanagere	30.5	6.8	37.3	47.1	8.7	55.8	13.4	4.9	18.3
Dharwad	32.2	3.7	36.0	50.8	4.8	55.5	13.5	2.7	16.2
Gadag	33.9	5.4	39.3	50.0	5.9	56.0	17.8	4.8	22.7
Kalaburagi	27.2	6.3	33.5	41.8	7.4	49.2	12.1	5.1	17.2
Hassan	33.0	4.2	37.2	52.7	5.1	57.8	13.3	3.3	16.6
Haveri	31.7	5.1	36.8	49.8	6.0	55.8	13.0	4.2	17.2
Kodagu	37.5	3.2	40.6	54.9	4.2	59.1	20.1	2.1	22.2
Kolar	31.9	4.1	36.0	48.9	5.3	54.2	14.7	2.9	17.6
Koppal	31.5	5.7	37.2	48.5	6.3	54.8	14.4	5.2	19.6
Mandya	34.1	5.4	39.5	52.8	6.3	59.1	15.4	4.5	20.0
Mysuru	33.3	4.7	38.0	51.9	5.9	57.8	14.6	3.5	18.1
Raichur	30.7	5.3	36.0	46.5	5.9	52.5	14.7	4.6	19.3
Ramanagara	35.3	4.4	39.7	52.3	5.4	57.7	17.9	3.3	21.3
Shivamogga	32.5	3.8	36.3	52.6	4.9	57.5	12.5	2.6	15.1
Tumakuru	33.7	5.4	39.1	50.7	6.4	57.1	16.4	4.4	20.8
Udupi	37.7	3.3	40.9	54.8	4.0	58.8	21.4	2.6	23.9
Uttara Kannada	30.5	4.1	34.7	48.9	5.5	54.4	11.8	2.7	14.5
Yadgir	30.3	5.8	36.1	44.3	6.0	50.3	16.1	5.5	21.6

Table 7.27

Work Participation Rate across Districts in Karnataka, (Census 2011)-TOTAL

Name of District	WPR (Persons)			WPR (Male)			WPR (Female)		
	Main	Marginal	All	Main	Marginal	All	Main	Marginal	All
Bagalkote	35.8	7.5	43.3	47.9	5.9	53.8	23.5	9.1	32.6
Bengaluru	40.1	4.0	44.1	57.6	4.4	62.0	21.0	3.6	24.6
Bengaluru Rural	39.4	7.1	46.4	55.5	6.5	62.0	22.3	7.6	30.0
Belagavi	36.3	7.8	44.1	51.1	5.5	56.6	21.1	10.0	31.1
Ballari	39.5	6.0	45.5	51.9	5.0	56.9	27.0	7.1	34.0
Bidar	32.4	8.9	41.2	44.2	8.6	52.7	20.1	9.2	29.3
Vijayapura	34.9	7.7	42.6	45.8	6.5	52.2	23.6	9.0	32.6
Chamarajnagara	37.4	9.8	47.2	53.1	10.2	63.3	21.5	9.5	30.9
Chikkaballapura	42.7	8.3	51.0	53.6	6.8	60.4	31.4	9.9	41.3
Chikkamagaluru	42.2	7.5	49.7	57.6	5.6	63.2	26.9	9.4	36.4
Chitradurga	40.2	11.4	51.6	52.8	8.2	61.0	27.3	14.6	41.9
Dakshina Kannada	43.8	4.0	47.7	56.3	3.7	60.0	31.5	4.3	35.7
Davanagere	36.2	8.7	45.0	51.1	8.2	59.4	20.9	9.3	30.2
Dharwad	37.4	5.1	42.5	53.4	4.6	58.0	20.9	5.6	26.5
Gadag	39.8	6.8	46.6	52.5	5.3	57.8	26.8	8.3	35.1
Kalaburagi	32.9	9.5	42.4	44.0	8.2	52.2	21.4	10.8	32.2
Hassan	42.4	8.5	50.9	58.0	5.4	63.4	26.8	11.6	38.4
Haveri	37.7	8.0	45.7	53.6	6.3	59.9	21.0	9.8	30.7
Kodagu	46.7	3.6	50.3	59.1	3.5	62.7	34.4	3.8	38.2
Kolar	38.0	8.7	46.7	50.8	7.7	58.5	25.1	9.7	34.7
Koppal	36.6	10.6	47.1	47.0	8.4	55.4	25.9	12.7	38.7
Mandya	39.6	8.7	48.3	56.8	6.7	63.6	22.3	10.6	32.9
Mysuru	36.1	7.7	43.8	53.4	7.6	61.0	18.5	7.9	26.3
Raichur	37.6	9.2	46.8	47.8	7.1	55.0	27.4	11.2	38.7
Ramanagara	42.4	6.7	49.1	57.0	5.8	62.8	27.4	7.6	35.0
Shivamogga	37.2	7.3	44.5	54.8	6.1	60.9	19.6	8.5	28.1
Tumakuru	40.3	10.3	50.6	54.7	7.4	62.0	25.6	13.3	38.9
Udupi	39.0	4.6	43.6	55.1	4.5	59.7	24.3	4.6	28.9
Uttara Kannada	34.7	7.7	42.3	52.4	6.9	59.3	16.5	8.5	25.0
Yadgir	37.2	9.4	46.6	46.8	6.9	53.7	27.5	12.0	39.5

KARNATAKA
Work Participation Rates Female - 2011



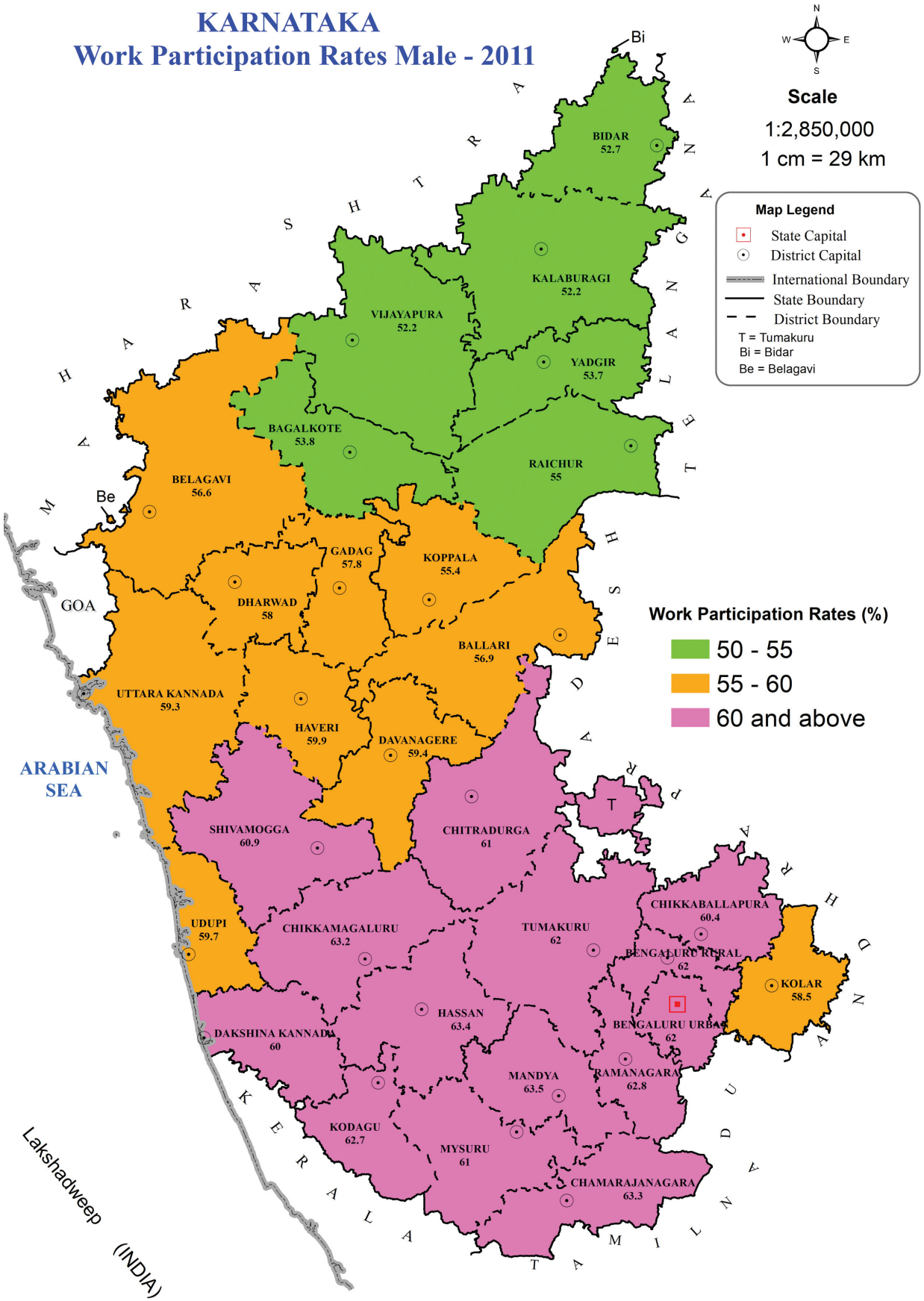

KARNATAKA
Work Participation Rates Male - 2011
N
W
E
S
Scale
1:2,850,000
1 cm = 29 km
Map Legend
State Capital
District Capital
International Boundary
State Boundary
District Boundary
T = Tumakuru
Bi = Bidar
Be = Belagavi
Bi
BIDAR
52.7
KALABURAGI
52.2
VIJAYAPURA
52.2
YADGIR
53.7
BAGALKOTE
53.8
RAICHUR
55
BELAGAVI
56.6
Be
GADAG
57.8
KOPPALA
55.4
DHARWAD
58
BALLARI
56.9
GOA
UTTARA KANNADA
59.3
HAVERI
59.9
DAVANAGERE
59.4
ARABIAN
SEA
SHIVAMOGGA
60.9
CHITRADURGA
61
T
CHIKKABALLAPURA
60.4
UDUPI
59.7
CHIKKAMAGALURU
63.2
TUMAKURU
62
BENGALURU RURAL
62
KOLAR
58.5
HASSAN
63.4
BENGALURU URBAN
62
DAKSHINA KANNADA
60
MANDYA
63.5
RAMANAGARA
62.8
KODAGU
62.7
MYSURU
61
CHAMARAJANAGARA
63.3
Lakshadweep
(INDIA)
Work Participation Rates (%)
50 - 55
55 - 60
60 and above

Table 7.28
Districts under Jurisdiction of Different Divisions

Name of the Division	District under Jurisdiction
Bengaluru	Bengaluru Urban, Bengaluru Rural, Chikaballapura, Chitradurga, Davangere, Kolar, Ramanagar, Shivamogga, Tumakuru
Mysuru	Chamarajanagar, Chikmaglur, Dakshina Kannada, Hassan, Kodagu, Mandya, Mysuru, Udupi
Belagavi	Bagalkot, Belagavi, Vijayapura, Dharwad, Gadag, Haveri, Uttara Kannada
Kalaburagi	Ballari, Bidar, Kalburagi, Koppal, Raichur, Yadgir

Table 7.29
Districts under Different NSS Regions

Name of the Division	District under Jurisdiction
Name of the NSS Region	District covered in NSS Region
Coastal and Ghat	Uttara Kannada, Dakshina Kannada, Udupi
Inland Eastern	Shivamogga, Chikmaglur,Hassan, Kodagu
Inland Southern	Tumakuru, Kolar, Bengaluru Urban, Bengaluru Rural, Mysuru, Chamarajanagar, Ramanagar, Chikkaballapura , **Mandya**
Inland Northern	Belagavi, Bagalkot, Vijayapura, Kalburagi, Bidar, Raichur, Koppal, Gadag, Dharwad, Haveri, Ballari, Chitradurga, Davangere , **Yadgir**

Asset Ownership

Chapter-8

Asset Ownership

Introduction

Human development is about ensuring that individuals have the ability, opportunities and choices to lead a fulfilling and dignified life. Functionally, the concept of human development has focussed on health, education, and standard of living. Income measures are typically used as a proxy for standard of living. In fact, indicators derived from income and consumption measures dominate the discourse related to material deprivations. More recently, scholars and policy makers have been considering the role of assets and wealth in defining and understanding poverty, inequality, and more broadly, in informing the well-being of individuals (Davies et. al., 2008; Moser, 2007).

Increasingly, there has been a shift towards incorporating wealth in addition to income measures into poverty studies since wealth represents unspent income accumulated over a period of time and therefore captures a relatively long-term picture of well-being. Asset ownership is critical for people to plan for the future, while income merely caters to short-term consumption needs. Oliver and Shapiro (1995) emphasize that asset ownership is conceptually different and more aligned with the concept of well-being than income: "[w]ealth is a special form of money not used to purchase milk and shoes and other life necessities. More often it is used to create opportunities, secure a desired stature and standard of living or pass class status along to one's children" (ibid, pg 2).

An asset perspective provides a long-term view of poverty and can help us understand the trajectory of households movement into and out of poverty. Lack of assets is often a cause of structural poverty wherein households remain poor over long periods and possibly across generations, which is quite different from stochastic poverty where households are affected by temporary income shocks (Carter and Barrett, 2006). Additionally, assets are more stable than income over a given period and can help cope with and respond to negative shocks; and are therefore better indicators of overall well-being.

This chapter examines the status of households in Karnataka with respect to assets and wealth. Trends in household asset ownership and wealth levels across the geographic and administrative regions of the state and disaggregated by social groups are examined. A separate section looks into the gender disparities in asset ownership and draws attention to the advantages of using asset data at the individual as against household level. Key data sources for this chapter are Census 2001 and 2011, the All India Debt and Investment Survey (AIDIS)

Asset ownership is critical for people to plan for the future, while income merely caters to short-term consumption needs.

2003-04, the Karnataka Household Asset Survey (KHAS) 2010-11, and the Agricultural Census of 2000-01, 2005-06 and 2010-11. Incidence of ownership of key physical assets, i.e., agricultural land and house are examined, while the section on wealth focuses on gross household worth Thus, covering all physical assets Financial assets and human capital assets are not covered in this chapter.

8.1 What does ownership of assets mean?

Ownership of assets can be conceptualized in diverse ways. The most commonly used concept (and one that informs the analysis in this chapter) comes from surveys that request information from individuals on the property owned by their household. This is referred to as 'reported ownership' and can be asked of all assets from immoveable property to small consumer durables, as well as financial assets.[7]

One can distinguish this from 'documented ownership', which asks about the existence of documents supporting ownership of the property. This is relatively simple to apply for immoveable properties which have documents such as sale deeds, wills, partition deeds, khata,[8] hakkupatra,[9] Record of Tenancy and Crops (RTC), and so on. Documented ownership can also be ascertained for certain types of moveable property like vehicles, farm equipment, business assets, and financial assets. The verification of documents is not common in surveys. Rather, information on documented ownership is also based on reporting by the respondents.

Last, there are 'rights' traditionally associated with ownership of private property – alienation rights (to sell, bequeath) and use rights (to rent/hire, use as collateral, manage income). If the owner (reported or documented) can exert these rights, then it constitutes effective ownership as it relates to control over the property as opposed to simple nominal ownership.

Types of assets

Assets are of many types and these are classified in several ways with some fluidity to the categorisations. An often-used classification is that of liquid assets versus illiquid or lumpy assets. Under this taxonomy, the more easily an asset can be exchanged for ready disposable cash, the more liquid it is. Many forms of financial assets including bank deposits, shares and other savings fall under the category of highly liquid assets. Physical assets, are by comparison, less liquid since their valuation is relatively more complex than financial assets. Among

[7] *Asset and property are used interchangeably.*

[8] *Khata certificate is one of the main documents of ownership of property. It literally means an account - it is an account of a person who has property in some place and contains details on the location, area, borders, etc., of the property in question, along with the ownership particulars.*

[9] *Hakkupatra is a document allowing the right of use of the property for the individual. It is usually relevant for houses which have been given to households under some government scheme, wherein for a specified period of time, the beneficiaries of the scheme have the right to use the house, but cannot alienate it in any way.*

physical assets, moveable assets are relatively more liquid than immoveable assets since the former can physically be transported to a market and traded against cash. Immoveable property including any kind of real estate is generally the most illiquid among all asset types since it cannot be exchanged for cash in the absence of a property market in its vicinity. Further, immoveable property is lumpy because typically it cannot be transacted in small parts.

In the context of human development, it is more intuitive to think of assets as being productive or non productive. Productive assets contribute to livelihoods either through wage income (business assets or livestock whose produce is used for home or market consumption) or non wage income (such as rentals, interest income).

Non-productive assets are those that predominantly provide use value. The most important non-productive assets are the place of residence and consumer durables. However, these assets could also be put to some productive use; for example, the renting of a part of the house or conducting any economic activity within the house premises, or using any household consumer durables (tailoring machine, refrigerator, kitchen appliances, vehicles) in income generating activities. The following sections examine the household ownership patterns of agricultural land and house in Karnataka.

Agricultural Land

In predominantly agrarian economies like India with more than 60% of its population residing in rural areas, agricultural land is the most important productive asset. For anyone, the State of being landed irrespective of the extent and type of land is superior to being landless. Indeed, the proportion of landless households is often a key welfare indicator in rural areas. Landlessness in rural areas, with a high dependence on agriculture, indicates a position of relative poverty and vulnerability, particularly when accompanied by a lack of other productive assets like livestock, and non-farm economic activities. Apart from its direct contribution to agricultural activity, owning land can ease credit access, improve one's social standing in the community and generally provide a sense of security to the household.

The data sources used to examine trends in agricultural land ownership in Karnataka are the All India Debt and Investment Survey (2003-04) and the Karnataka Household Asset Survey (2010-11). It is seen that 42% of all households in Karnataka owned agricultural land in 2010-11 (Table 8.1), a very marginal increase from 41% in 2003-04. The increase was more substantial in the case of SC (35% to 40%) and ST households (42% to 46%). Expectedly, rural and urban households differ considerably in the incidence of land ownership with 64% of rural households owning land whereas the comparable number for urban households was only 12% in 2010-11. During both time periods and irrespective of the caste of households, a secular decline is seen in the incidence of land ownership as one moves up the size class of land holdings. For example, in 2010-11, 31% of all rural households, 30% of SC households and 42% of ST households owned marginal

It is seen that 42% of all households in Karnataka owned agricultural land in 2010-11 (Table 8.1), a very marginal increase from 41% in 2003-04. The increase was more substantial in the case of SC (35% to 40%) and ST households (42% to 46%).

land holdings, while no more than 5% of any of these groups owned medium or large land holdings.

Table 8.2 looks a critical dimension of agricultural land quality, i.e., the irrigation status. Caste based differences emerge here with a lower percentage of SC and ST households compared to all households in rural areas owning irrigated land.[10] However, it also shows a substantive increase in percent of irrigated land owned by ST households in the period between the two comparison years. Using KHAS data, Figure 8.1 shows the distribution of the total land owned by rural households in 2010-11 by caste and religion and indicates a concentration of agricultural land among Hindus compared to other religions and among Other Backward Castes (OBC) followed by Backward Castes (BC). While 43% of the total land area was owned by OBC and 32% by BC households, only 14% and 2%, respectively was owned by SC and ST households. Likewise, 93% of total land area was owned by Hindu households and only 6% by Muslim households.

Table 8.1
Household incidence of agricultural land ownership by size class (%), 2003-04 and 2010-11

Size class of land holdings /household categories	Rural			Urban			Total		
	SC	ST	All	SC	ST	All	SC	ST	All
2003-04									
Marginal (< 1 hectare)	33	23	31	4	6	4	26	21	22
Small (1 – 2 hectares)	6	14	14	1	3	1	5	13	10
Semi-medium (2 – 4 hectares)	3	6	8	0	2	1	3	5	6
Medium/Large (> 4 hectares)	2	3	5	0	6	1	1	4	4
Total	**44**	**46**	**58**	**5**	**17**	**7**	**35**	**42**	**41**
2010-11									
Marginal (< 1 hectare)	30	42	31	2	2	4	23	30	20
Small (1 – 2 hectares)	12	14	18	1	2	3	10	11	11
Semi-medium (2 – 4 hectares)	8	6	10	1	1	3	7	5	7
Medium/Large (> 4 hectares)	1	0	5	3	0	2	2	0	4
Total	52	63	64	7	6	12	40	46	42

Source: Authors' calculations, All India Debt and Investment Survey, 2003-04; Karnataka Household Asset Survey, 2010-11.

[10] *The percentage of households owning irrigated land among other caste groups is much higher than the average: 46% among Forward Castes (FC), 26% among the Backward Castes (BC), and 21% among Other Backward Castes (OBC).*

Table 8.2
Household incidence of land ownership by irrigation status in rural areas (%), 2003-04 and 2010-11

Type of agricultural land	2003-04			2010-11		
	SC	ST	All	SC	ST	All
Irrigated land	11	11	20	11	18	19
Unirrigated land	34	37	43	44	52	51
Any agricultural land	44	46	58	52	63	64

Source: Authors' calculations, All India Debt and Investment Survey, 2003-04; Karnataka Household Asset Survey, 2010-11.

Table 8.3 shows the mean area (in hectares) owned by these groups. Here, we find that the highest mean was for BC households at 1.60 hectares followed by OBC households (1.06 hectares), suggesting that although a greater proportion of land area was owned by OBC compared to BC households, the former were smaller tracts of land. Mean area owned by SC and ST households was 0.55 and 0.58 hectares, respectively. By comparison, households belonging to the Forward Castes (FC) had only 2% of the total area share but a higher mean area (0.83 hectares). Mean area owned by Hindu households was 1.03 hectares, higher than 0.75 hectares for Muslim households. These charts and table seem to indicate that there is substantial inequality in agricultural land ownership patterns in the State.

These charts and table seem to indicate that there is substantial inequality in agricultural land ownership patterns in the State.

Figure 8.1
Distribution of total agricultural land area owned by social groups in rural areas (%), 2010-11

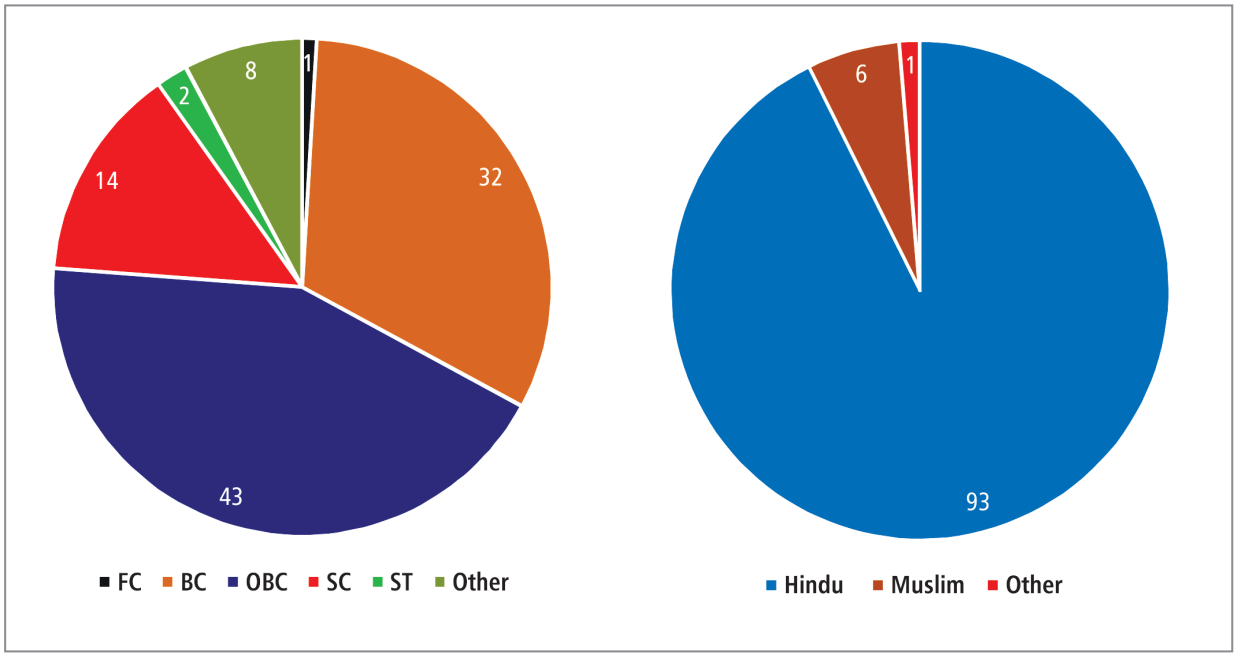


Table 8.3
Mean area of land (in hectares) owned by social groups in rural areas

Social groups	Total land	Irrigated land	Unirrigated land
Caste			
FC	0.83	1.81	1.18
BC	1.60	1.17	2.74
OBC	1.06	0.74	1.97
SC	0.55	0.34	1.29
ST	0.58	0.41	1.05
Other	0.81	0.44	1.90
Total (hectares)	1.00	0.70	1.90
Religion			
Hindu	1.03	0.72	1.92
Muslim	0.75	0.39	1.87
Other	0.55	0.72	1.21
Total (hectares)	1.00	0.70	1.90

Source: Authors' calculations, Karnataka Household Asset Survey, 2010-11.

99% of agricultural land in Karnataka falls under individual operation while joint and institutional holdings are negligible.

8.2 Operational land holdings

The Agricultural Census conducted quinquenially by the Department of Agriculture and Cooperation, Government of India, is an important source of information on agricultural land holdings in the country. The focus of the Census is on operational holdings[11] rather than ownership holdings, as key decisions on plot and farm management are taken by those who operate the land, who may not necessarily be owners of the land. The Census records the number and area of all operational land holdings in the country, disaggregated by size classes, social groups, nature of holdings (individual, joint, or institutional), and gender.[12] The Agricultural Census for 2000-01, 2005-06, and 2010-11 shows that 99% of agricultural land in Karnataka falls under individual operation while joint and institutional holdings are negligible.

Approximately, 12% and 6% of individual land holdings in Karnataka were operated by SC and ST households, respectively in 2011 (Table 8.4). The proportions are relatively higher in Kalburagi (14% by SC and 10% by ST) and relatively lower

[11] *An operational holding refers to all land which is used wholly or partly for agricultural production and is operated as one technical unit by one person alone or with others without regard to the title, legal form, size or location.*

[12] *An individual holding is one that is operated either by one person or by a group of persons who are the members of the same household. A joint holding is typically operated by two or more persons belonging to different households, who are considered joint partners in the economic and technical responsibility of the holding. Institutional holdings include government farms, farms of sugarcane factories, cooperative farms, lands managed by trusts, corporate farms, etc.*

in Belagavi (8% by SC and 4% by ST). These percentages have been largely unvarying between 2000-01 and 2010-11, except for marginal shifts within the regions. The area under cultivation by SC and ST households has also remained low at roughly 9% for SC households and 6% for ST households over this decade. The predominant share of both the number as well as area of operational holdings are under the control of Other households. The total number of operational holdings saw some increase from 6,962,466 in 2000-01 to 7,512,617 in 2005-06, and a smaller increase to 7,763,669 in 2010-11. The total area of these holdings,however,, was lower in 2010-11 than in 2005-06 and 2000-01 suggesting some fragmentation of holdings during this five year period.

Table 8.4
Distribution of individual operational holdings by caste
Percentage, 2000-01, 2005-06 and 2010-11

Divisions	2000-2001							
	SC		ST		Other		All households	
	No. Holdings	Area	No. Holdings	Area	No. Holdings	Area	No. Holdings	Area (hectares)
Bengaluru	14	11	8	8	78	81	1,867,035	2,829,048
Mysuru	10	8	2	2	88	90	2,058,597	2,086,096
Belagavi	8	6	4	3	88	91	1,612,447	3,730,503
Kalaburagi	14	11	9	8	76	81	1,424,387	3,350,932
Karnataka	12	9	5	5	83	86	6,962,466	11,996,579
	2005-2006							
	SC		ST		Other		All households	
	No. Holdings	Area	No. Holdings	Area	No. Holdings	Area	No. Holdings	Area (hectares)
Bengaluru	14	11	7	8	79	81	2,004,478	2,875,193
Mysuru	11	9	3	3	86	89	2,223,346	2,130,739
Belagavi	8	6	4	3	88	91	1,720,045	3,736,006
Kalaburagi	14	11	10	9	76	80	1,564,748	3,486,600
Karnataka	12	9	6	6	83	85	7,512,617	12,228,538
	2010-2011							
	SC		ST		Other		All households	
	No. Holdings	Area	No. Holdings	Area	No. Holdings	Area	No. Holdings	Area (hectares)
Bengaluru	13	11	7	8	80	82	2,176,612	2,786,336
Mysuru	12	8	4	3	85	88	2,098,759	2,096,072
Belagavi	8	6	4	3	88	91	1,816,073	3,676,331
Kalaburagi	14	11	10	9	76	81	1,672,225	3,426,638
Karnataka	12	9	6	6	82	85	7,763,669	11,985,377

Source: Authors' calculations, Agricultural Census 2000-01, 2005-06, and 2010-11.

8.3 Land reforms in Karnataka

The Karnataka Land Reforms Act of 1961 was intended to correct several structural inequalities in land ownership patterns. The major objectives of land reforms were to fix ceiling limits on land holdings and confer ownership rights to those who cultivated the land, through redistribution. A key goal of the reforms were to reduce caste based disparities in land ownership, which were rampant in the State. Three dominant phases may be traced in the implementation of these reforms in Karnataka. The first phase advocated abolition of intermediaries, like, imamdars and jagirdars. The second phase initiated the agenda of tenancy reforms. The third and most radical phase in the history of land reforms in Karnataka focussed on conferring ownership rights to those that actually cultivated the land and redistribution of surplus land to the landless. The Act was amended during this period in 1974 and the succeeding ten years was the most active phase of the reforms in Karnataka (Krishna 1997).

In the years following the central government espousing globalisation and liberalisation policies in 1991, the enthusiasm hitherto seen in the implementation of land reforms came down

Another related asset redistribution legislation introduced by the State government was the Karnataka Scheduled Castes and Scheduled Tribes (Prohibition of Transfer of Certain Lands) Act in 1978 (ibid.). Under this law, any land granted by the government to members of the SC and ST communities was mandated to remain in their ownership and control and could not be transferred to anyone else by any means.

The land reforms were undertaken with vigour until the mid-1980s. data up to the early 1990s shows that of the 43 lakh acres of tenanted land claimed, 47% was found to be genuinely tenanted and their ownership was handed over to the tillers. The ceiling on land holdings met with limited success though and only 1.1 percent of the State net sown area was declared as surplus and taken over for redistribution. Under the Act, agricultural labourers were also entitled to seek ownership rights over the dwelling units they inhabited and a majority of the applications received were accepted and settled (ibid.).

In the years following the central government espousing globalisation and liberalisation policies in 1991, the enthusiasm hitherto seen in the implementation of land reforms came down and there have been periodical demands for softening regulatory mechanisms in the agricultural sector, in particular ceilings of holdings (Nadkarni 1997). The enactment remains on paper, however and in the light of the glaring disparities that continue to be seen in land ownership patterns needs to be revisited and renewed.

Livestock

Livestock rearing is particularly important for landless households and those with unirrigated agricultural land, as it is a potential source of supplementary income. Like agriculture, livestock rearing is diverse with respect to size and scale, which determines the extent to which the animals owned contribute to household subsistence vis-à-vis income generation. The household incidence of livestock ownership examined using data from the AIDIS (2003-04) and the KHAS

(2010-11) shows a reduction from 43% in 2003-04 to 35% in 2010-11; However, in rural areas it remained relatively stable at 56% – 57% during this period (Table 8.5). It is seen that more households owned large stock (30% in 2003-04 and 29% in 2010-11) when compared to small stock (6% in 2003-04 and 8% in 2010-11) and poultry (7% in 2003-04 and 10% in 2010-11).

Table 8.5
Household incidence of ownership of livestock (%), 2003-04 and 2010-11

Assets	2003-04 (AIDIS)			2010-11 (KHAS)		
	Rural	Urban	Total	Rural	Urban	Total
Livestock	56	8	43	57	5	35
Large stock	44	3	30	47	3	29
Small stock	9	0	6	13	1	8
Poultry	10	1	7	15	2	10

Notes: Large stock include cattle (cross-bred and non-descript), buffalo, yak, horse, mithun, mule, donkey, pony, camel and elephant. Small stock include sheep, goats, pigs, and rabbits. Poultry include cock, hen, chicken, duck, and other birds.
Source: Authors' calculations, All India Debt and Investment Survey, 2003-04; Karnataka Household Asset Survey, 2010-11.

It is seen that more households owned large stock (30% in 2003-04 and 29% in 2010-11) when compared to small stock (6% in 2003-04 and 8% in 2010-11) and poultry (7% in 2003-04 and 10% in 2010-11).

Housing

The right to housing is a component of the right to adequate standard of living in the 1948 Universal Declaration of Human Rights and in the 1966 International Covenant on Economic, Social and Cultural Rights. As a signatory to several international conventions that uphold the right to housing, India has legal obligations to uphold these rights. The concept of right to housing goes beyond the provision of basic shelter; it should afford the citizens the ability to live a secure and dignified life.[13] Guided by the rights framework, we look beyond home ownership to also examine quality of housing and provision of sanitation facilities within the house premises. From a human development perspective, these attributes are critical since the quality of housing enhances lifestyle and contributes substantially to the productive capabilities of individuals.

Using Census data, it is seen that the total number of owned houses in Karnataka increased 22%, from 80,28,342 in 2001 to 97,86,047 in 2011 (Table 8.6). This increase was more than twice as steep in urban areas (40%) as compared to rural areas (16%). Across the administrative regions, the increase in the number of

[13] *The right to housing talks about certain freedoms and entitlements as well as protection against evictions (UN Habitat, Fact Sheet No. 21). While these are pertinent to human development, a discussion of these aspects is beyond the scope of this chapter.*

Across the administrative regions, the increase in the number of urban houses owned was higher in the Bengaluru and Mysuru regions (42% and 41%, respectively)

urban houses owned was higher in the Bengaluru and Mysuru regions (42% and 41%, respectively) compared to 35% and 37% in the Belagavi and Kalburagi regions, but the opposite pattern was found in rural areas with the Belagavi and Kalburagi regions showing increases of 19% and 18%, respectively compared to only 15% and 14% in Bengaluru and Mysuru regions respectively. These changes perhaps echo the pattern of overall shifts in the population between rural and urban areas, specifically pointing to greater urbanisation in Bengaluru and Mysuru.

In terms of the incidence of home ownership, however, Table 8.6 shows no substantive changes during this decade and the main change is the reduction in the overall incidence from 78% in 2001 to 74% in 2011. This was mainly due to the reduction in urban areas from 55% to 51%, which is entirely concentrated in the Bengaluru division (45% in 2001 and 40% in 2011). This suggests that urban population grew at a rapid rate, whereas home ownership despite an increase in absolute numbers did not keep pace with the population growth.

Rural areas in the State and across regions show largely stable levels of home ownership incidence; in this case as well, the main reduction is in the Bengaluru division from 91% to 88% due to rapid expansion of Bengaluru city limits and a steep increase in real estate prices in villages in the city's peripheries. This is evident when we examine the home ownership rates across districts in the Bengaluru division; the percentage of households owning homes in Bengaluru urban district was 44% in 2001, the lowest among all the districts in this region (and the State); this further fell to 38% in 2011.

Table 8.6
Incidence of home ownership (%), 2001 and 2011

Division	2001			2011		
	Rural	Urban	All households	Rural	Urban	All households
Bengaluru	(1,784,714) 91	(854,128) 45	(2,638,842) 62	(2,044,405) 88	(1,215,326) 40	(3,259,731) 55
Mysuru	(1,630,803) 91	(365,813) 60	(1,996,616) 81	(1,855,791) 91	(516,970) 60	(2,372,701) 79
Belagavi	(1,531,437) 91	(454,019) 65	(1,985,456) 81	(1,828,414) 90	(613,925) 65	(2,442,339) 80
Kalaburagi	(1,138,406) 92	(269,022) 61	(1,407,428) 81	(1,343,546) 91	(367,730) 61	(1,711,276) 79
Karnataka	(6,085,360) 91	(1,942,982) 55	(8,028,342) 78	(7,072,156) 90	(2,713,891) 51	(9,786,047) 74

Note: Absolute number of houses within parenthesis.
Source: Authors' calculations, Census 2001 and 2011.

Disaggregating the incidence of ownership by caste shows that home ownership rates are marginally higher for the Scheduled Caste (SC) and Scheduled Tribe (ST) households than for the households belonging to Other caste groups (Table 8.7). This pattern has remained consistent during the inter-census decade, which could be due to the fact that a larger percent of

these households reside in rural areas (71% of SC and 76% of ST households in 2011), where ownership of houses is higher (Table 8.7). The higher home ownership rate among SC and ST households could also reflect the impact of State housing programmes which target the poorest and most vulnerable households, among whom these communities are over represented (see Paragraph 8.4).

The small reduction in overall incidence of home ownership evident from Table8.7 was true of all caste groups, to a greater extent in urban areas. For example, in 2001, 64%, 58%, and 53% of SC, ST, and Other households, respectively in urban areas were home owners and these figures fell to 60%, 53%, and 50%, respectively in 2011 (Table 8.7). Further, echoing the pattern of ownership at the overall level, ownership was lower in the Bengaluru division when compared to the other divisions, and in particular the lowest in Bengaluru urban district (55% for SC and 35% for ST households in 2011). Across caste groups, the Bengaluru division also saw the steepest reduction incidence of ownership in urban areas over the decade.

The higher home ownership rate among SC and ST households could also reflect the impact of State housing programmes which target the poorest and most vulnerable households, among whom these communities are over represented

Table 8.7
Incidence of home ownership by caste (%), 2001 and 2011

Divisions	2001											
	Rural				Urban				Total			
	SC	ST	Other	All	SC	ST	Other	All	SC	ST	Other	All
Bengaluru	94	92	89	91	57	49	45	46	82	79	65	69
Mysuru	92	88	91	91	71	63	60	62	89	84	83	84
Belagavi	94	92	91	91	72	63	65	66	89	87	83	84
Kalaburagi	95	94	91	92	71	71	59	62	91	90	81	84
Karnataka	94	92	90	91	64	58	53	55	86	84	76	78
2011												
Bengaluru	92	90	86	88	52	41	40	41	76	73	58	62
Mysuru	92	87	92	91	67	60	61	61	87	82	82	83
Belagavi	92	90	90	90	70	62	66	66	86	85	82	83
Kalaburagi	94	93	89	91	70	70	59	61	89	89	79	82
Karnataka	92	91	89	90	60	53	50	51	83	81	72	74

Source: Authors' calculations, Census 2001 and 2011.

8.4 State housing programmes

There are two key programmes in operation in Karnataka. The Indira Awas Yojana (IAY), a national scheme initiated in 1996 and the Ashraya Scheme of the State government started in 1991-92. The main objective of these programmes is to provide homeless households and households living in unserviceable houses with a certain level of housing security

Rural Ashraya Housing Programme and the Indira Awas Yojana have succeeded in meeting this mandate and more than 90% of houses provided by the Rural Ashraya and the Indira Awas Yojana are registered in women's names.[14]

by providing grants and loans to build durable houses. The target groups are the below poverty line (BPL) population and the socially backward groups. Additionally, the Dr. Ambedkar Housing Scheme of the Government of Karnataka targets the SC and ST households specifically.

Based on data provided by the Rajiv Gandhi Housing Corporation Limited, it is seen that between 2000 and 2012, around 24 – 38% of the beneficiaries of the Rural Ashraya programme were SC households, which reduced to 18% in 2013. The percentage of ST households who benefited from this scheme remained between 5% and 11% during the same period. In 2013, the Urban Ashraya provided houses to a total of 6975 beneficiaries of whom 23% were SC households and 5% were ST households. The data also indicates that for the year 2013-14, the rural scheme more than met its targets with the percentage of achievements to targets being 113% and 129% for SC and ST households respectively. The urban component of the scheme, however, fell short with the comparable percentages being only 49% and 22% for SC and ST households respectively.

In all these schemes there are special provisions that mandate that the house be registered in the name of a woman, either individually or jointly. The rationale behind this is that women are more likely to retain the asset and are less likely to sell or pawn it off. A recent report submitted to the Department of Women and Child Welfare, Government of Karnataka finds that the Rural Ashraya Housing Programme and the Indira Awas Yojana have succeeded in meeting this mandate and more than 90% of houses provided by the Rural Ashraya and the Indira Awas Yojana are registered in women's names.[14]

Although limited, the existing data on the social housing schemes of the government suggest that they aid in ensuring basic housing security for the vulnerable sections of society. Data on the ownership of houses by these groups as seen in this chapter points to this. However,, concerns around the quality and durability of houses constructed under the schemes remain, and whether these houses meet the full requirements of the right to adequate housing is questionable. Systematic data collection on not just the quantitative but also the qualitative aspects of houses provided under the programmes is important to answer these questions.

Ownership of a house indicates only a broad measure of housing security. Irrespective of the ownership status, equally if not more important is also the type of houses that are occupied by the households. The United Nations Committee on Economic, Social and Cultural Rights outlines several parameters that constitute households' right to adequate housing (UN Habitat, Fact Sheet No. 21). Among these is habitability, i.e., the structure has to provide not only adequate space but also effective shelter from the cold, heat, rain, and wind. Another key indicator of adequate housing laid out by the Committee is the availability of amenities and services including safe drinking water, adequate sanitation, energy for cooking, heating, lighting and food storage which beyond the walls and roof of the house, are considered to be minimum requirements to ensure housing security.

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[14] *Housing Evaluation Report, 2014. Submitted to Government of Karnataka by Centre for Public Policy, Indian Institute of Management Bengaluru.*

The Census data contains several of these qualitative indicators of the residences and we examine two here; whether the house is a permanent structure and the availability of sanitation facility within the premises. A permanent structure protects people from the forces of nature and provides a greater degree of personal safety and security. Compared to open defecation which is not uncommon in several developing countries, access to clean and safe sanitation facilities enhances hygiene as well as ensures the dignity for all members of the household, especially women members. Table 8.8 provides a snapshot of these indicators for Karnataka for 2011.

Table 8.8
Incidence of residence in permanent structure and latrine facility within premises by caste (%), 2011

Divisions	Rural households											
	SC			ST			Other			Total		
	Total No.	Living in permanent structure	Latrine within premises	Total No.	Living in permanent structure	Latrine within premises	Total No.	Living in permanent structure	Latrine within premises	Total No.	Living in permanent structure	Latrine within premises
Bengaluru	531576	63	22	221344	63	19	1571724	66	43	2324644	65	36
Mysuru	348293	49	26	145749	47	31	1534518	56	48	2028560	55	43
Belagavi	289613	54	9	129335	44	10	1612594	42	22	2031542	44	20
Kalaburagi	340658	64	4	214682	50	5	924110	55	11	1479450	56	9
Karnataka	1510140	58	16	711110	52	16	5642946	55	33	7864196	55	28
Divisions	Urban households											
	SC			ST			Other			Total		
	Total No.	Living in permanent structure	Latrine within premises	Total No.	Living in permanent structure	Latrine within premises	Total No.	Living in permanent structure	Latrine within premises	Total No.	Living in permanent structure	Latrine within premises
Bengaluru	349603	83	80	113149	85	84	2485016	92	96	2947768	90	93
Mysuru	82109	70	77	36363	71	77	723538	83	95	842010	82	92
Belagavi	100404	68	47	32310	65	51	793046	70	71	925760	70	68
Kalaburagi	98048	76	38	44063	67	41	458066	80	67	600177	79	61
Karnataka	630164	77	68	225885	76	70	4459666	85	88	5315715	84	85
Divisions	All households											
	SC			ST			Other			Total		
	Total No.	Living in permanent structure	Latrine within premises	Total No.	Living in permanent structure	Latrine within premises	Total No.	Living in permanent structure	Latrine within premises	Total No.	Living in permanent structure	Latrine within premises
Bengaluru	881179	71	45	334493	70	41	4056740	82	75	5272412	79	68
Mysuru	430402	53	36	182112	52	40	2258056	65	63	2870570	62	58
Belagavi	390017	57	19	161645	48	18	2405640	51	38	2957302	52	35
Kalaburagi	438706	67	12	258745	53	11	1382176	63	30	2079627	63	24
Karnataka	2140304	64	32	936995	58	29	10102612	68	57	13179911	67	51

Source: Authors' calculations, Census 2011.

The data suggests that Karnataka is yet to meet its obligations towards providing adequate housing as evaluated against only two basic parameters (Table 8.8). Only 67% of all households reside in a permanent shelter; in urban areas, this is 84% and much lower at 55% in rural areas. Not surprisingly, access to sanitation is much worse. Only half of Karnataka's household population have a latrine within their premises. In rural Karnataka, this further reduces to 28%. Using Census 2011 data, a recent study in 112 districts across India has found that open defecation is highly correlated with childhood stunting (Spears, Ghosh, and Cumming 2013) which suggests that the absence of proper sanitation facilities has a severe negative impact on health and can potentially diminish the quality of human capital.

As expected, these housing facilities are distributed differentially across caste groups. Although the differences in rural areas are negligible with respect to permanent structure (58%, 52%, and 55% of SC, ST, and Other households, respectively live in houses with permanent structure) the differences are marked in urban areas. While 77% of SC and 76% of ST households live in permanent structures, the comparable proportion for Other households is 85%. Where the distinctions are even starker is in the availability of latrine facilities within the house premises. In both rural and urban areas, a far greater proportion of Other households compared to SC and ST households have toilets within their premises. Although the overall access to sanitation in the State is quite poor, it is much worse for SC and ST households compared to the Other households.

Trends in wealth levels and distribution

Incidence based measures underestimate inequalities in asset distribution in the population, as they do not shed any light on the quality or the number of the assets owned by an individual. Irrigated land is equated with unirrigated land although their productive uses and market values could be substantially different. Similarly, someone owning several properties gets the same weightage as someone who owns just one property. One way of incorporating such information is through asset values where we can consider both number of assets as well as qualitative details about the assets, such as size, location, material, age, etc. Asset values are also useful since they can help compare households owning different asset portfolios.

Asset values may be of different types – construction values in the case of built up immoveable property; and rental and sale values for all types of assets. Sale value, i.e., the value at which the asset in question can be sold in the market on a given day is most commonly acquired through survey data, and this is used to compute the worth of all assets owned by households. The sum of the worth of all physical assets is the gross physical wealth of a household. Using data from the AIDIS 2003-04 and the KHAS 2010-11, this section examines trends in this metric for Karnataka.

The asset composition of household wealth indicates the importance of each asset category in overall wealth. On average, immoveable property was the biggest contributor to gross household physical wealth, both at the beginning and end of the decade (Figures 8.2 and 8.3). Agricultural land dominated in rural areas-51% of gross household physical wealth was accounted for by land in 2003-04, which increased to 64% in 2010-11. This was followed by all other non-agricultural real estate, which was 38% in 2003-04 and fell to 28% in 2010-11. This indicates the relative appreciation of agricultural land values in rural areas compared to non-agricultural real

estate values over the eight-year period.

In urban areas, agricultural land had a relatively smaller share, accounting for 7% in 2003-04 and increasing to 15% in 2010-11. One of the reasons for the appreciation could be the surge in land values in the peripheries of major cities and towns like Bengaluru, Mysuru, Mangaluru all of which expanded their city boundaries rapidly during this period. In 2010-11, non-agricultural real estate was the main contributor to gross physical worth of households in urban areas. (72%) Other assets like livestock, agricultural tools and equipment, non-farm activities and assets accounted for not more than 15% in both rural and urban areas during both time periods. Consumer durables were relatively more significant in urban areas, constituting 10% of household physical wealth in 2003-04, which fell to 8% in 2010-11.

Figure 8.2
Asset composition of gross household physical wealth (%) in rural areas, 2003-04 and 2010-11

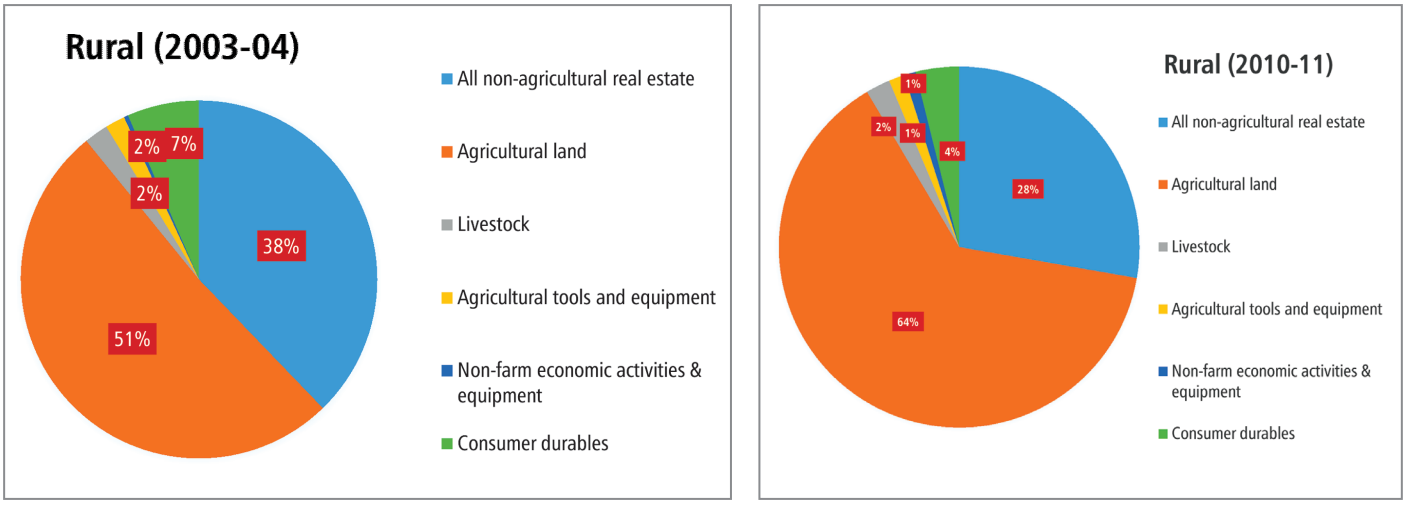


Figure 8.3
Asset composition of gross household physical wealth (%) in urban areas, 2003-04 and 2010-11

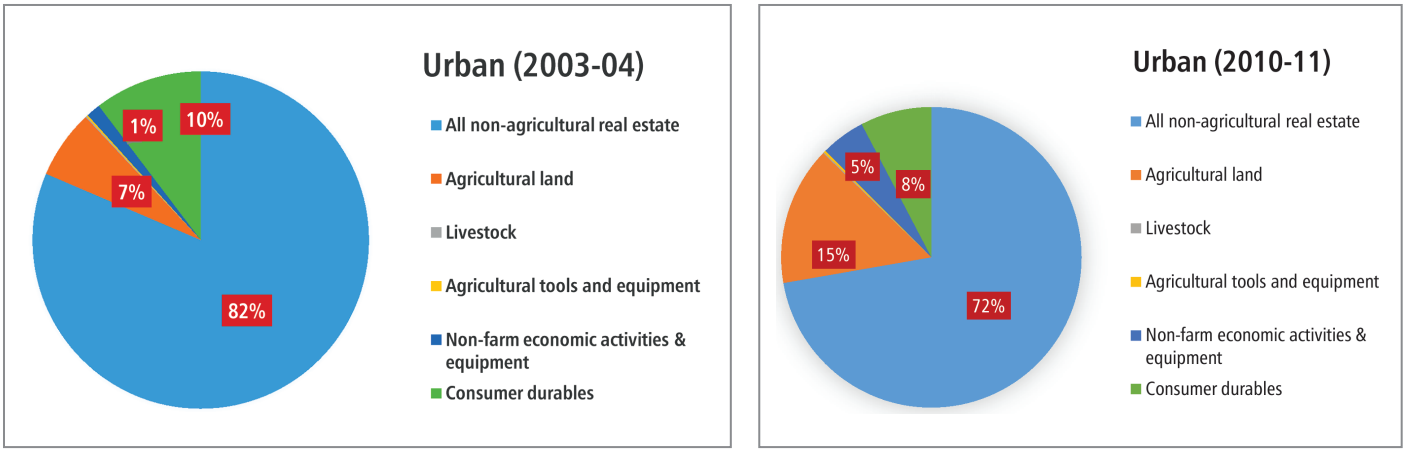


Table 8.9
Mean and median per capita gross physical wealth by asset categories, 2003-04 and 2010-11 (in Rupees)

Asset categories	AIDIS (2003-04)				KHAS (2010-11)			
	Rural		Urban		Rural		Urban	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
All non-agricultural real estate	34,998	22,033	1,14,680	12,240	45,632	20,000	1,57,813	0
Agricultural land	38,324	11,684	7,484	0	98,986	15,000	35,630	0
Livestock	1,620	39	112	0	2,656	440	178	0
Agricultural tools and equipment	1,129	117	164	0	1,705	61	324	0
Non-farm economic activities & equipment	290	0	2,063	0	1,285	0	8,608	0
Consumer durables	5,735	3,557	14,613	8,451	5,398	2,050	17,124	5,142
Gross per capita physical wealth	**82,095**	**46,961**	**1,39,114**	**29,561**	**155,661**	**57,266**	**2,19,677**	**23,950**

Source: Authors' calculations, All India Debt and Investment Survey, 2003-04; Karnataka Household Asset Survey, 2010-11.
Note: All values are in 2010 rupees.

Expectedly, there has been an increase in both rural and urban areas in the per capita mean value of all physical asset categories which indicates the appreciation in the value of existing assets as well as the accumulation of new assets.

Table 8.9 shows the mean and median per capita values of the various assets as well as the gross per capita physical wealth. Expectedly, there has been an increase in both rural and urban areas in the per capita mean value of all physical asset categories which indicates the appreciation in the value of existing assets as well as the accumulation of new assets. Mean values in rural areas were higher than in urban areas for all agriculture related assets (land, livestock, agricultural tools and equipment), and vice versa, i.e., urban values higher than rural, for the other assets in both time periods. Overall, the mean per capita physical worth of households increased from Rs. 82,095 and Rs. 139,114 in 2003-04 to Rs. 155,661 and Rs. 219,677 in 2010-11 in rural and urban areas, respectively. Much of these increases was concentrated in the high value assets of agricultural land and other real eState. The increasing mean values, Thus, suggest the gradual enhancement of wealth and prosperity of households over time.

The median values, however, show that this improvement in wealth has not been evenly distributed and that there has been a worsening of inequality over the decade. For example, the median per capita value of non-agricultural real eState was Rs. 22,033 in rural areas and Rs. 12,240 in urban areas in 2003-04. These fell to Rs. 20,000 and Rs. 0 in rural and urban areas, respectively in 2010-11. A similar reduction of the per capita median value is seen with respect to consumer durables. Further, in both time periods, for all assets, the means are substantially higher than the medians. High means coupled with low medians imply that some households on the right hand side of the wealth distribution are in an extremely advantageous position while the majority lag far behind. The following sections explore the question of wealth inequalities in greater detail.

Inequalities in wealth distribution

The worsening of wealth inequality over the decade is indicated by the gini coefficients (Table 8.10). The gini coefficient for total wealth has risen by 10 percentage points (10 percentage points and 7 percentage points in rural and urban areas, respectively). In rural areas, the biggest contributor to this trend is agricultural land, whose gini coefficient increased from 0.60 in 2003-04 to 0.81 in 2010-11. In urban areas also, agricultural land ginis showed a similar trend. However, here the escalation in the ginis for non-agricultural real estate from 0.62 to 0.85 is also a key contributor. This is presumably the effect of unprecedented private sector growth in the metropolitan areas of Bengaluru Urban district with a fairly small proportion of the total population earning very high salaries and accumulating high valued real estate. On the other hand, this growth has increased demand for low skilled labour (construction workers and domestic workers for example) with low wages, whose earnings enable them to meet their subsistence needs, but would find it challenging to acquire even low valued assets; this would contribute to rising inequality. All other assets also saw an appreciation in the gini coefficients; however, since they contribute a much smaller share in the overall wealth composition, they are unlikely to have substantially impacted overall inequality.

The consolidation of wealth at the top end of the distribution is also seen from the ratio of wealth of the 90th to the 10th percentile, which has increased around 3.5 times (43 to 146) over this period implying the rich are able to accumulate assets at a much faster rate than the poor.

The gini coefficient for total wealth has risen by 10 percentage points (10 percentage points and 7 percentage points in rural and urban areas, respectively).

Table 8.10
Gini coefficients for asset categories and per capita gross physical wealth, 2003-04 and 2010-11

Asset categories	2003-04			2010-11		
	Rural	Urban	Total	Rural	Urban	Total
All non-agricultural real estate	0.44	0.62	0.64	0.60	0.85	0.81
Agricultural land	0.60	0.65	0.60	0.81	0.97	0.88
Livestock	0.47	0.56	0.48	0.72	0.98	0.83
Agricultural tools and equipment	0.88	0.94	0.88	0.93	0.99	0.95
Non-farm economic activities	0.81	0.81	0.83	0.97	0.97	0.97
Consumer durables	0.51	0.54	0.56	0.69	0.69	0.72
Total (gross physical wealth)	0.57	0.74	0.65	0.67	0.81	0.75
Ratio of the 90th percentile to 10th percentile	16	228	43	46	269	146

Source: Authors' calculations, All India Debt and Investment Survey, 2003-04; Karnataka Household Asset Survey, 2010-11.

Both SC and ST households are much worse off in urban areas than in rural areas with shares of only 6% and 1% of wealth respectively.

Table 8.11 shows the quintile distribution of households by per capita physical wealth and the per capita average values by the different social groups using KHAS data. Among the caste groups, the smallest proportion of households in the wealthiest quintile was the SC (12%) and ST (15%) households, while the largest proportion was the FC households (44%). The mean and median wealth of the SC and ST households was also considerably lower than those of other caste groups and those of the FC who were the highest. Households belonging to all castes, however, showed inequality internally with their means being considerably higher than the medians.

Inequality is seen with respect to the quintile distribution of the religions as well. Hindu households were fairly evenly distributed across the quintiles whereas Muslim and Other households showed skewed patterns. Only 12% of Muslim households and 15% of Other households were in the wealthiest quintile while both these groups were overrepresented in the poorest quintile.

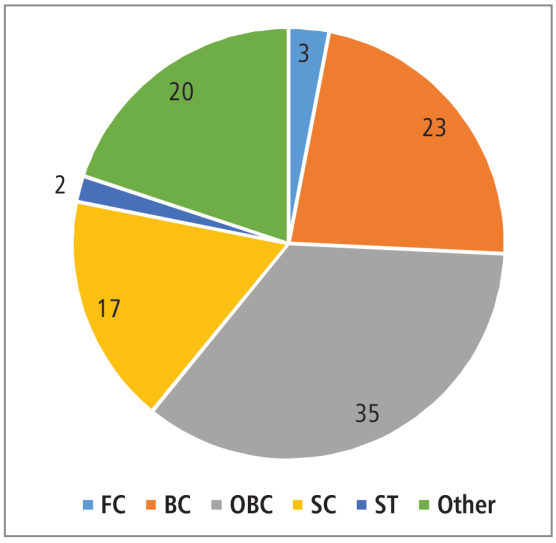
Figures 8.4 and 8.5 show the distribution of per capita gross physical wealth by caste and religion using the KHAS dataset. In rural areas, a majority of the wealth is concentrated among the OBC (35%) and BC (23%) households, with SC and ST households accounting for 17% and 2% respectively. The distribution by religious groups shows a high concentration among Hindu households (80%). In urban areas, the domination of Hindus in wealth is even higher at 89%, while among caste groups, BC and FC households account for the major share with 41% and 28% respectively. Both SC and ST households are much worse off in urban areas than in rural areas with shares of only 6% and 1% of wealth respectively.

Table 8.11
Distribution of households by social groups and per capita physical wealth quintiles, 2010-11

Caste	Physical wealth quintiles						Per capita average gross physical wealth (in 2010 Rupees)	
	Q1	Q2	Q3	Q4	Q5	All households	Mean	Median
SC	18	26	24	19	12	100	107,190	34,595
ST	19	25	20	21	15	100	87,324	44,434
OBC	17	19	20	24	20	100	133,637	53,776
BC	19	15	21	19	27	100	243,893	59,396
FC	15	13	11	17	44	100	710,160	117,100
Other	33	23	16	14	13	100	170,783	21,450
Religion								
Hindu	18	19	21	21	21	100	185,097	52,023
Muslim	32	24	16	15	12	100	174,997	21,450
Other	31	24	20	10	15	100	156,297	23,513

Source: Authors' calculations, Karnataka Household Asset Survey, 2010-11

Figure 8.4
Distribution of per capita gross physical worth by social groups in rural areas, 2010-11



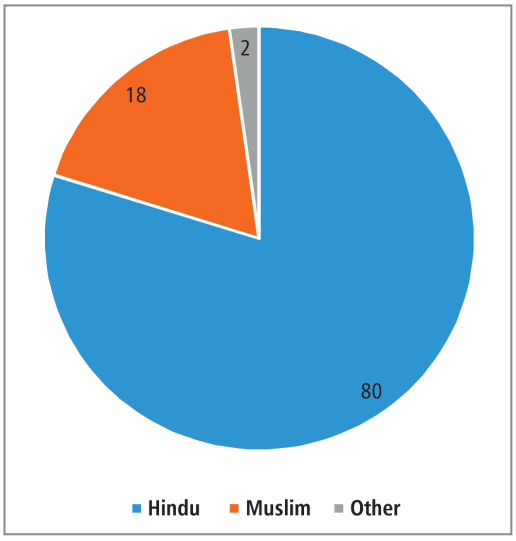
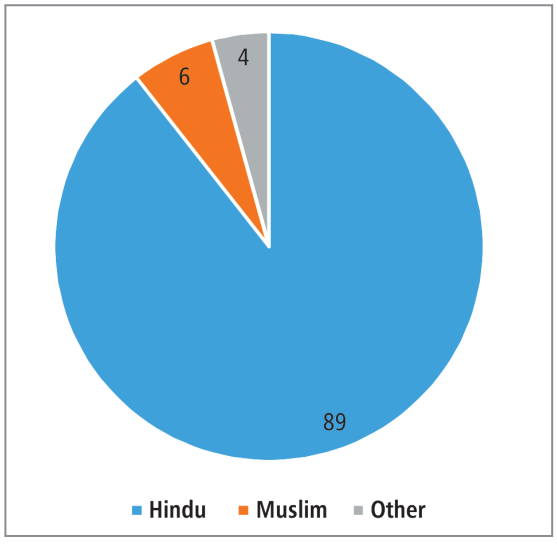
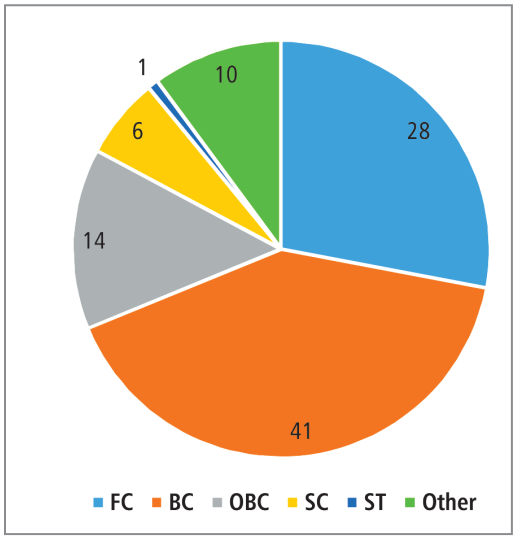


Figure 8.5
Distribution of per capita gross physical worth by social groups in urban areas 2010-11





8.5 Regional imbalance in wealth distribution

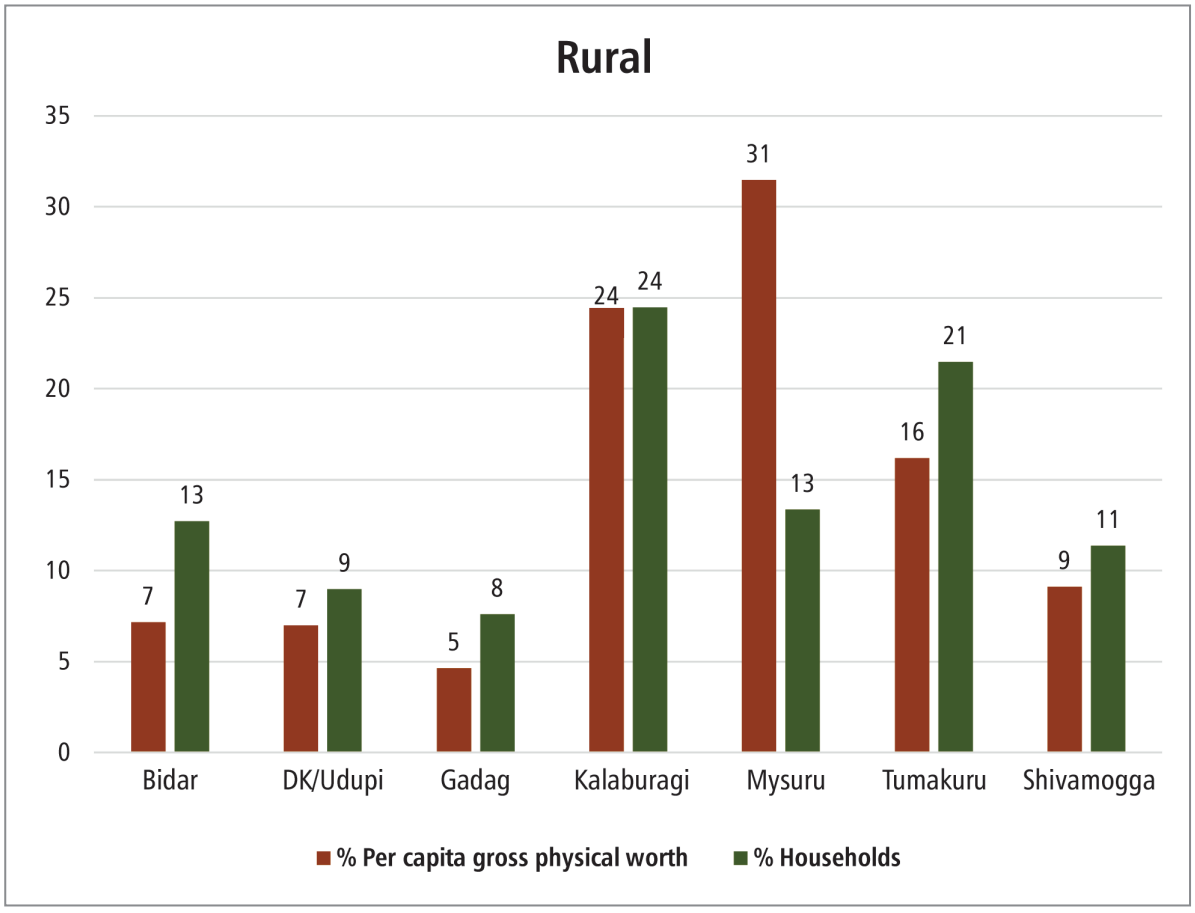
An important layer of inequality that planners and policymakers grapple with is regional imbalance given that certain parts of the State develop faster than others. This remains the case with respect to wealth distribution as well. Figures 8.6 and 8.7 show the percentage of per capita wealth accruing to each district alongside the proportion of households in that district for rural and urban areas respectively using the KHAS dataset. Rural areas of Bengaluru Urban district were not covered by the

In rural areas, wealth is disproportionately concentrated in Mysuru district – compared to only 13% of households residing, 31% of per capita wealth accrues to this district.

survey; therefore, Figure 8.6 excludes Bengaluru. Both rural and urban areas are marked by imbalance in the wealth distribution at least in some districts. In rural areas, wealth is disproportionately concentrated in Mysuru district – compared to only 13% of households residing, 31% of per capita wealth accrues to this district. This reduces the wealth share of all other districts (except Kalburagi) relative to the percentage of households in them. Kalburagi has 24% of the rural households as well as wealth share among these districts.

Urban areas show a high concentration of wealth in the metropolitan areas of Bengaluru Urban district with 48% share of wealth. Most of the other districts have less than 10% share in wealth with Kalburagi and Dakshina Kannada/Udupi at 13% and 15%, respectively. Although Bengaluru has 41% of the total households among these districts, the wealth distribution across these households is very skewed – indicated by the mean of Rs. 2,58,534 accompanied by a median less than a tenth of the mean at Rs. 20,850. This suggests that a major share of the wealth of these districts is concentrated in Bengaluru, and much of it among the wealthiest households.

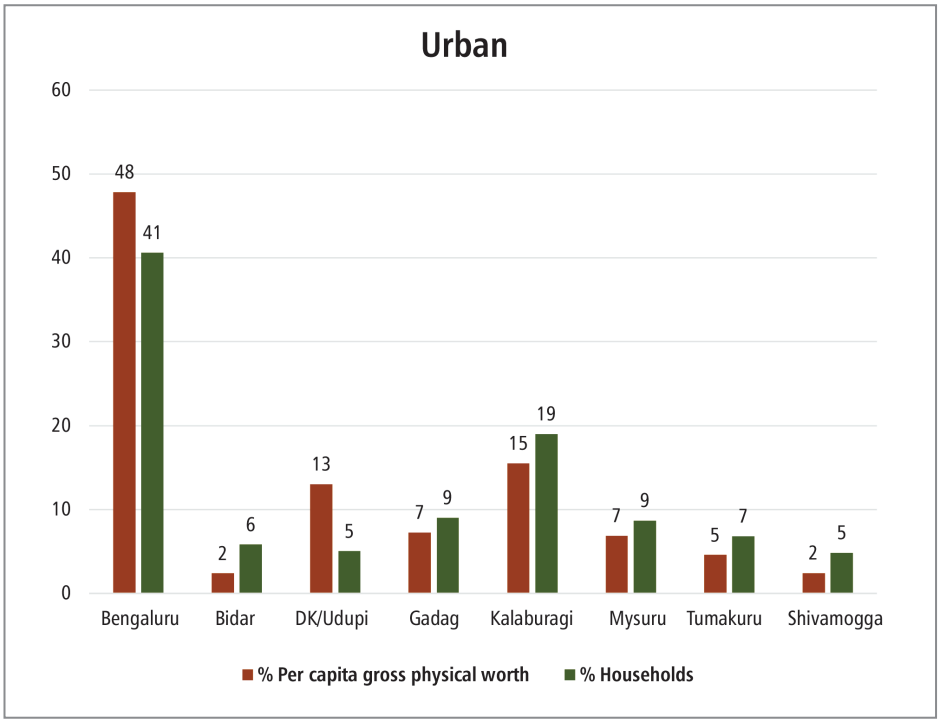
Figure 8.6
Distribution of per capita gross physical wealth and households across districts, rural areas, 2010-11



Gender, Assets and Wealth

A systematic gender bias within social structures and institutions, communities and households affects human development outcomes across the population. The discrimination against women and girls affects not only their immediate well-being in terms of education or health but can also constrain their future opportunity set. Not being accorded an equal status in society is disempowering, and ultimately impinges on their ability to live with dignity, an important component of human development.

Figure 8.7
Distribution of per capita gross physical wealth and households across districts, urban areas, 2010-11



Adopting a gender perspective when discussing assets and wealth is important, as evidence from intra-household literature has conclusively established that women's resource control is beneficial for themselves, their households and the larger community. It can be an important step towards economic empowerment for women, and help to improve their bargaining power within households. This impacts current well-being in terms of rendering them more vocal in household decision making and reducing the incidence of exposure to violence, and also strengthens intergenerational prospects via enhanced investments in children's human capital (Oduro et al 2015; Doss 2013; Swaminathan et al 2011).

The home ownership by disaggregating households as male headed and female headed (Table 8.12).[15] In Karnataka, about 15% of the households are female headed. Female headed

[15]*The head of household as defined by the Census 2011 is a person who is recognised as such by the household. She or he is generally the person who bears the chief responsibility for managing the affairs of the household and takes decision on behalf of the household. The head need not necessarily be the oldest male member or an earning member, but may be a female or a younger member of either sex. In case of an absentee de jure 'Head' who is not eligible to be enumerated in the household, the person on whom the responsibility of managing the affairs of household rests was to be regarded as the head irrespective whether the person is male or female.*

households are typically poorer than male headed households with lower access to credit, assets and other productive inputs. However, it is seen that a marginally higher proportion of female heads reside in their own homes (80%) as compared to male heads (73%). The differences are quite narrow in rural areas (92% and 90% for female and male heads, respectively) and wider in urban areas (61% and 50% for female and male heads, respectively). Presumably, this reflects their targeting by State housing programmes. The pattern of a higher home ownership incidence among female headed households is seen across Karnataka, with rural areas of the Belagavi and Kalburagi regions being the only exceptions. Seemingly then, there are negligible gender inequalities in home ownership However, as discussed earlier, mere incidence of ownership does not capture any qualitative aspects of the structure of the residence.

Agricultural Census data shows that more than 80% of the individually held land holdings in Karnataka are operated by male headed households, with little change over the past decade

Table 8.12
Incidence of home ownership by headship (%), 2011

Division	Female headed households			Male headed households		
	Rural	Urban	Total	Rural	Urban	Total
Bengaluru	90	49	70	88	40	61
Mysuru	93	72	87	91	59	82
Belagavi	88	71	82	90	65	83
Kalaburagi	91	69	85	91	60	82
Karnataka	92	61	80	90	50	73

Source: Authors' calculations, Census 2011.

Agricultural Census data shows that more than 80% of the individually held land holdings in Karnataka are operated by male headed households, with little change over the past decade (Table 8.13).[16] Further, it is seen that the proportion of holdings under operation by male headed households increases as the size of the land holdings increases. For example, 78% of all marginal holdings in Karnataka were operated by male headed households in 2010-11 whereas the comparable proportion for large holdings was 87% with a secular increase in between. This trend has not changed over the past decade in Karnataka. This data points to two main findings; first, there are marked gender disparities in favour of men in the operation of land holdings based on the sex of the head of the household and second, these disparities worsen with increases in the land size.

[16]As mentioned earlier, 99% of all operational land holdings in the State are individual holdings, i.e., operated by the members of one household; therefore the sex disaggregated data put out by the Agricultural Census captures the sex of the head of the household.

Table 8.13
Distribution of individually held operational land holdings by sex of household head and size class of holdings (%), 2000-01, 2005-06 and 2010-11

Size class	2000-01		2005-06		2010-11	
	Male	Female	Male	Female	Male	Female
Marginal (< 1 hectare)	81	19	80	20	78	22
Small (1 -2 hectares)	85	15	84	16	83	17
Semi medium (2 – 4 hectares)	87	13	86	14	85	15
Medium (4 – 10 hectares)	89	11	88	12	87	13
Large (> 10 hectares)	90	10	89	11	87	13
Karnataka	84	16	83	17	81	19

Source: Authors' calculations, Agricultural Census, 2000-01, 2005-06, 2010-11

The analysis above shows a mixed picture on asset ownership/operation status by gender. Based on the sex of the household head, incidence of home ownership is marked by few gender differences while operation of land holdings shows substantial differences in favour of men. Gender analysis of many development indicators is typically reduced to comparisons using headship categorizations[17] and this is primarily due to data limitations where information is collected only for households. This poses a serious disconnect for policymaking if welfare outcomes for individuals (particularly while considering income or assets) are determined based on household level data.

In the context of asset ownership, evidence suggests that estimates based on headship might either underestimate or overestimate the true extent of differences. Deere, Alvarado, and Twyman (2012) found in a study of eleven Latin American countries that gender analysis using headship would overestimate the extent of gender inequality in home ownership. The use of household level asset ownership information is also problematic for wealth analysis. For example, to arrive at individual measures of wealth, household wealth is divided by household size, which gives the per capita wealth of each household member. By treating all individuals within a household equally, intra-household inequality is underestimated since the share of those who actually own assets is reduced while the share of those who do not own assets is increased. This also leads to an underestimation of inequality in the overall population.

The KHAS dataset is unique in this respect since it has information on who within the household is the owner of each asset. This helps us arrive at the actual asset ownership and wealth status of every household member, which is then used to undertake sex disaggregated analysis at the individual level, This data shows that across all asset categories (with the exception of jewellery), the proportion of adult men owning assets

Based on the sex of the household head, incidence of home ownership is marked by few gender differences while operation of land holdings shows substantial differences in favour of men.

[17] *Exceptions are measures of human development like education and health which are usually available for individuals.*

was higher than that of adult women (Table 8.14). For immoveable property, the gender gap in incidence was substantial – 37% and 24% of men owned non-agricultural real estate and agricultural land respectively, while the comparable numbers for women were only 14% and 5%, respectively. In the case of livestock and agricultural tools and equipment, the gap was narrower largely because all household members were reported as owners, presumably based on access and use of these assets. Jewellery was the only asset where a larger proportion of women (50%) were owners compared to men (22%).

Table 8.14
Incidence of asset ownership for adult men and women (%), 2010-11

Asset categories	Rural		Urban		Total	
	Male	Female	Male	Female	Male	Female
All non-agricultural real estate	48	17	24	10	37	14
House	45	15	21	9	35	13
Other real eState	11	3	5	2	9	3
Agricultural land	37	8	6	1*	24	5
Marginal	17	4	2	0	11	3
Small	10	2	1	0	7	1
Semi-medium	6	1	2	0	4	2
Medium and Large	4	1	1	0	3	0
Livestock	63	57	7	6	39	36
Large stock	55	48	5	4	34	30
Small stock	14	12	1	1	9	8
Poultry	16	16	2	2	10	10
All agricultural tools and equipmen	87	83	18	18	58	56
Small agricultural tools	87	82	17	17	57	55
Big agricultural equipment	18	15	3	2	12	10
Non-farm economic activities	8	4	16	5	12	5
Select consumer durables						
Vehicles	35	20	41	21	37	20
Mobile phones	48	29	70	49	57	37
Jewellery	21	53	23	46	22	50

Source: Authors' calculations, Karnataka Household Asset Survey, 2010-11
** Due to rounding, the incidence of all agricultural land ownership by women is 1% whereas the categories of land ownership show 0.*

The gender gap is prevalent across both rural and urban areas (Table 8.14) as well as the survey districts (Table 8.15). The incidence of women's ownership of immoveable property was higher, and the gender gap narrower, in the coastal districts of Dakshina Kannada and Udupi compared to other districts. In these districts, some communities practise Aliyasantana, the matrilineal inheritance system where daughters are preferred over sons in inheritance. Here it is seen that 23% of adult women owned non-agricultural real estate and 12% owned agricultural land. In all other districts in the State, the traditional inheritance system widely practised is Makkalasantana where sons inherit property to the exclusion of daughters – this is reflected in the incidence of women's ownership, which is not more than 19% (Shivamogga district) for non-agricultural real estate, and not more than 8% (Kalaburagi district) for agricultural land.

The Hindu Succession Act, 1956, advocated equal rights to daughters and sons for self-acquired property, and its amendment in 2005 extended this equality to coparcenary property as well. Karnataka has had a longer tradition of gender equality since it was one of the few States that implemented equal rights for sons and daughters in certain types of property in 1994. However,, traditional and customary lineage and inheritance systems like the Aliyasantana and Makkalasantana continue to prevail in spite of awareness of the legislations alongside improvements in literacy, education and economic opportunities.

Across the districts, the average agricultural land area owned by women owners was 0.66 hectares compared to 0.94 hectares for men (Table 8.16). Even in Dakshina Kannada/Udupi, there was a considerable gender gap in favour of men in the average land area owned. Shivamogga and Tumakuru had both women and men owners with almost similar average land holdings sizes, although the incidence of ownership in both these districts showed only 6% of women owning land compared to much higher incidences for men (33% and 26% in Tumakuru and Shivamogga, respectively). This suggests a high concentration of land among few women owners in these two districts. All the other districts showed men land owners being in a more advantageous position than women land owners with respect to the size of the land owned. The size of the land holdings owned would naturally affect the value of the land and this is reflected in the average value of land owned by men and women owners, the former being about 1.4 times that of the latter for the State as a whole.

Karnataka has had a longer tradition of gender equality since it was one of the few States that implemented equal rights for sons and daughters in certain types of property in 1994.

Table 8.15
District level incidence of asset ownership by adult men and adult women (%), 2010-11

Asset categories	Bengaluru		Bidar		Dakshina Kannada/ Udupi		Gadag		Kalaburagi		Mysuru		Tumakuru		Shivamogga	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
All non-agricultural real estate	15	9	48	13	33	23	47	15	47	13	41	13	45	16	40	19
House	14	8	46	12	31	22	40	12	46	12	39	12	43	15	37	17
Other real estate	2	1	7	2	6	2	16	5	13	3	11	3	9	3	9	5
Agricultural land	3	0	32	6	17	12	39	7	38	8	27	5	33	6	26	6
Non-farm economic activities	11	2	8	2	12	4	11	4	12	6	9	4	9	5	12	7
Select consumer durables																
Vehicles	45	27	28	17	33	9	29	16	18	11	43	23	48	29	53	32
Jewellery	21	36	17	39	25	61	24	61	14	28	25	71	20	62	33	64

Source: Authors' calculations, KHAS 2010-11

Table 8.16
Average area and value of land owned by women and men by district, 2010-11[18]

District	Average area ^ (in hectares)		Average value ^ (in Rupees)	
	Men	Women	Men	Women
Bidar	1.03	0.71	2,76,088	2,02,301
Dakshina Kannada/Udupi	0.75	0.32	3,45,850	1,10,766
Gadag	1.37	0.74	2,38,446	1,23,008
Kalaburagi	1.43	1.06	4,79,750	2,38,632
Mysuru	0.53	0.49	4,56,652	2,75,123
Shivamogga	0.52	0.53	2,79,459	4,29,717
Tumakuru	0.60	0.60	2,84,046	2,48,297
Udupi	0.71	0.19	2,44,200	90,919
Karnataka	**0.94**	**0.66**	**3,54,503**	**2,57,108**

^ Mean area and value over adult men and women owners.
Source: Authors' calculations, KHAS 2010-11

[18] *Bengaluru is not included in this analysis since rural parts of the district were not covered by the survey.*

As explained earlier, asset values account for both quantity and quality of asset holdings which could show great variation between men and women. Comparing the share of total gross physical wealth held by women to the share held by men is one way to examine gender differences in the wealth status. Overall, women own only 21% of the total physical gross wealth (Table 8.17) with 20% share in rural areas and 22% share in urban areas. This skewed distribution is particularly evident with respect to high value assets such as agricultural land and non-agricultural real estate. Consumer durables like vehicles and mobile phones also show women own only 28% and 30% of the gross physical wealth, respectively. In the case of relatively lower value assets (livestock, agricultural tools, some consumer durables), the wealth distribution between women and men is less skewed although still aligned in favour of men.

Overall, women own only 21% of the total physical gross wealth (Table 8.17) with 20% share in rural areas and 22% share in urban areas. This skewed distribution is particularly evident with respect to high value assets such as agricultural land and non-agricultural real estate.

Table 8.17
Wealth shares of men and women across asset categories, 2010-11

Asset categories	Rural		Urban		Total	
	Male	Female	Male	Female	Male	Female
All non-agricultural real estate	76	24	79	21	78	22
House	76	24	80	20	79	21
Other real estate	78	22	70	30	72	28
Agricultural land	85	15	83	17	84	16
Marginal	77	23	91	9	77	23
Small	86	14	77	23	85	15
Semi-medium	88	12	56	44	81	19
Medium and Large	88	12	77	23	91	9
Livestock	53	47	56	44	54	46
Large stock	53	47	56	44	54	46
Small stock	52	48	49	51	51	49
Poultry	54	46	51	49	54	46
All agricultural tools and equipment	61	39	72	28	63	37
Small agricultural tools	53	47	55	45	53	47
Big agricultural equipment	62	38	72	28	63	37
Non-farm economic activities	87	13	97	3	96	4
All consumer durables	39	61	50	50	46	54
Vehicles	80	20	70	30	72	28
Mobile phones	74	26	67	33	70	30
Jewellery	19	81	32	68	27	73
Total physical assets	80	20	78	22	79	21

Source: Authors' calculations, KHAS 2010-11

Government housing programmes were relatively more in favour of women with 13% of owners having acquired their houses through these programmes compared to 9% of men.

One of the reasons for the vast disparities in asset ownership and wealth between men and women is the channels through which they acquire these assets. Data from the KHAS (Table 8.18) shows the incidence of these main modes of acquisition for the house for men and women owners. It is possible that the house was acquired through more than one channel but this was relatively infrequent and respondents typically tended to report the main mode of acquisition.[19] While 54% of men owners had inherited their homes, the comparable number for women owners was only 14%, which shows the prevalence of gender-based discrimination in spite of legislations that promote equality of the sexes in inheritance for the majority of the population (Hindus). Women owners were more likely to be reported as owners of houses which their spouses had inherited (19%), or themselves inherit only after the death of the spouse (20%), both of these channels being negligible in the case of men owners. These trends on inheritance reflect the patriarchal mindset that women 'belong' to the marital home rather than the natal home and are therefore cut out of their rightful shares in property equivalent to that of their male siblings.

Relative to inheritance, acquisition through purchase of property showed a lower incidence for both men and women. Here again, we see gender differences in play, since the proportion of men owners being able to participate in their housing market using their own earnings was more than twice that of women owners. Women owners were as likely to report the use of their own earnings as the earnings of their spouses and other household members in the purchase of their houses. This reveals both women's lower workforce participation rates as well as disadvantages that they face in the labour market in terms of wage rates. Government housing programmes were relatively more in favour of women with 13% of owners having acquired their houses through these programmes compared to 9% of men. This is not surprising as these programmes mandate the registration of the houses provided in women's names either individually or jointly.

[19] *Only 4% of the houses owned had more than one mode of acquisition reported. The majority of these cases were combinations of loans through government programmes and construction using own resources, as well as the inheritance of the house in combination with additional construction with own resources.*

Table 8.18
Incidence of key modes of acquisition of dwelling by men and women owners (%), 2010-11

Modes	Men owners	Women owners
Natal inheritance of self	54	14
Natal inheritance of spouse	2	19
Inheritance from dead spouse	0	20
Purchased/built using some own earnings	35	16
Purchased/built using earnings of spouse/other household members	1	16
Government housing programmes	9	13

Source: Authors' calculations, KHAS 2010-11

Conclusion and Recommendations

Assets are important for human development. They have a bearing on the economic and social status of households and individuals. Thus, the extent of inequalities that we find in asset ownership patterns and wealth distribution is suggestive of the notion that the rising tide has not lifted everyone in Karnataka. Much remains to be achieved to in terms of ensuring equitable growth and particularly targeting the vulnerable groups like SC, STs and women. The State housing programmes have shown a measure of success, but more focus needs to be given to the quality of housing, and ensuring access to basic facilities such as sanitation for all. Land reforms, which have practically been wiped out of the policy discourse need to be re-examined and adapted to the current context.

In the light of the high degree of wealth inequality, it is timely to re-kindle the notion of an estate tax (tax on the total wealth of a person at the time of his/her death). There existed a central legislation in India, the estate Duty Act, which was in effect from 1963 to 1985. This Act sought to reduce wealth inequalities by levying a duty on the estate of a deceased individual. The main objective was to bridge the gap between those who were fortunate enough to inherit wealth and those who were not, since the differences in opportunities available to these two groups is one of the main drivers of the vast differences in human development outcomes. However,, many types of properties as well as transfers were excluded under the Act, which enabled rampant evasion. Further, the Act failed to generate duties commensurate to the administrative costs of implementing it and it was therefore eventually abolished.[20]

Much remains to be achieved to in terms of ensuring equitable growth and particularly targeting the vulnerable groups like SC, STs and women.

The analysis in this chapter suggests inheritance is the dominant form of

[20] *http://indianexpress.com/article/opinion/columns/death-and-taxes/; http://www.dnaindia.com/mumbai/report-it-s-a-bad-time-to-bring-back-eState-duty-1801388; http://thewire.in/2016/02/15/the-case-for-reintroducing-inheritance-tax-21645/ (Last accessed at 3.30 p.m. on June 3, 2016).*

acquisition of high valued assets. What this essentially means is that there are intergenerational transfers of economic and social opportunities for the wealthiest households, with reduced opportunities for others. This would lead to a widening of wealth disparities. Globally, some form of estate duty is often used as a policy tool for smoothening wealth distribution in the population.[21] Piketty (2014) recommends a global tax on inheritance in combination with progressive wealth taxes to bridge the gap, especially in countries which have never had or have done away with such taxes. A review of the pros and cons of such a tax and its efficacy in reducing wealth disparities should be undertaken by the Government.

Thus, programmes that facilitate asset creation or generate income should keep intra-household dynamics in mind. State interventions should bear in mind not only vulnerable households but also vulnerable individuals, who may reside in non-vulnerable households, in their programme design.

A key recommendation for the government is to strengthen data collection mechanisms which can feed into monitoring and evaluation of policies and programmes as well as for tracking development indicators. Evaluation of any scheme is not possible without individual level data on the beneficiaries. For example, even the State housing programmes on which some data exists, do not consistently provide for information on the physical and financial targets and achievements disaggregated by the sex of the beneficiary. This makes it challenging to monitor and evaluate the performance of key schemes aimed at improving the economic status of women.

Individual level data can shed light on hitherto unexamined aspects of inequality. Using KHAS data, we find unacceptably high levels of inequality among people, which is not evident when using standard household survey data. To illustrate, using KHAS data, the per capita method of wealth allocation (as has been undertaken in this chapter to facilitate comparison with the AIDIS) yields a Gini coefficient of 0.67 for rural Karnataka, but a significantly higher Gini coefficient of 0.90 when computed with individual wealth information.

Further, individual level data can provide insights on intra-household disparities in resource allocation. Using KHAS data it is seen that, in a sample of couples, almost 32% of total wealth inequality is attributed to intra-household inequality (Malghan and Swaminahtan 2015). Thus, programmes that facilitate asset creation or generate income should keep intra-household dynamics in mind. State interventions should bear in mind not only vulnerable households but also vulnerable individuals, who may reside in non-vulnerable households, in their programme design.

Collecting individual level data at regular intervals is also essential for a better understanding of gender inequality as it helps policy makers go beyond an analysis based on headship status. The Sustainable Development Goals under Goal 5 (gender equality) refers to undertaking reforms to give women equal rights to economic resources including property. Specifically, with respect to assets, Karnataka has been a pioneer

[21] *http://taxfoundation.org/article/eState-and-inheritance-taxes-around-world. (Last accessed at 3.30 p.m. on June 3, 2016).*

in such reforms, at least for the majority of women living in the State. However,, the incidence of property ownership by women suggests that legislative changes have not made any substantive impact on social norms and processes over more than two decades. The implementation of the amended HSA (2005) has also been patchy. The Government needs to conduct legal awareness and gender sensitisation programmes for men and women to ensure that the law is implemented in letter and spirit.

With disaggregated data, indicators of women's property ownership vis-à-vis men's can be constructed which can then be monitored over time. Bhoomi, the Government of Karnataka's initiative to computerize land records, and only initiative of its kind in India, is an excellent example of individual level data. Analysis of Bhoomi data shows measures of the gender land gap in Karnataka (Table- 8.19).

The government also needs to address the regional imbalance prevailing in the State. Given the economic growth patterns over the last two decades, the metropolitan regions of Bengaluru are disproportionately wealthy compared to the rest of the State, and even within Bengaluru, there are glaring wealth disparities. This inequitable growth simultaneously adds pressure on urban infrastructure while depriving other regions of economic opportunities. Initiatives to stimulate asset creation in a sustainable manner need to be intensified in all parts of the State to ensure a better spread of prosperity.

Appendix 1 - Gender land gap using the Bhoomi database

In 2001, the Bhoomi Project was introduced in Karnataka by the State Revenue Department to computerize the maintenance of land records, specifically the Record of Rights, Tenancy, and Crops (RTC). The main objective of the programme is to periodically update data on land ownership, transfers and mutation therein, details on tenancy, and cropping patterns and make it easily accessible to the farmers and other users. It also makes the records tamper-proof and helps create a master database of land revenue and land use in the State.

Using Bhoomi data at the plot level, it is possible to analyse the gendered distribution of agricultural land ownership. The measure of gender disparity considers all agricultural plot owners in the State or a given district and examines what percentage are men and women. The findings are similar to those from the KHAS data examined in the chapter; there is a significant gender gap in favour of men in the ownership of agricultural land holdings. Women are largely underrepresented as plot owners constituting only 20% of all plot owners in the State, and ranging from a low of 7% in Belagavi to a high of 47% in Udupi. Tracking this data on a regular basis would be useful to monitor the State's commitments to achieving gender equality in agricultural land ownership.

This inequitable growth simultaneously adds pressure on urban infrastructure while depriving other regions of economic opportunities. Initiatives to stimulate asset creation in a sustainable manner need to be intensified in all parts of the State to ensure a better spread of prosperity.

Table 8.19
Distribution of agricultural plot owners by sex for select districts (%)

District	% men	% women
Udupi	53	47
Dakshina Kannada	66	34
Chikkaballapura	70	30
Uttara Kannada	73	27
Bagalkote	78	22
Dharwad	79	21
Chitradurga	79	21
Shivamogga	81	19
Bengaluru Urban	81	19
Ballari	81	19
Chamarajanagara	81	19
Davangere	81	19
Mandya	82	18
Hassan	82	18
Mysuru	82	18
Koppal	83	17
Chikkamagaluru	83	17
Bengaluru Rural	83	17
Vijayapura	83	17
Tumakuru	83	17
Ramanagara	84	16
Raichur	84	16
Kalaburagi	84	16
Gadag	85	15
Bidar	86	14
Kolar	86	14
Kodagu	87	13
Haveri	88	12
Yadgir	91	9
Belagavi	93	7
KARNATAKA	80	20

Source: Authors calculations, Bhoomi Database, 2012, Government of Karnataka

Poverty and Inequality

Chapter-9

Poverty and Inequality

Introduction

This chapter provides a comprehensive analysis of changes in the economic well-being of overall as well as subgroups of population of India vis-avis Karnataka based on the real per capita expenditure. The analysis provided in this chapter enables us to understand whether there has been any significant improvement in the economic welfare of all the subgroups of the population in rural and urban areas and also shown that the gains of welfare are equally shared. The analysis is based on National Sample Survey (NSS) data on consumer expenditure. We begin with a comprehensive assessment of the performance of States in the post-reform period in terms of growth as well as reduction of income poverty and multiple deprivations with more emphasis on Karntaka. Using interState data for 1993–94, 2004–05, and 2011–12, we investigate whether there is any systematic relationship between growth and poverty and also between growth and inequality. We also analyse relative poverty at regional level in Karnataka among different social, religious and occupational group. The analysis will help us in understanding the proximate and structural factors underlying poverty and in equality. we discuss pathways for Karnataka for hastening the process of poverty reduction.

InterState Growth Disparities and Poverty Reduction: Position of Karnataka Vis-à-vis other States

9.1 Per Capita Gross State Domestic Product

There are substantial interstate variations in per capita GSDP as well as in growth rates (Table 9.1). It can be observed from the Table-9.1 that a disquieting characteristic of the growth process in the post-reform period is the widening regional inequality. This may act as a barrier to inclusive growth. The interstate inequality in per capita State domestic product had worsened. The States' experiences demonstrate a lack of inclusiveness in the growth process.

A disquieting characteristic of the growth process in the post-reform period is the widening regional inequality. This may act as a barrier to inclusive growth. The interstate inequality in per capita State domestic product had worsened.

Table 9.1
Per capita income and its annual growth rates across the States during 1993-94 and 2011-12 (at 2011-12 prices)

States	1993-94(Rs.)	2011-12(Rs.)	Annual Growth Rate(%)
Andhra Pradesh	31157	78136	5.2
Arunachal Pradesh	41560	73082	3.2
Assam	30162	41154	1.7
Bihar	11520	21918	3.6
Chhattisgarh	32285	55177	3.0
Goa	76363	258666	7.0
Gujarat	32771	85814	5.5
Haryana	44170	107343	5.1
Himachal Pradesh	37334	87721	4.9
Jammu & Kashmir	37295	51382	1.8
Jharkhand	26017	41254	2.6
Karnataka	**39220**	**89717**	**4.7**
Kerala	38155	97912	5.4
Madhya Pradesh	17386	36658	4.2
Maharashtra	44392	98910	4.6
Manipur	26688	37589	1.9
Meghalaya	29066	59754	4.1
Nagaland	24804	51314	4.1
Odisha	23402	47019	4.0
Punjab	47931	85577	3.3
Rajasthan	25790	57427	4.5
Tamil Nadu	35834	93042	5.4
Uttar Pradesh	20170	31886	2.6
Uttarakhand	34442	101128	6.2
West Bengal	25291	61554	5.1
Andaman & Nicobar Islands	36662	81283	4.5
Chandigarh	57630	159117	5.8
Delhi	76033	185044	5.1
Puducherry	37931	119649	6.6
All India	**28369**	**63460**	**4.6**

Source: CSO for various Years

9.2 State and Location wise Poverty Estimates

Empirical discussions on the estimates of poverty revolve around the issue of poverty line and poverty measure. With respect to the second issue i.e., the poverty measure the path breaking work on measurement of poverty by Prof. Amarthya Sen (1976), has changed the way poverty is measured among researchers. It is now well accepted that a poverty measure should not only consider incidence of poverty but also the other aspects like depth and severity of poverty. Even though Sen's measure generated lots of theoretical discussions for empirical application it was not quite well adopted due to complexities in the computation procedure. Foster Greer and Thorbecke (1984), introduced a class of poverty measures having the formula, $P_a = {}^1/_n \sum^q \left(\frac{Z-Yi}{Z}\right)^a$ where Z is the poverty line Yi is income of i^{th} individual, n is the total population, q is the number of poor and $a \geq 0$ is a poverty aversion parameter and it is commonly known as FGT index, where head count ratio(HCR), Poverty Gap Index (PGI) and Squared Poverty Gap Index (SPGI) are specific cases[1] which address incidence, Depth and severity issues of poverty. These measures are widely accepted and almost all empirical works on poverty adopts these three measures which are easy to compute and understand. With respect to the first issue i.e., determination of poverty line there is a long history. In India poverty line started with Rs. 20 per capita per month in 1960-61 by perspective planning division and subsequently Rs. 49.09 in Rural areas and Rs.56.65 in Urban areas by planning commission which are based on 2400 Kcal and 2100 Kcal per day requirements in Rural and Urban areas respectively at 1973-74 market prices. Even though these lines were extensively used in the Indian poverty literature, several problems were raised by the researchers over the period not only with respect to the Planning commission's poverty line but also price index used to update these poverty lines. In order to take care of the problems thus, raised by the researchers planning commission set up a committee with Late Prof. Suresh Tendulkar as the chairperson and they came out with the set of poverty lines for 1993-94, 2004-05, 2009-10 and subsequently for 2011-12. Several representations were made by researchers suggesting that Tendulkars poverty line is too low. To review the methodology Committee was constituted under the chairmanship of Dr. C. Rangarajan. Rangarajans committees poverty line estimate is 40.7% more in urban areas and 19.1% more in rural areas than Tendulkars committee estimate. Though Rangarajans committee submitted its report in 2014, since Indian Government has still not adopted the results, here we use only Tendulkars poverty line estimates.

Poverty line as per Tendulkar methodology is expressed as MPCE based on Mixed Reference Period. For 2011-12, for rural areas national poverty line is Rs. 816 per capita per month and Rs. 1000 for urban areas. The corresponding figures for Karnataka are Rs. 902 in rural areas and Rs. 1089 for urban areas, which are slightly higher than national average. All the members whose MPCE is below the poverty line are poor and

In India poverty line started with Rs. 20 per capita per month in 1960-61 by perspective planning division and subsequently Rs. 49.09 in Rural areas and 56.65 in Urban areas by planning commission which are based on 2400 Kcal and 2100 Kcal per day requirements in Rural and Urban areas respectively at 1973-74 market prices.

incidence of poverty(head count ratio) is percentage of poor in total. Table 9.2 provides the poverty estimates for the year 2011-12 across States. It can be seen from the table that Karnataka Stands 13th position among 20 major States and has highest poverty among southern States both in Rural and Urban areas. Even though in terms of incidence of poverty Karnataka ranks 13th, it takes 11th position in terms of Depth of poverty (i.e., as per poverty Gap Index (PGI)) and 10th position in terms of severity of poverty (i.e., as per SPGI) (see Appendix Table 9.25).

Table 9.2
Percentage of Population below Poverty Line by States: 2011-12

Sl. No	State	Rural	Urban	Total
1	Andhra Pradesh	10.96	5.81	9.2
2	Assam	33.89	20.49	31.98
3	Bihar	34.06	31.23	33.74
4	Chattisgarh	44.61	24.75	39.93
5	Gujarat	21.54	10.14	16.63
6	Haryana	11.64	10.28	11.16
7	Himachal	8.48	4.33	8.06
8	Jammu & Kashmir	11.54	7.2	10.35
9	Jharkhand	40.84	24.83	36.96
10	**Karnataka**	**24.53**	**15.25**	**20.91**
11	Kerala	9.14	4.97	7.05
12	Madhya Pradesh	35.74	21	31.65
13	Maharashtra	24.22	9.12	17.35
14	Odisha	35.69	17.29	32.59
15	Punjab	7.66	9.24	8.26
16	Rajasthan	16.05	10.69	14.71
17	Tamil Nadu	15.83	6.54	11.28
18	Uttarakhand	11.62	10.48	11.26
19	Uttar Pradesh	30.4	26.06	29.43
20	West Bengal	22.52	14.66	19.98
All India		**25.7**	**13.7**	**21.92**

Source: Press Note on Poverty Estimates, 2011-12, Government of India Planning Commission, July 2013.

9.3 Interstate Variations in Poverty Reduction

There are substantial interstate variations in the performance in poverty reduction. States such as Goa, **Kerala,** Himachal Pradesh, **Andhra Pradesh,** Sikkim, **Tamil Nadu**, Punjab, Haryana, Meghalaya and Uttarakhand performed better (Table 9.3) whereas it is worth noting that Karnataka performed moderately in the incidence of poverty in the post-reform period.

Table 9.3
Incidence and Performance of states in Poverty Reduction between 1993-94 and 2011-12 (% reduction in poverty)

Best Performing States No			Moderate Performing Sates			Worst Performing States		
State	1993–94	2011–12	State	1993–94	2011–12	State	1993–94	2011–12
Goa	20.7	5.1	Puducherry	24.7	9.7	Bihar	60.4	33.7
Kerala	31.3	7.1	Jammu and Kashmir	26.3	10.4	Manipur	65.2	36.9
Himachal Pradesh	34.7	8.1	Maharashtra	47.7	17.4	Uttar Pradesh	48.4	29.4
Andhra Pradesh	44.6	9.2	Rajasthan	38.3	14.7	Jharkhand	60.7	37.0
Sikkim	31.8	8.2	Tripura	32.9	14.1	Assam	51.8	32.0
Tamil Nadu	44.5	11.3	Gujarat	37.8	16.6	Arunachal Pradesh	54.5	34.7
Punjab	22.4	8.3	Karnataka	49.5	20.9	Madhya Pradesh	44.0	31.7
Haryana	35.9	11.2	West Bengal	39.4	20.0	Chhattisgarh	50.9	39.9
Meghalaya	35.2	11.9	Delhi	15.7	9.9	Nagaland	20.4	18.9
Uttarakhand	32.1	11.3	Odisha	59.1	32.6	Mizoram	11.8	20.4
All India	45.1	21.9						

Note: Performance of the States in poverty reduction is arranged from the best performed to the least performed. Figures are the percentage of poor in respective States/union territories based on the official poverty line. Performances as suggested by Kakwani (1993) is measured by computing performance index:
$\{Ln(P_{1993-94} - P_{2011-12}) - Ln(P_{2011-12} - P_{min})\} / Ln(P_{max} - P_{min})$.
The maximum and minimum values of poverty considered are: 66% and 5% respectively.

9.4 Growth and Poverty Reduction

Table-9.4 demonstrates that growth would tend to reduce poverty. However,, there are some outliers. Cross classification of States on the basis of their ranking on growth and poverty reduction shows that 15 of the 29 States fall on the diagonal cells (Table 9.4). The positive outliers on poverty reduction, namely, Punjab, Himachal Pradesh, Haryana and Meghalaya performed better in poverty reduction compared to their growth. The negative outliers, Madhya Pradesh and Nagaland, performed worst in poverty reduction though their growth was moderate. Clearly, in these States, growth did not trickle down to the poor. It is to be noted that Karnataka performed moderately as far as growth and poverty reduction is concerned.

It is to be noted that Karnataka performed moderately as far as growth and poverty reduction is concerned.

Table 9.4
Classification of States by Growth and Poverty Reduction: 1993-94 to 2011-12

Growth rate of percapita Income (1993-94 to 2011-12)	Performance in poverty Reduction (1993-94 to 2011-12)		
	Best	Moderate	Worst
Best	Goa, Pondicherry, Tamil Nadu, Kerala, Andhra Pradesh	Uttar Pradesh, Gujarat, West Bengal, Delhi	Nil
Moderate	Haryana, Himachal Pradesh, Meghalaya	Karnataka, Maharastra, Rajasthan, Orissa	Madhya Pradesh, Nagaland
Worst	Punjab	Jammu & Kashmir	Bihar, Arunachal Pradesh, Chattisgarh, Uttara Pradesh, Manipur, Assam

Source: Classified based on CSO and NSSO data

9.5 Poverty among Social Groups

Distribution of the poor and population by social groups shows that for all-India, the ST households accounted for 17.4% of the poor against 8.9% of their share in the population; SC households accounted for 25.4% of the poor against 19% of their population, and Other Backward Class (OBC) households accounted for 41.4% of the poor against 44.1% of the population. In Karnataka, the ST households accounted for 8.7% of the poor against 5.8% of their share in the population; SC households accounted for 26.2% of the poor against 16.7% of their population and Other Backward Class (OBC) households accounted for 47.2% of the poor against 53.1% of the population (Table 9.5).

Table 9.5
Percentage Distribution of Poor and Persons by Social Group at State Level, 2011–12

State/UT	% Share of Poor to Total Poor					% Share of Persons to Total Persons				
	ST	SC	OBC	Others	All	ST	SC	OBC	Others	All
Andhra Pradesh	16.1	25.4	43.2	15.3	100	6.5	18.5	49.8	25.2	100
Arunachal Pradesh	65.5	0.5	13.8	20.2	100	69.3	1.3	6.5	22.9	100
Assam	15.4	8.5	28.0	48.0	100	15.5	9.7	27.7	47.1	100
Bihar	2.7	26.8	58.6	11.9	100	1.7	17.9	62.6	17.8	100
Chhattisgarh	42.2	17.7	38.2	1.8	100	33.4	15.3	43.6	7.6	100
Delhi	0.0*	39.6	17.6	42.8	100	2.8	21.0	19.3	56.9	100
Goa	0.0*	25.4*	31.7	42.9	100	6.4	4.2	16.4	73.0	100
Gujarat	38.3	7.2	43.8	10.8	100	18.1	6.6	41.8	33.5	100
Haryana	0.5*	49.4	33.4	16.7	100	0.6	23.0	28.2	48.1	100
Himachal Pradesh	8.3	45.5	6.6	39.7	100	7.2	23.0	18.9	50.8	100

Jammu and Kashmir	13.7*	20.5	8.3	57.6	100	9.5	11.6	12.3	66.7	100
Jharkhand	32.9	16.2	41.7	9.3	100	24.8	15.0	45.1	15.1	100
Karnataka	**8.7**	**26.2**	**47.2**	**18.0**	**100**	**5.8**	**16.7**	**53.1**	24.4	100
Kerala	6.6*	18.5	58.3	16.6	100	1.4	9.3	66.1	23.2	100
Madhya Pradesh	38.3	21.4	31.0	9.3	100	23.0	17.3	41.9	17.8	100
Maharashtra	28.2	17.5	28.6	25.7	100	9.0	15.4	34.1	41.6	100
Manipur	39.5	4.6	46.1	9.8	100	34.2	3.8	53.9	8.1	100
Meghalaya	96.0	0.0	0.1	3.9	100	90.9	0.3	0.8	8.0	100
Mizoram	87.3	0.0	10.2	2.4	100	94.3	0.3	3.4	2.0	100
Nagaland	94.1	1.5	1.9	2.4	100	94.7	1.8	0.9	2.6	100
Odisha	40.5	26.0	25.9	7.6	100	21.3	22.0	35.6	21.2	100
Puducherry	2.3	25.2	65.4	7.1	100	0.7	13.0	76.4	9.9	100
Punjab	0.3	72.8	13.6	13.3	100	0.4	38.5	13.8	47.3	100
Rajasthan	41.4	24.5	29.6	4.5	100	15.2	19.3	47.4	18.1	100
Sikkim	36.4	10.6*	49.3	3.7	100	42.3	5.3	45.6	6.8	100
Tamil Nadu	2.7	33.8	63.2	0.4	100	1.2	20.8	75.3	2.6	100
Tripura	62.1	15.0	5.6	17.3	100	37.4	19.6	16.4	26.6	100
Uttar Pradesh	1.0	33.0	57.2	8.8	100	1.2	23.8	54.4	20.7	100
Uttarakhand	4.7	28.2	26.3	40.8	100	4.0	21.6	18.6	55.8	100
West Bengal	12.1	28.7	8.2	51.1	100	5.0	27.2	9.2	58.6	100
All India	**17.4**	**25.4**	**41.4**	**15.8**	**100**	**8.9**	**19.0**	**44.1**	28.0	100

**Due to small sample size of NSS the reliability of the estimates of these groups is less.*
Source: Ongoing CESS study.

9.6 Consumption Pattern and Inequality

National Sample Survey (NSS) collects data on Uniform Reference Period (URP) i.e., 30 days reference period for all items and Mixed Reference Period (MRP) i.e., 365 days reference period for items with low frequency of purchase (clothing, footwear, durables, education and institutional health care) and 30 day reference period for all the remaining items of household consumption. In all the four round mentioned above i.e., 55th, 61st,, 66th and 68th[2] the information was collected by MRP and they are comparable. Since MRP is better and preferred to URP in the current study all our estimates i.e., average consumption expenditure, Inequality and poverty estimates are all based on the MRP per capita monthly consumption expenditure.

Table 9.6 presents mean per capita expenditure and Gini co-efficient, measure of inequality, across State for 2011-12. From the figures we see that mean consumption in Karnataka is higher than the national average both in rural and urban areas. In rural areas, Karnatakas per capita consumption is quite low and it stands in the 12th position and mean consumption being less than all the southern States. However, in Urban areas Karnataka stands in 5th position, mostly because of Bengaluru city, and has better mean consumption expenditure

we see that mean consumption in Karnataka is higher than the national average both in rural and urban areas.

than other southern States, except Kerala. However, it is quite disappointing to note that, inequality in urban areas is highest in Karnataka, again may be due to Bengaluru city. Even in rural areas inequality is quite high but better than our neighboring States Kerala and Tamil Nadu.

Table 9.6
Mean per capita consumption and inequality across States of India 2011-12

States	Gini Co-efficient			Mean Per capita Expenditure		
	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	0.249(13)	0.317(16)	0.304(13)	1563.2 (7)	2559.3 (7)	1889.8 (8)
Assam	0.216(19)	0.353 (9)	0.263(19)	1057.0(15)	2090.2(14)	1164.8(16)
Bihar	0.208(20)	0.287(20)	0.225(20)	970.4 (17)	1396.7(20)	1011.4(20)
Chattisgarh	0.247(14)	0.397 (4)	0.326 (8)	904.2(20)	1776.2(19)	1090.5(18)
Gujarat	0.253(11)	0.290(19)	0.311(10)	1430.1(11)	2472.5(10)	1852.4(9)
Haryana	0.254(9)	0.390(6)	0.333(6)	1926.0(3)	3346.3(1)	2355.3(3)
Himachal Pradesh	0.279(3)	0.337(14)	0.305(12)	1800.6(4)	3173.3(2)	1949.2(6)
Jammu & Kashmir	0.252(12)	0.308(18)	0.281(17)	1601.5(5)	2320.3(12)	1762.5(11)
Jharkhand	0.217(18)	0.344(12)	0.303(14)	919.6(18)	1894.4(16)	1120.8(17)
Karnataka	**0.268(5)**	**0.417(1)**	**0.388(1)**	**1395.1(12)**	**2898.9(5)**	**1940.2(7)**
Kerala	0.363(1)	0.398(3)	0.379(2)	2355.5((1)	3044.2(3)	2536.5(1)
Madhya Pradesh	0.267(6)	0.371(7)	0.330(7)	1024.1(16)	1842.3(17)	1232.8(15)
Maharastra	0.259(8)	0.368(8)	0.371(3)	1445.9(9)	2937.1(4)	2128.3(4)
Orissa	0.239(16)	0.353(10)	0.299(16)	904.8(19)	1830.3(18)	1044.6(19)
Punjab	0.276(4)	0.323(15)	0.302(15)	2136.4(2)	2743.1(6)	2356.3(2)
Rajasthan	0.233(17)	0.315(17)	0.273(18)	1445.7(10)	2206.9(13)	1626.0(12)
Tamil Nadu	0.282(2)	0.337(13)	0.336(5)	1570.6(6)	2534.3(8)	2000.2(5)
Uttar Pradesh	0.254(10)	0.415(2)	0.324(9)	1072.9(14)	1942.2(15)	1258.4(14)
Uttaranchal	0.261(7)	0.351(11)	0.308(11)	1551.4(8)	2452.0(11)	1778.8(10)
West Bengal	0.241(15)	0.392(5)	0.347(4)	1170.1(13)	2489.9(9)	1521.4(13)
Total	**0.287**	**0.377**	**0.359**	**1287.2**	**2477.0**	**1627.2**

Source: Estimated based on NSSO Unit level data

However, it is quite disappointing to note that, inequality in urban areas is highest in Karnataka, again may be due to Bengaluru city.

Table 9.7 presents the per capita expenditure and inequality over the years 1993-94 to 2011-12. All the figures are converted into 2011-12 prices so they become comparable. Table clearly indicated a growth in rural per capita consumption over the years both at Karnataka and national level. However, urban area had a fall in 2004-05 and then it subsequently increased. However, inequality in urban areas grew substantially in Karnataka from 0.30 gini co-efficient to 0.42. On the other hand inequality in rural areas in Karnataka was more or less stable around 0.24 during 1993-94 to 2009-10 and rose marginally to 0.27 in 2011-12.

Table 9.7
Trends in Mean consumption and inequality

Per capita Monthly Mean Consumption Expenditure in Rs. (2011-12 prices)								
	1993-94		2004-05		2009-10		2011-12	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Karnataka	910.4	1590.6	1172.0	1563.2	1272.4	1862.6	1395.1	2898.9
All India	884.3	1508.5	1058.1	1449.0	1156.0	1607.2	1287.2	2477.0
Gini Co-efficients								
	1993-94		2004-05		2009-10		2011-12	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Karnataka	0.2383	0.3045	0.2458	0.3315	0.2371	0.386	0.2678	0.4168
All India	0.2547	0.3203	0.2809	0.3234	0.2832	0.3805	0.2875	0.3769

Source: Estimated based on NSSO Unit level data

9.7 Status of Child Poverty

Rural Poverty is concentrated in States Bihar, Jharkhand, Orissa, Madhya Pradesh and chattisgarh, whereas Urban poverty is concentrated in Bihar, Chattisgarh, Jharkand and Uttar Pradesh. These differences in prevalence of poverty get reflected in the proportion of poor children across various States. It is disheartening to see that in quite few States more than 40% of the children are in absolute poverty. Children experience poverty differently from adults. The experience is more than a simple material poverty. The lack of household economic need pushes children into child labour and in turn deprives them of right to education and recreation, making children experience mental poverty. UNICEF puts this as "Children living in poverty experience deprivation of the material, spiritual and emotional resources needed to survive, develop and thrive, leaving them unable to enjoy their rights, achieve their full potential or participate as full and equal members of society". From Table 9.8 one cannot get a direct link between child poverty and child labour. Though in rural areas Jharkhand had highest child labour and poverty it is not true across most of the States. Even at household level the picture is not very clear. Juxtaposing child poverty and child labour at household level one can see that, in rural areas among the children in labour only 48% of them belonged to poverty household and rest 52% are from the households not in poverty **(see Table 9.26).** The figures are little higher in the case of urban areas, where 65% of children in labour force are coming from households not in poverty. The reasons could be two fold, due to definitional issues NSS survey may miss out most of the child labour. The other reason could be that the income earned by the children may be lifting the household above poverty line.

Table 9.8
Status of Child poverty and Child Labour - 2011-12

States	Child Poverty			Child Labour (5-14 years)		
	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	14.5	8.5	12.5	2.1	0.5	1.6
Assam	39.3	23.4	37.9	0.4	0.7	0.5
Bihar	40.4	39.3	40.3	0.6	0.5	0.6
Chattisgarh	50.7	31.3	46.8	0.9	0.9	0.9
Gujarat	26.9	14.3	22.5	2.1	1.2	1.7
Haryana	16.1	13.3	15.3	0.2	0.2	0.2
Himachal Pradesh	10.4	6.7	10.0	0.2	0.0	0.2
Jammu & Kashmir	15.8	10.3	14.7	0.9	0.4	0.8
Jharkhand	45.8	32.6	43.5	3.3	1.1	2.9
Karnataka	**31.7**	**20.5**	**27.8**	**1.6**	**0.3**	**1.2**
Kerala	9.1	6.0	8.4	0.0	0.2	0.1
Madhya Pradesh	39.9	28.0	37.3	0.7	0.4	0.6
Maharastra	31.8	13.1	23.9	1.8	0.3	1.1
Orissa	44.4	21.5	41.1	1.3	2.2	1.4
Punjab	10.5	15.0	12.1	1.2	0.7	1.0
Rajasthan	21.4	14.4	20.0	1.6	0.7	1.4
Tamil Nadu	18.3	8.8	14.2	0.4	0.2	0.3
Uttar Pradesh	37.2	31.8	36.2	2.1	2.5	2.1
Uttaranchal	13.7	11.5	13.2	1.2	0.5	1.0
West Bengal	29.9	23.0	28.5	2.0	7.3	3.2
Total	**32.1**	**19.2**	**28.9**	**1.4**	**1.2**	**1.4**

Source: Estimated based on NSSO Unit level data

Here one can see a link between child poverty and child labour (Table 9.9). Regions with high child poverty are the regions where high child labour is found except Inland eastern in rural areas.

In Karnataka, child labour was quite high in rural areas and this is attributed mainly to backward region of the State.[3] Here one can see a link between child poverty and child labour (Table 9.9). Regions with high child poverty are the regions where high child labour is found except Inland eastern in rural areas. Inland eastern region is mainly a malnad region dominated with plantation crops. Cropping pattern attracts migrated labour leading to more child labour. Inland Northern, where most of the districts are in dry land belt and industrially backward, witnessed high incidence of child poverty and child labour.

Table 9.9
Region wise Incidence of child poverty and child labour Karnataka 2011-12

Region	Rural		Rural	
	Incidence of child poverty	Child labour	Incidence of child poverty	Child labour
Coastal & Ghats	13.7	0.0	13.0	0.1
Inland Eastern	15.7	1.2	25.4	0.1
Inland Southern	17.1	0.1	3.2	0.0
Inland Northern	42.0	2.5	42.1	0.7
State	31.7	1.6	20.5	0.3

Source: Estimated based on NSSO Unit level data

9.8. Comparative Assessment of Well-being Across Indian States

Recent household surveys show the worst forms of deprivation. Data from the NFHS-4 of 2015–16 of Karnataka, and District Level Household Survey on Reproductive Health (DLHS) of 2012–13 of Karnataka provide useful information on basic deprivations. As many as 36% of children under five years of age suffered from malnutrition (stunted) and 61% of children (aged 6–59 months) suffered from anaemia (NFHS-4). For instance, 36% of children were not fully immunized and 22% did not receive a vitamin A dose in the last six months prior to the NFHS. The position was equally dismal for women and adolescent girls (10–19 years): 43% of ever married women suffered from anaemia and 57% adolescent girls suffered from severe and moderate anaemia (DLHS). Households' access to basic amenities was equally bad. According to DLHS-4, 50% did not have toilet facility. These data suggest that the incidence of non-income poverty is much more alarming than the incidence of income poverty.

Table 9.10 ranks the States on inverse of deprivation index, inverse of income poverty, and per capita GSDP. It is evident that all the three indicators showed more or less similar ranking across States. However, there are some outliers. It is observed that Gujarat, Haryana and Maharashtra though ranked high on per capita GSDP, had a middle position in the ranking on inverse of incidence of poverty and inverse of deprivation. Among the Southern States Karnataka ranked 13 on per capita GSDP, incidence of poverty is high. Overall in all the three index rank, Karnataka performed moderately.

Among the Southern States Karnataka ranked 13 on per capita GSDP, incidence of poverty is high. Overall in all the three index rank, Karnataka performed moderately.

Table 9.10
Ranking of States based on Inverse of Deprivations, Inverse of Incidence of Poverty and Real Per capita GSDP

Region	Average PerCapita GSDP (2009-12) Rank	Inverse of Incidence of Poverty 2011-12 Rank	Inverse of Deprivation Index Rank	Board Rank
Goa	1	1	2	1
Delhi	2	8	1	3
Puducherry	3	7	NA	4
Kerala	4	2	4	2
Maharashtra	5	17	12	11
Gujarat	6	16	15	12
Haryana	7	10	9	8
Punjab	8	5	6	6
Sikkim	9	4	3	5
Tamil Nadu	10	12	5	9
Himachal Pradesh	11	3	7	7
Andhra Pradesh	12	6	14	10
Karnataka	**13**	**20**	**16**	**15**
Uttar Pradesh	14	21	24	22
Arunachal Pradesh	15	26	17	20
West Bengal	16	19	18	18
Tripura	17	14	10	13
Meghalaya	18	13	19	16
Rajasthan	19	15	23	19
Chhattisgarh	20	29	21	26
Nagaland	21	18	NA	21
Madhya Pradesh	22	22	25	24
Odisha	23	24	22	24
Jammu & Kashmir	24	9	11	14
Jharkhand	25	28	27	28
Uttarakhand	26	11	13	16
Assam	27	23	20	26
Manipur	28	27	8	23
Bihar	29	25	26	28

Note: Deprivation Index is based on malnutrition; IMR, births not attended by trained functionaries; children not attending schools in the age group 6–14 years; prevalence of child labour; girls married below 18 years; households without access to safe drinking water; households without own toilet facility; households without electricity facility and households without a pucca house.
Source: Radhakrishna (2014).

Table 9.11 provides the ranking of the States on progress made in reducing income poverty, deprivations in terms of child malnutrition and illiteracy in the post-reform period, a combined ranking of the three. The following observations can be made. First, in reducing malnutrition among Southern States, Kerala, Tamil Nadu performed better; whereas Andhra Pradesh and Karnataka's performance is not as good as the other two State southern States. Second, in reducing educational deprivation, the same picture is observed. Overall, Karnataka performed moderately.

Table 9.11
Ranking of States on Performance in - Reduction in Income Poverty, Decline in Malnutrition, and Improvement in Education in the Post-Reform Period

State	Income Poverty Decline 1993-2010	Decline in Child Malnutrition			Increase in Literacy			Overall
		Under-weight	CED Women	Combined	NSS 1997-2008	Census 1991/2011	Combined	
Himachal Pradesh	1	5	13	4	24	5	12	1
Jammu and Kashmir	2	6	10	3	21	30	28	9
Kerala	3	22	2	11	14	3	4	2
Tamil Nadu	4	9	12	9	5	14	5	2
Goa	5	18	8	13	29	6	18	10
Sikkim	6	25	9	19	16	4	7	8
Andhra Pradesh	7	17	15	18	22	28	27	17
Arunachal Pradesh	8	29	29	29	15	27	24	24
Karnataka	**9**	**15**	**14**	**15**	**10**	**22**	**16**	**12**
Meghalaya	10	26	1	14	1	11	1	6
Maharashtra	11	2	16	4	12	7	5	5
Tripura	12	12	23	20	20	1	8	12
Haryana	13	27	25	27	17	18	18	21
Uttarakhand	14	11	7	4	3	9	1	4
Gujarat	15	19	20	22	19	15	17	19
Odisha	16	4	17	9	6	19	11	10
Rajasthan	17	8	21	15	25	23	26	21
Jharkhand	18	21	24	24	11	26	21	27
West Bengal	19	10	19	15	26	20	25	23
Punjab	20	14	6	8	13	24	21	15
Manipur	21	3	5	2	8	13	8	7
Assam	22	24	28	27	4	25	12	24
Uttar Pradesh	23	13	22	20	18	17	18	24

State	Income Poverty Decline 1993-2010	Decline in Child Malnutrition			Increase in Literacy			Overall
		Under-weight	CED Women	Combined	NSS 1997-2008	Census 1991/2011	Combined	
Madhya Pradesh	24	23	27	26	9	21	15	28
Bihar	25	20	26	25	23	29	29	29
Delhi	26	16	3	7	28	10	23	20
Chhattisgarh	27	7	18	12	7	16	10	15
Nagaland	28	28	11	22	2	12	3	18
Mizoram	29	1	4	1	27	2	12	14

Note: The State with rank 1 had the highest and the State with rank 29 had the lowest performance in the ranking on reduction of deprivations. The overall ranking was arrived at by combining the ranks on the three indices relating to income poverty, malnutrition and education using Borda Rule. In the overall Ranking of States/UTs, best preformed State (Himachal Pradesh) had rank 1 and worst performed State (Bihar) had rank 29.
Source: Radhakrishna et al (2013).

Finally, on the overall ranking among Southern States, the performance of Kerala, Tamil Nadu is better. By and large, Andhra Pradesh and Karnataka with a higher incidence of multiple deprivations in the beginning of the reform period performed badly in the reduction of deprivations.

Detail Analysis of Poverty in Karnataka

9.9 Trends in Poverty

Comparable poverty ratios for 1993-94, 2004-05, 2009-10 and 2011-12 are given in Table 9.12 both for Karnataka State and at national level.

Rural poverty in Karnataka has declined by 32.1 percentage points during 1993-94 to 2011-12, which is much higher as compared to the decline at the all-India level(24.4 percentage points).

Rural poverty in Karnataka has declined by 32.1 percentage points during 1993-94 to 2011-12, which is much higher as compared to the decline at the all-India level(24.4 percentage points). The number of rural poor also declined over the period from 16.7 million to 9.3 million, which is about 44%. Incidence of poverty has always been less in rural Karnataka than the corresponding estimates for the country except for the year 1993-94.

Deprivation in the urban sector too declined but at a lesser extent (as compared to rural sector) both in Karnataka (18.9 percentage points) and India as a whole(18.1 percentage points) between 1993-94 and 2011-12. The decline in the poverty ratios was not sufficient to neutralize the growth in urban population. Hence, the number of urban poor has increased both in Karnataka and all-India between 1993-94 and 2004-05. However, between 2004-05 and 2011-12, a remarkable decline is seen in the number of poor and the decline is less by six percentage point in Karnataka(28.8%) as compared to all-India(34.8%). Incidence of urban poverty is almost same in Karnataka as that of all-India except for the year 1993-94, where Karnataka had higher incidence of poverty compared to all-India.

Table 9.12
Trends in Incidence of Poverty - Karnataka and All India

Year	Rural		Urban		Total	
	% of poor	No. of Poor (million)	% of poor	No. of Poor (million)	% of poor	No. of Poor (million)
Karnataka						
1993-94	56.6	16.7	34.2	4.1	49.5	20.8
2004-05	37.5	13.5	25.9	5.2	33.4	18.7
2009-10	26.1	9.7	19.6	4.5	23.6	14.2
2011-12	24.5	9.3	15.3	3.7	20.9	13.0
All India						
1993-94	50.1	327.7	31.8	74.9	45.3	403.0
2004-05	41.8	325.8	25.7	81.4	37.2	407.2
2009-10	33.8	278.2	20.9	76.5	29.8	354.7
2011-12	25.7	216.7	13.7	53.1	21.9	269.8

Note: Estimates are based on mixed reference period(MRP) of distribution of monthly percapita consumption expenditure of the National Sample Survey.

9.10 Levels of Living in Karnataka - A Regional Profile

Regional profiles of deprivation in levels of living and inequality are presented in this section for rural and urban sectors of Karnataka for the years 2004-05 and 2011-12. As mentioned earlier, NSS regions for Karnataka are classified as follows.

- Region 1: Coastal and Ghats: Dakshina Kannada, Udupi and Uttara Kannada.
- Region 2: Inland Eastern: Chikkamagaluru, Hassan, Kodagu and Shivamogga.
- Region 3: Inland Southern: Bengaluru (Rural), Bengaluru (Urban), Chamarajanagar, Kolar, Mandya, Mysuru and Tumakuru.
- Region 4: Inland Northern : Bagalkot, Belagavi, Ballari, Bidar, Vijayapura, Chitradurga, Davanagere, Dharwad, Gadag, Kalburagi, Haveri, Koppal and Raichur.

Rural Karnataka: For the State as whole, per capita per month rural median consumption (in 2011-12 prices) increased by Rs. 151 between 2004-05 and 2011-12. The increase in the consumption was highest in Coastal and Ghats (Rs. 296) and lowest in Inland Eastern (Rs. 27). All the regions except Inland northern stand out with levels of consumption being higher than the State average in both the years 2004-05 and 2011-12. Coastal and Ghats and Inland Southern had similar increase in the consumption and also achieved similar decline in the poverty ratio i.e., around 15 percentage points. Inland Northern, even though had only half of that of the increase in the consumption, witnessed same stride in the reduction of poverty between

2004-05 and 2011-12. Inequality in nominal consumption distribution remained same in rural Karnataka as a whole. The extent of inequality (Gini Ratio) in consumption distribution in rural Karnataka was 27% in the year 2011-12 (Table 9.13).

Table 9.13
Region wise Consumption Distribution in Rural Karnataka

2004-05						
Regions	Consumption Levels in 2011-12 prices (Rs. Per month)		Head Count Ratio	Poverty Gap Index	Squared Poverty Gap Index	Gini Ratio
	Mean	Median	%	%	%	%
Coastal & Ghats	1481.07	1217.93	26.98	6.42	2.04	38.37
Inland Eastern	1342.23	1151.21	17.81	2.00	0.38	23.19
Inland Southern	1284.02	1077.16	27.47	3.98	0.90	25.43
Inland Northern	1011.42	906.08	49.60	8.97	2.33	22.97
State	1171.99	1006.91	37.49	6.51	1.67	26.64
Coastal & Ghats	1955.31	1513.85	12.72	1.08	0.22	32.45
Inland Eastern	1487.23	1177.75	16.88	1.70	0.22	27.95
Inland Southern	1615.90	1354.60	11.89	1.42	0.24	26.72
Inland Northern	1178.52	1024.27	34.29	4.84	1.11	21.78
State	1395.10	1157.95	24.53	3.26	0.71	26.78

Source: Estimated based on NSSO Unit level data

Urban Karnataka

Although inequality declined in all the regions except inland southern, the decline was substantial in inland eastern region. The extent of consumption inequality in Urban Karnataka was 42% in the year 2011-12

For the State as a whole per capita per month urban median consumption increased (in 2011-12 prices) by Rs. 412 during 2004-05 and 2011-12. In urban areas also increase was highest in Coastal and Ghats, i.e., by Rs. 783 followed by Inland Southern region, Rs. 729, during the period 2004-05 and 2011-12. However, Inland eastern region witnessed a lowest increase in consumption i.e., Rs. 61 during the same period. Extent of poverty reduction in the two regions i.e., Inland eastern, inland southern were marginal and it was substantial in Coastal & Ghats region(about 28 percentage points). Inland Northern also had a remarkable decline in poverty i.e., 16 percentage points. Inequality in nominal consumption distribution in urban Karnataka is much higher compared to rural areas. Inequality increased in urban Karnataka as a whole. Although inequality declined in all the regions except inland southern, the decline was substantial in inland eastern region. The extent of consumption inequality in Urban Karnataka was 42% in the year 2011-12 (Table 9.14).

Table 9.14
Region wise Consumption Distribution in Urban Karnataka

2004-05						
Regions	Consumption Levels in 2011-12 prices (Rs. Per month)		Head Count Ratio	Poverty Gap Index	Squared Poverty Gap Index	Gini Ratio
	Mean	Median	%	%	%	%
Coastal & Ghats	2253.61	1445.37	38.16	8.57	2.55	45.62
Inland Eastern	1881.19	1604.39	20.49	3.15	0.76	27.47
Inland Southern	2648.30	2062.06	7.91	1.50	0.45	33.35
Inland Northern	1373.59	1102.63	49.47	12.73	4.58	32.40
State	2107.56	1563.15	25.88	6.19	2.13	36.85
2009-10						
Coastal & Ghats	3469.49	2228.54	10.45	1.58	0.35	43.85
Inland Eastern	1746.68	1665.63	20.21	3.75	1.11	23.83
Inland Southern	3841.80	2791.36	2.45	0.36	0.08	38.47
Inland Northern	1618.32	1336.14	33.89	7.17	2.08	30.24
State	2898.94	1975.15	15.29	3.09	0.88	41.68

Source: Estimated based on NSSO Unit level data

9.11 Living Standard across Administrative Division in Karnataka

For administrative purpose, Karnataka has been divided into four divisions viz., Bengaluru division, Belagavi division, Kalburagi division and Mysuru division. In Rural Karnataka, Mysuru division not only had highest consumption level but also lowest poverty estimates indicating prosperity of the division. Even though it constitutes nearly 1/4th of the population it contributed only 12% to the overall poverty. On the contrary Kalaburagi division not only had highest poverty but also contributed 36% to the overall poverty.

In Urban Karnataka, Bengaluru division had highest consumption levels. Consumption levels in this division were almost 2.5 times more than their rural counterpart. With respect to the other divisions the difference in the consumption levels between rural and urban is to the tune of 1.5times more which is marginally more after taking into account the price differentials between rural and urban. This indicates the prosperity of the districts coming under Bengaluru division, partly may be due to proximity to the Bengaluru city. However, as expected, inequality is highest in Bengaluru division. Poverty is quite low i.e., only 5.5% of the people are below poverty line. Mysuru division stands next in terms of low poverty and high consumption levels. Inequality is as high as Bengaluru division. Kalburagi division shows the same picture as Rural i.e., division with highest poverty and very low consumption level and hardly any improvement in the consumption levels between rural and urban. Only 14% of the urban population belongs

Kalaburagi division not only had highest poverty but also contributed 36% to the overall poverty.

to Kalburagi division and it contributes 39% to overall poverty. Thus, Kalburagi division needs special attention both in rural areas and urban areas (Table 9.15).

Table 9.15
Administrative Division wise Consumption Distribution - 2011-12

Division	Consumption Levels (Rs. Per month)		Head Count Ratio	Poverty Gap Index	Squared Poverty Gap Index	Contribution to total Poverty	Gini Ratio
Rural	Mean	Median	%	%	%	%	%
Bengaluru Division	1478.32	1237.12	18.83	2.40	0.47	20.8	26.8
Belagavi Division	1255.64	1068.71	29.52	2.97	0.53	31.0	22.2
Kalburagi Division	1139.69	999.85	37.09	6.28	1.62	36.3	22.3
Mysuru Division	1717.97	1348.94	12.61	1.48	0.24	11.9	29.7
Total	1395.10	1157.95	24.53	3.26	0.71	100.0	26.8
URBAN							
Bengaluru Division	3693.87	2725.26	5.49	0.96	0.23	19.3	39.7
Belagavi Division	1760.77	1407.60	28.19	5.87	1.70	34.1	31.8
Kalburagi Division	1450.46	1183.87	41.50	8.96	2.64	38.7	28.4
Mysuru Division	2828.17	1953.13	8.90	1.51	0.46	7.9	38.3
Total	2898.94	1975.15	15.29	3.09	0.88	100.0	41.7
TOTAL							
Bengaluru Division	2652.36	1692.10	11.76	1.64	0.34	20.4	42.4
Belagavi Division	1402.03	1151.10	29.14	3.81	0.87	31.8	26.8
Kalburagi Division	1218.18	1046.02	38.20	6.96	1.88	36.9	24.7
Mysuru Division	1995.31	1510.83	11.69	1.49	0.30	10.8	34.4
Total	1940.23	1344.58	21.18	3.20	0.77	100.0	38.8

Source: Estimated based on NSSO Unit level data

It is evident that there is a clear link between informality and poverty which is the cause of concern in the State.

9.12. Poverty by Occupational Groups in Karnataka

Agricultural labourer household constitute the second largest group accounting for 23% of total rural population. This group not only has lowest per capita expenditure, there is high incidence of poverty (39% are poor) across different occupational group. Self employed in agriculture constitute the largest group with 45% of population belonging to it. Even though per capita consumption is slightly better than agricultural labourers, still 22.5% of people are poor. In Urban Karnataka, Regular wage /salary earning constitute the largest group with very low poverty and high per capita consumption. Casual Labourers though constitute only 15% of population, 38% among them are poor and their per capita consumption is nearly 1/3rd of regular wage earners consumption (Table 9.16). It is evident that there is a clear link between informality and poverty which is the cause of concern in the State.

Table 9.16
Levels of Living, Inequality and Poverty by Occupational groups: Karnataka and All India 2011-12

Household Type	Rural Karnataka				Rural All India			
	Share in total population (%)	Average per capita consumption (Rs. Per month)	Proportion of poor population (%)	Relative inequality in consumption distribution (Lorenz ratio %)	Share in total population (%)	Average per capita consumption (Rs. Per month)	Proportion of poor population (%)	Relative inequality in consumption distribution (Lorenz ratio %)
Self employed in agriculture	44.7	1398.2	22.5	25.4	38.0	1301.0	22.2	27.7
Self employed in non agriculture	13.2	1546.4	16.6	28.9	17.1	1363.8	18.6	28.0
Regular wage/ salary earning	9.5	1909.0	12.0	31.1	8.6	1822.1	11.1	30.8
Casual Labour in agriculture	23.3	1112.8	39.3	21.1	19.7	1019.2	39.8	23.4
Casual labour in non agriculture	7.7	1290.4	22.0	20.7	13.2	1105.9	32.7	25.1
Others	1.6	1634.5	18.9	31.2	3.3	1667.0	17.8	36.5
All	100.0	1395.1	24.5	26.8	100.0	1287.2	25.4	28.7
	Urban Karnataka				**Urban All India**			
Self employed	37.0	2375.3	16.9	36.9	40.7	2229.1	14.8	35.6
Regular wage/ salary earning	43.9	3747.9	6.8	39.1	39.6	2935.7	6.9	35.8
Casual labour	14.7	1344.0	38.0	22.8	13.5	1388.1	32.9	26.2
Others	4.4	4035.1	10.4	48.0	6.2	3537.2	8.2	42.2
All	100.0	2898.9	15.3	41.7	100.0	2477.3	13.7	37.7

Source: Estimated based on NSSO Unit level data

9.13. Poverty Across Social Group in Karnataka

Social group wise disaggregation indicates that SC and ST group have lowest consumption levels and high incidence of poverty compared to OBC and others (Table 9.17). Further it is seen that in rural areas poverty is highest among SC group compared to others. SCs who account only for 18% of the population in rural areas contribute about 27% to the total poverty. Though the reduction in the poverty levels of this group is substantial i.e., 20 percentage points from 2004-05 to 2011-12, it is as a result of decline in the regions of Inland eastern and Inland southern (see table 9.18). Thus, Inland northern region not only needs emphasis in general but also on the SC group in particular, where every alternate person is poor.

Social group wise disaggregation indicates that SC and ST group have lowest consumption levels and high incidence

Table 9.17
Social group wise Consumption Distribution in Karnataka

Social Groups	Rural				Urban			
	Consumption Levels in 2011-12 prices (Rs. Per month)		Head Count Ratio	Contribution to total Poverty	Consumption Levels in 2011-12 prices (Rs. Per month)		Head Count Ratio	Contribution to total Poverty
	Mean	Median	%	%	Mean	Median	%	%
2004-05								
ST	977.33	895.50	50.53	11.28	1286.21	994.56	55.70	5.82
SC	981.54	879.16	57.37	31.00	1371.57	1182.41	41.22	20.28
OBC	1162.98	1010.21	35.85	37.14	1710.66	1424.94	32.14	48.91
Others	1351.50	1101.37	23.72	20.58	2709.95	2080.57	14.31	24.99
Total	1171.99	1006.91	37.49	100.00	2107.56	1563.15	25.88	100.00
2011-12								
ST	1191.89	1023.70	30.81	8.72	1867.37	1393.26	33.69	8.52
SC	1281.80	1064.62	37.06	26.93	1931.20	1552.60	24.96	24.06
OBC	1452.48	1221.82	20.75	46.36	2441.57	1821.71	15.09	49.47
Others	1409.14	1148.05	21.62	17.99	4214.19	2947.79	8.77	17.95
Total	1395.10	1157.95	24.53	100.00	2898.94	1975.15	15.29	100.00

Table 9.18
Region wise Incidence of poverty Across Social groups(%) in Karnataka

Rural					
2004-05					
Social Groups	Coastal & Ghats	Inland Eastern	Inland Southern	Inland Northern	Total
ST	51.29	27.21	27.34	63.83	50.53
SC	56.11	36.23	45.78	65.99	57.37
OBC	33.41	16.21	24.74	54.06	35.85
Others	14.10	8.41	18.15	30.94	23.72
Total	26.98	17.81	27.47	49.60	37.49
2011-12					
ST	30.90	62.89	1.95	36.24	30.81
SC	47.62	13.14	15.06	50.93	37.06
OBC	6.97	19.26	11.30	30.38	20.75
Others	1.11	0.00	16.94	28.76	21.62
Total	12.72	16.88	11.89	34.29	24.53

Urban					
2004-05					
Social Groups	Coastal & Ghats	Inland Eastern	Inland Southern	Inland Northern	Total
ST	0	20.92	24.98	81.96	55.70
SC	35.59	28.06	25.73	59.42	41.22
OBC	55.90	26.19	8.69	59.42	32.14
Others	22.08	8.94	2.12	33.28	14.31
Total	38.16	20.49	7.91	49.47	25.88
2011-12					
ST	0.00	0.00	2.26	52.58	33.69
SC	23.13	49.28	7.68	48.86	24.96
OBC	19.90	15.93	2.32	33.08	15.09
Others	0.60	14.50	0.12	23.81	8.77
Total	10.45	20.21	2.45	33.89	15.29

9.14. Poverty Across Religious Group in Karnataka

Rural Karnataka is dominated with religious group Hindus, where they constitute 91%. The next dominant group is Islamic with 8% and only 1% Christians and others is negligible. In urban Karnataka, 76% are Hindus, around 19% constitute Muslims and 4.5% Christians and less that 1% others. Thus, further discussions are concentrated for two religious groups viz., Hindus and Muslims. Table 9.19 gives the picture of incidence of poverty across religious groups in Karnataka.

Table 9.19
Incidence of poverty across religious groups

Religious Groups	Share of the Population	Incidence of poverty in Karnataka across Religious Groups			
	2011-12	1993-94	2004-05	2009-10	2011-12
Rural					
Hinduism	90.65	61.0	38.1	26.7	24.2
Islamic	8.31	54.6	35.8	20.9	29.9
Christianity	1.02	33.1	3.6	3.0	13.5
Others	0.02	38.5	15.8	100.0	55.1
Total	100.00	60.0	37.5	26.1	24.5
Urban					
Hinduism	75.71	32.5	23.0	19.9	13.2
Islamic	18.95	52.0	40.3	20.4	24.5
Christianity	4.50	16.4	8.0	9.2	10.2
Others	0.84	18.2	0.6	3.7	19.9
Total	100.00	35.9	25.9	19.5	15.3

Source: Estimated based on NSSO Unit level data

In Rural Karnataka, incidence of poverty was less among people belonging to Islamic group compared to Hindus till 2009-10. Incidence of poverty was not only less among Muslims, the decline in incidence of poverty was much faster than Hindus. Poverty estimates continuously declined till 2009-10. However, between 2009-10 and 2011-12, even though there was a decline in poverty estimate at State level there was an increase in the poverty estimate by about 9 percentage point with respect to the religious group Muslims. The same picture is evident even in urban Karnataka. This result collaborates with the consumption pattern across these two religious groups. Average consumption level in rural Karnataka among Muslims was marginally higher than Hindus till 2009-10 and also there was an improvement in the average consumption level (see table 9.20). In 2011-12 the average consumption level among Muslims not only fell but was also much lower than the Hindus.

Table 9.20
Consumption pattern (Mean per capita monthly expenditure in 2011-12 prices)

	Share of the Population	Incidence of poverty in Karnataka across Religious Groups:		
	1993-94	2004-05	2009-10	2011-12
RURAL				
Hinduism	900.83	1135.43	1264.19	1400.96
Islam	953.10	1149.21	1276.53	1246.75
Total	910.45	1171.99	1272.40	1395.10
URBAN				
Hinduism	1652.44	2223.64	2534.25	3063.18
Islam	1263.13	1549.96	1999.83	1989.94
Total	1590.5	2107.56	2471.03	2898.94

Source: Estimated based on NSSO Unit level data

The picture in urban Karnataka with respect to average consumption level is different. In urban areas nearly over two decades, the consumption levels of Muslims were much lower than the consumption levels of Hindus. Muslims were not only less in terms of consumption levels, the gap also widened over the period. In 2011-12, the difference in the average consumption level between Hindus and Muslims were Rs. 1074 per capita per month. One can also see that mostly Muslims grew at lower level than Hindus (Table- 9.21). This raises the question as to where does the concentration of poverty lie and what emphasis needs to be taken in order to lift these people. Analysing poverty across region wise(here analysis is possible only across different regions/ administrative blocks as the sample size is not sufficient for any analysis at district level) and across occupational group would show some direction in this regard.

Analysis at administrative division indicates that in rural area Mysuru division fares well in terms of living standard. Not only mean consumption is quite high but also incidence of poverty is quite low and this region contributes very low to the overall poverty. Being one of the prosperous region in Karnataka the results are as expected. In Mysuru region one can also observe that the living standard of Muslims are not only very high compared to other regions, but also better than their counter parts Hindus. But the disturbing factor is that the share of Muslims gradually declining in Mysuru division (See Table 9.22). During 2004-05 to 2011-12 the share of Muslims in Mysuru region has down by 15 percentage point.

Table 9.21
Poverty Across Administrative divisions

2004-05						
	Mean per capita expenditure in 2011-12 prices		Incidence of poverty		% contribution to total poverty	
Karnataka administrative division	Hinduism	Islam	Hinduism	Islam	Hinduism	Islam
Rural						
Bengaluru Division	1157.3	1108.8	37.5	25.4	28.1	17.0
Belagavi Division	1058.8	979.9	43.2	46.5	31.6	37.0
Kalburagi Division	912.1	906.4	56.3	62.7	27.2	40.5
Mysuru Division	1360.1	1619.3	19.8	8.1	13.0	5.5
Total	1135.4	1149.2	38.1	35.8	100.0	100.0
Urban						
Bengaluru Division	2679.1	2059.6	9.1	11.4	20.4	12.0
Belagavi Division	1593.6	1053.5	40.4	69.8	41.1	47.0
Kalburagi Division	1232.5	1006.1	53.8	68.3	25.0	30.6
Mysuru Division	2362.1	1682.1	21.2	34.2	13.5	10.5
Total	2223.7	1550.0	23.0	40.3	100.0	100.0
2011-12						
Karnataka administrative division	Hinduism	Islam	Hinduism	Islam	Hinduism	Islam
Rural						
Bengaluru Division	1482.1	1405.2	18.4	25.9	21.5	15.4
Belagavi Division	1261.0	1228.5	29.8	22.6	31.5	22.4
Kalburagi Division	1151.5	1071.6	36.3	41.5	33.9	59.3
Mysuru Division	1692.7	1784.1	13.3	8.7	13.0	2.8
Total	1401.0	1246.8	24.2	29.9	100.0	100.0
URBAN						
Bengaluru Division	3864.7	2756.0	4.5	7.8	18.7	13.2
Belagavi Division	1942.9	1326.1	25.2	35.6	31.7	42.1
Kalburagi Division	1493.3	1245.7	38.3	54.0	41.2	36.7
Mysuru Division	2826.2	1999.5	8.0	14.9	8.3	8.0
Total	3063.2	1989.9	13.2	24.5	100.0	100.0

Source: Estimated based on NSSO Unit level data

Table 9.22
Pattern of population share across Administrative Division:

	2004-05		2011-12	
RURAL	**Hindus**	**Muslims**	**Hindus**	**Muslims**
Bengaluru Division	28.6	24.1	28.2	17.8
Belagavi Division	27.9	28.5	25.5	29.7
Kalaburagi Division	18.4	23.2	22.5	42.8
Mysuru Division	25.1	24.3	23.7	9.7
Total	100.0	100.0	100.0	100.0
URBAN				
Bengaluru Division	51.3	42.5	55.3	41.2
Belagavi Division	23.4	27.1	16.6	29.0
Kalaburagi Division	10.7	18.1	14.3	16.7
Mysuru Division	14.6	12.3	13.9	13.1
Total	100.0	100.0	100.0	100.0

Source: Estimated based on NSSO Unit level data

This decline could either partly because of migration to urban areas or mostly the population who had migrated to Bengaluru and Mysuru region in search of job possibly must have moved back to Kalaburagi region after 2004-05 drought there by increasing the Kalaburagi region population share by about 20 percentage point and further contributing to the poverty in this region. Incidence of Poverty being very high in general in Kalaburagi region and more so with respect to people belonging to Muslim population calls for more attention towards poverty alleviation programme and targeted programmes for minorities. Further looking at occupation wise poverty it is seen that nearly 86% of people belonging to occupation group self employed in agriculture belonging to Muslim religious group are poor. Lack of irrigation, access to credit and other inputs are reasons behind it. Being drought prone area anti poverty programmes should be in the direction of creating job opportunity in non farm activities coupled with providing skill training.

In Urban Karnataka poverty is concentrated both in Belagavi and Kalaburagi region. Even though there is a decline in poverty over the period, still the incidence is quite high in these two regions. In 2011-12, 41% of total poverty among Hindus is contributed by Kalburagi division and 42% among Muslims is by Belagavi division. It is also found that among Muslims incidence of poverty is more among self employed and casual labourers. Incidence of poverty in Belagavi and Kalaburagi division with the occupational group self employed and casual labour is to the tune of 64% among Muslims. Thus, targeted urban anti poverty programme, which does not get much emphasis is very essential to address these big numbers.

9.15 District Level Poverty in Karnataka

District level poverty estimates indicate that poverty is concentrated in northern Karnataka districts. Incidence of poverty which exceed 35% are found in the districts, Chitradurga, Ballari, Koppal, Raichur, Kalaburagi, Bagalkote and Bidar (see table 9.27).

Table 9.23
Juxtaposing incidence of poverty with district income.

	High Income (Income above State median Income)	Low Income (Income below State median Income)
High Poverty(Poverty levels above State figures)	I Dharwad Ballari Shivamogga Udupi	II Belagavi Bagalkote Vijayapura Kalaburagi Bidar Raichur Koppal Gadag Haveri Chitradurga Davangere
Low Poverty (Poverty Levels below State figures)	III Uttara kannada Chikkamagaluru Tumakuru Bengaluru Bengaluru Rural Hassan Dakshina Kannada Kodagu Mysuru Ramanagar	IV Kolar Mandya Chamarajanagara

Source: Estimated based on NSSO Unit level data

How ever special emphasis is required with respect to the districts in group II, which are mostly from Northern part of Karnataka as they are restraints from trickledown effect.

Districts are divided into four groups (Table 9.23). Group I districts are those whose poverty levels are above the State average and district income is also above State median income. These districts are of concern since in spite of district having good income it has not percolated to lower segment of the population. Group II districts are those whose poverty levels are above the State average and district income is below the State median income. Districts being poor needs more State intervention in the form of special programmes. Group III districts are those with low poverty and high income and most of these districts as expected are from the southern region with either good irrigated land or more urbanized. Group IV districts are those with low poverty and low income levels. These districts being close to Bengaluru city, some emphasis towards industrialization can overall make the people better. However special emphasis is required with respect to the districts in group II, which are mostly from Northern part of Karnataka as they are restraints from trickledown effect.

9.16 Helping the poor through Targeted PDS (BPL and Anthyodaya card holders)

Since major portion of Karnataka is in dry belt with low industrialization, economic growth solving the problem of poverty would not be feasible. Direct poverty alleviation programmes are more important in these regions. But these programmes would be oriented towards strengthening the productive potential of the

economy and providing more opportunities for involving the poor in the economic process. Broadly, there would be schemes for income generation through supplementary employment, for the welfare of the poor in rural/urban areas and this is coupled with Targeted PDS system to ensure that the poor have access to foodgrains at prices they can afford. Karnataka Government is providing as a part of food security programme, 30 KG rice for BPL card holders at the rate of Rs. 1 per KG. This is a boon to most of the people in poverty. What is the extent of misclassification in this regard. Do the deserved ones are getting the benefits or being denied.

NSS in its 68th round collected data on the type of ration card possessed by the households. At the State level it was found that still 21% of the households did not possess Ration cards. In rural areas the percentage of households who did not possess ration card was much smaller i.e., only 13% compared to urban areas which was around 36%. In Rural areas 6.6% possessed Anthyodaya card and 62% had BPL cards. In total as per the Ration card possession 68.6% are termed below poverty line and are getting benefits through several programme including Rs1 per KG rice. Type I error committed by not identifying the household properly as poor is to the tune of 2.5% in Rural area and 1.7% in Urban areas. These percentages correspond to 9.46 lakh persons in rural areas and 4.12 lakh persons in Urban areas. These are the households who are really poor but have been denied of all the programme benefits including Rs1 per KG rice, which would be a great help in the current situation given that market prices being quite high which is unaffordable by most of these households. Efforts should be made to bring down this error to almost 0%. On the other hand type II error committed is to the tune of 49.3% in Rural areas and 25.2% in urban areas. Drastic reduction in these numbers would save a lot to the government, which in turn can be diverted towards other developmental activities.

Karnataka Government is providing as a part of food security programme, 30 KG rice for BPL card holders at the rate of Rs. 1 per KG. This is a boon to most of the people in poverty.

Table 9.24
Types of Ration Card Possessed by Different Groups of Households

Households	Type of Ration Card Possessed				
	No Card	Anthyodaya	BPL	Other (APL)	Total
Rural					
Above Povery Line	10.2	4.7	44.6	15.9	75.5
Below Poverty Line	2.8	1.9	17.4	2.5	24.5
Total - Rural Karnataka	13.0	6.6	62.0	18.5	100.0
Urban					
Above Povery Line	34.7	1.1	24.1	24.8	84.7
Below Poverty Line	1.6	1.7	10.3	1.7	15.3
Total - Urban Karnataka	36.4	2.7	34.3	26.6	100.0
Total (Rural +Urban)					
Above Povery Line	19.1	3.4	37.2	19.2	78.8
Below Poverty Line	2.4	1.8	14.8	2.2	21.2
Total Karnataka State	21.4	5.2	52.0	21.4	100.0

Source: Estimated based on NSSO Unit level data

9.17. Conclusion and Recommendations

In Karnataka, extreme poverty still remains a concern. 24.5% in rural areas and 15.3% in urban areas are poor constituting nearly 13 millions. Although poverty has been reducing during the last two decades, it is still high and the challenges remain vast. States progress in fighting poverty has been modest when compared with some of its neighboring States. 72% of the poor in Karnataka reside in rural areas, where broader economic growth as a poverty eliminator may not reach the poor. Majority of these poor households are concentrated in districts of Northern Karnataka and socially disadvantaged caste. Extra efforts are required to ensure economic sustainability through targeted and effective policies to keep with the pace of poverty decline.

What should be done to accelerate the process of poverty reduction? While, growth is necessary for poverty reduction, it may not trickle down to the bottom groups unless some preconditions are met. There is a need to go beyond the establishment of social safety nets to protect the vulnerable groups from the risks, and focus on providing decent employment and raising incomes of the poor through explicit policy interventions. The experience, by and large, is that countries which are most successful in reducing poverty are the ones which have combined rapid growth with equity in promoting the growth. In such a strategy, public policies influence both the distribution of income and the process of income generation. It needs to be emphasised, However,, that the importance of growth cannot be ignored. A strategy which focuses primarily on reducing inequality through redistribution of income but ignores growth is unlikely to lead to a sustained process of poverty reduction. It may undermine the incentive system, and also impose serious constraints on finding the resources necessary to finance the targeted anti-poverty programmes in the absence of growth. Therefore, growth needs to be rapid enough to significantly improve the absolute conditions of the poor. And to have the maximum impact of growth, there should also be an improvement in the relative position of the poor in incremental income and this should be more than their share in the average income. The increase in the income share of the poor is bound to induce better and sustainable growth by generating adequate demand and incentives for more investment.

Poverty alleviation programmes are top down in nature and the poor are normally passive in them. They are not very effective since they do not take into consideration the needs of the people. For effective poverty alleviation, social mobilization and empowerment of the poor is the first basic step. This has been very successfully done through the formation of SHGs, particularly those of the poor women. The earlier assumption about poverty alleviation is that the poor could be assisted to enable them to raise their income which, in turn, would address all the multiple deprivations at one go, is proving wrong.

Income rise and its sustenance is a slow process. Hence, basic deprivations of the poor need to be addressed directly through public support systems. Some of the other important steps needed are to improve capabilities by providing skill training to the poor; using science and technology in the process of poverty reduction as being done in MGNREGA in Andhra Pradesh; make poverty alleviation programmes development-oriented as being done by Bharatiya Agro Industries Foundation (BAIF), intensify social auditing and monitoring of poverty funds use; give more powers to local PRIs as in Kerala.

There is a need to go beyond the establishment of social safety nets to protect the vulnerable groups from the risks, and focus on providing decent employment and raising incomes of the poor through explicit policy interventions.

Table 9.25
Depth and Severity of poverty at State level (2011-12):

States	Deapth of poverty				Severity of poverty			
	Rural	Urban	Total	Rank	Rural	Urban	Total	Rank
Andhra Pradesh	1.60	0.87	1.36	4	0.38	0.22	0.33	4
Assam	5.79	3.83	5.59	14	1.44	1.00	1.40	14
Bihar	6.24	6.80	6.30	16	1.64	2.14	1.69	17
Chattisgarh	8.99	5.20	8.18	20	2.72	1.92	2.54	20
Gujarat	3.27	1.64	2.61	9	0.80	0.40	0.64	9
Haryana	2.08	1.76	1.98	8	0.52	0.45	0.50	8
Himachal Pradesh	1.03	0.76	1.00	1	0.18	0.21	0.19	1
Jammu & Kashmir	1.91	0.95	1.69	6	0.49	0.20	0.42	6
Jharkhand	6.88	4.85	6.46	18	1.73	1.40	1.66	16
Karnataka	**3.26**	**3.09**	**3.20**	**11**	**0.71**	**0.88**	**0.77**	**10**
Kerala	1.59	0.83	1.39	5	0.46	0.25	0.41	5
Madhya Pradesh	8.33	3.86	7.19	19	2.80	1.01	2.35	19
Maharastra	4.65	1.55	3.23	12	1.57	0.41	1.04	13
Orissa	7.01	3.15	6.43	17	2.03	0.85	1.85	18
Punjab	1.18	1.56	1.32	2	0.28	0.40	0.32	3
Rajasthan	3.21	1.56	2.82	10	1.01	0.38	0.86	11
Tamil Nadu	2.47	1.10	1.86	7	0.58	0.34	0.48	7
Uttar Pradesh	5.68	5.29	5.59	15	1.61	1.51	1.59	15
Uttaranchal	1.25	1.55	1.32	3	0.20	0.38	0.25	2
West Bengal	3.70	2.71	3.44	13	0.94	0.71	0.88	12
All India	**4.62**	**2.54**	**4.03**		**1.30**	**0.71**	**1.13**	

Table 9.26
Percentage of children in labour force across Poverty households (2011-12)

States	Rural		Urban	
	HHs not in Poverty	HHs in Poverty	HHs not in Poverty	HHs in Poverty
Andhra Pradesh	75.1	24.9	97.3	2.7
Assam	48.6	51.4	85.4	14.6
Bihar	41.5	58.5	11.9	88.1
Chattisgarh	2.3	97.7	71.9	28.1
Gujarat	77.2	22.8	57.6	42.4
Haryana	100.0	0.0	0.0	100.0
Himachal Pradesh	0.0	100.0	0.0	0.0
Jammu & Kashmir	53.2	46.8	96.7	3.3
Jharkhand	46.2	53.8	42.7	57.3
Karnataka	**58.2**	**41.8**	**44.1**	**55.9**
Kerala	0.0	0.0	100.0	0.0
Madhya Pradesh	27.1	72.9	42.7	57.3
Maharastra	11.0	89.0	74.0	26.0
Orissa	48.1	51.9	32.4	67.6
Punjab	91.8	8.2	51.2	48.8
Rajasthan	62.2	37.8	67.3	32.7
Tamil Nadu	9.8	90.2	86.2	13.8
Uttar Pradesh	54.1	45.9	35.5	64.5
Uttaranchal	68.9	31.1	94.7	5.3
West Bengal	61.0	39.0	95.1	4.9
ALL India	**52.3**	**47.7**	**64.6**	**35.4**

Table 9.27
Incidence of Poverty at District Level 2011-12

Districts	Incidence of Poverty 2011-12			Per capita Income in Rs.
	Rural	Urban	Total	
Belagavi	27.5	32.3	28.8	48557
Bagalkote	32.1	45.0	35.8	44798
Vijayapura	21.4	28.5	23.1	41292
Kalaburagi	38.9	32.0	37.2	39884
Bidar	32.5	45.9	35.1	36347
Raichur	37.6	38.2	37.7	34975
Koppal	42.0	34.6	40.7	42941
Gadag	25.6	15.0	21.8	44853
Dharwad	57.3	15.5	34.0	75555
Uttara Kannada	19.3	20.1	19.6	56105
Haveri	31.3	52.2	33.7	37776
Ballari	33.1	53.0	40.8	80000
Chitradurga	48.3	40.4	46.7	51018
Davanagere	23.0	23.8	23.3	49288
Shivamogga	32.5	22.3	29.3	57544
Udupi	22.7	21.4	22.4	79862
Chikmagaluru	10.4	24.6	14.7	66038
Tumakuru	14.4	5.9	13.0	51741
Kolar	9.8	11.2	10.0	47000
Bengaluru	0.0	1.7	1.5	133210
Bengaluru Rural	19.0	0.0	15.7	101619
Mandya	18.9	4.1	16.4	43512
Hassan	11.3	13.9	11.6	55818
Dakshina Kannada	1.5	1.9	1.6	94179
Kodagu	1.2	2.8	1.5	103264
Mysuru	20.7	7.0	15.5	63902
Chamarajanagara	1.3	4.1	1.6	37367
Ramanagar	11.7	4.5	10.5	72889
Total	**24.5**	**15.3**	**21.2**	**67223**

Supporting Human Development - Basic Infrastructure

Chapter-10

Supporting Human Development-Basic Infrastructure

Introduction

Human Development, as a multivariate function, is dependent on and determined by a number of variables, and among them, infrastructure plays a pivotal role by providing the much needed foundational support to the superstructure of human development in which people, their capabilities and their active participation matter most. But the present chapter holds discussion not on all sorts of infrastructural facilities, but on some select basic infrastructural facilities such as "drinking water", "sanitation", "housing", "energy" and "roads". A relatively detailed discussion is undertaken on the diverse dimensions of these decisive variables. It is an empirical inquiry into the status and inter-temporal trends in the quantitative and qualitative adequacy of the variables, so that the Government would be able to institute measures from time to time to ensure the balance between the facilities needed across divisions, districts, urban local bodies and those which are actually available. With such an end in-view, the chapter, besides introductory section, is split into six sections and a number of sub-sections. The matters pertaining to drinking water, sanitation, housing, energy and roads are discussed in the second, third, fourth, fifth and sixth sections respectively. And the seventh section concludes the Chapter. Besides general conclusions, it examines in detail the relative positions of the districts in the State by constructing and using Basin Index scores with reference to some important aspects of the aforesaid variables.

10.1 Drinking Water

The global significance of sustainable access to adequate quantities of good quality drinking water (and basic sanitation) has been well-recognized by its inclusion as the Millennium Development Goals' Goal 7 which included two targets, 7B and 7C, that focused on providing safe drinking water and basic sanitation to the overall population, and better living conditions to slum dwellers. Further, towards highlighting the relevance of the issue and to consolidate water and sanitation-related achievements, the recently-announced Sustainable Development Goals' Goal 6 aims at ensuring the availability and sustainable management of water and sanitation for all, thereby also seeking to address quality and sustainability of water resources. However,, despite rapid progress, since 1990, in ensuring the supply of drinking water and sanitation services to large sections of the population in developing regions, about 16 per cent of the rural population do not use improved drinking water

Sustainable Development Goals' Goal 6 aims at ensuring the availability and sustainable management of water and sanitation for all, thereby also seeking to address quality and sustainability of water resources.

The target of halving the proportion of households without access to safe drinking water sources from its 1990 level to be reached by 2015, has been achieved in both rural and urban areas in Karnataka. However, as in the case of India, disparities continue to persist across districts and taluks of the State and between rural-urban and SC/ST and general population.

sources, as compared to 4 per cent of the urban population in 2014.

Where as, Goal 7's Target 10 of the MDG which proposed to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation, India has broadly achieved the MDG target of sustainable access to safe drinking water in rural areas with 87.9% of households having access to improved drinking water sources against the target of 78.39%, while in urban areas, in 2012, 90.1% households had access to improved drinking water source and it is expected that this would have reached 94.2% vis-à-vis the target of 93.63% by 2015. At the all India level, for all areas, the target for access to improved source of drinking water has already been achieved as, in 2012, 87.8% households had access to improved source of drinking water against the target of 82.42%. However,, issues relating to water quality have emerged in many Indian States with estimates of upto 13% of drinking water in rural areas containing chemical contaminants including fertilizer run-offs (particularly urea and its decomposition products). The Government of India's National Rural Drinking Water Program aims to provide, in partnership with State governments, adequate and safe drinking water to the rural population of the country. The current initiatives of the Government of India's Ministry of Drinking water and sanitation, the nodal ministry for implementation of rural drinking water and sanitation programs/schemes in the county seek to increase drinking water supply service levels in rural areas from 40 lpcd (litres per capita per day) to 55 lpcd, focus on piped water supply, and adopt a conjoint approach on drinking water supply and sanitation. The Ministry of Urban Development is the nodal ministry for implementing urban water supply and sanitation programs (incl. solid waste management interventions) in India. Albeit the successes achieved in the areas of rural and urban drinking water with respect to the MDGs, it is necessary to intensify efforts regarding the quality of water and its round-the-clock availability in both rural and urban areas.

Karnataka's initiatives towards enhancing the access to drinking water has been guided by the State's water policy, 2002. Various State-funded, centrally supported schemes and externally assisted programmes for development of drinking water infrastructure have been implemented in Karnataka during the past few decades. The interventions have resulted in an increased access to water as indicated by measures such as coverage and availability of drinking water source (in premises, away etc.). The target of halving the proportion of households without access to safe drinking water sources from its 1990 level to be reached by 2015, has been achieved in both rural and urban areas in Karnataka. However, as in the case of India, disparities continue to persist across districts and taluks of the State and between rural-urban and SC/ST and general population.

A. Sources and Location of drinking water

10.2. Source of drinking water

Sources of drinking water in India include treated/untreated tapwater,

covered / uncovered well, handpump, tubewell/borehole, spring, River/ canal, Tank/pond/lake and other sources. During the last two decades, untimely and reduced rains have impacted surface water availability and quality leading to an increase in the dependence on groundwater sources across most regions of the country as well as in Karnataka.

10.2.1 Tapwater as main source

The proportion of Karnataka's rural and urban households with tapwater (treated / untreated) as the main source of drinking water rose during the period 2001 to 2011 with 66.1% of the State's households having access to this service in 2011 as compared to 58.9% in 2001 while the proportion of rural households with this source increased to 56.4% from 48.5% during the decade (Table 10.1 and Annexure1). Similarly, in 2011, the proportion of urban households having tapwater (treated/untreated) as the primary source marginally rose to 80.4% from 78.4% in 2001. Among districts, 18.6% of households in Udupi district had tapwater as the primary source as compared to 82.4% in Mysuru district. Access to treated/untreated tapwater in rural households has seen a significant rise in Dakshina Kannada district during the period 2001-2011. The proportion of all (Rural and Urban) households with this source declined in Bidar, Kolar and Chikkaballapura districts, while a decline was also seen in the urban households of Uttara Kannada, Kodagu, Chitradurga and Bengaluru (Rural) Annexure-1.

The proportion of Karnataka's rural and urban households with tapwater (treated / untreated) as the main source of drinking water rose during the period 2001 to 2011 with 66.1% of the State's households having access to this service in 2011

Table 10.1
Proportion of households with tapwater (treated/untreated) as main drinking water source - Top and Bottom 5 districts*

District	Rural		Urban		Total	
	2001	2011	2001	2011	2001	2011
Udupi	9.9	14.3	24.5	29.0	12.6	18.6
Uttara Kannada	17.2	21.5	43.0	42.0	24.7	27.4
Dakshina Kannada	14.4	25.7	56.6	63.1	31.0	43.7
Yadgir	37.7	41.4	63.9	70.6	42.0	47.1
Vijayapura	29.4	38.2	67.6	80.1	37.7	48.2
Bengaluru Urban	63.3	68.1	79.6	80.1	77.8	79.1
Ballari	69.8	71.6	88.1	94.5	76.3	80.6
Dharwad	58.9	68.0	85.2	90.0	73.4	80.7
Ramanagara	70.1	77.6	88.7	92.2	73.7	81.0
Mysuru	59.5	73.9	91.0	94.4	71.3	82.4
All districts	**48.5**	**56.4**	**78.4**	**80.4**	**58.9**	**66.1**

** on the basis of proportion of total households in 2011*
Source: Census, 2011

Treated tapwater

In 2011, 41.2% of all households (All, Rural and Urban) in the State had treated tapwater as the main source of drinking water as compared to 35.2% and 32.3% of SC and ST households respectively (Table 10.2). The proportion of All households with this source was 68.4% and 22.9% in urban and rural areas respectively as compared to 65.3%, 66.2% and 22.7 % 21.5 % of Urban and Rural households of SC and ST respectively. Evidently, a marked disparity between Rural and Urban, and between Urban SC, Rural ST and the overall population with respect to access to treated tapwater exists in the State.

Table 10.2
Proportion of households with treated tap-water as main drinking water source - Top and bottom 5 districts*

District	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
	All			SC			ST		
Udupi	6.7	23.7	11.7	11.5	28.9	15.8	5.1	22.7	8.7
Uttara Kannada	9.5	36.3	17.3	13.1	53.0	25.5	12.5	51.5	20.2
Bengaluru Rural	19.3	20.0	19.5	17.8	19.7	18.1	22.5	23.2	22.6
Yadgir	18.2	51.7	24.6	17.0	56.0	21.6	14.1	50.8	18.4
Tumakuru	13.7	64.9	25.0	13.8	59.8	20.5	13.3	53.7	19.6
Shivamogga	21.3	82.4	43.3	26.5	83.3	41.5	23.4	82.4	38.4
Ballari	24.1	83.2	47.5	23.4	78.7	40.5	23.2	78.7	38.9
Dharwad	26.4	84.1	59.6	25.2	80.4	58.8	24.1	75.9	47.1
Mysuru	41.9	89.4	61.7	39.1	85.6	52.3	35.5	83.6	47.1
Bengaluru Urban	29.7	70.1	66.6	28.1	67.3	61.2	29.4	64.9	61.3
All Districts	**22.9**	**68.4**	**41.2**	**22.7**	**65.3**	**35.2**	**21.5**	**66.2**	**32.3**

** on the basis of proportion of All total households ,Source: Census, 2011*

In 2011, 41.2% of all households (All, Rural and Urban) in the State had treated tapwater as the main source of drinking water as compared to 35.2% and 32.3% of SC and ST households respectively

The proportion of all households with treated tapwater as the main source of drinking water was lowest in Udupi district (11.7%) while it was highest in Bengaluru urban district at 66.6%. Greater disparity existed between ST and All households of Mysuru and Dharwad districts although in districts such as Shivamogga, the proportion of rural SC and ST households with treated tapwater as the main source was higher than that of rural All households (Annexure 2). In 14 of the 30 districts of the State, the proportion of ST households (Total) with this source was markedly lower as compared to that of All (Total) households, with this disparity being evident in the districts of Dakshina Kannada, Kodagu, Raichur and Davanagere. The disparity between SC households and All households is higher in Hassan and Mysuru districts, and between Urban SC and All households in Bidar, Kolar and Vijayapura districts. On the whole, the status of ST households with

treated tapwater as the main source of drinking water appears to be weaker as compared to that of SC households (especially in the districts of Kodagu and Dharwad).

Across taluks, 3.2% of households in Ankola taluk of Uttara Kannada district had treated tapwater as the main source of drinking water as compared to 84.5% in Mysuru taluk of Mysuru district (Annexure 3). The disparity between Urban and Rural households in Uttara Kannada is distinct with a very low proportion of Rural households having this source although Karwar taluk of the district indicates a contrarian situation to the contrary. The disparity in access to treated tapwater between Urban and Rural households is significant in the taluks of Hospet (Ballari), Haliyal (Uttara Kannada), Navalgund (Dharwad) and Davangere (Davangere), while the proportion of ST households with treated tapwater in Belagavi taluk (Belagavi) is markedly lower than that of SCs and the overall households.

Deriving from the proportion of households with treated tapwater, about a fourth of the State's households relied on untreated tapwater as the main source of drinking water with about a third of Karnataka's rural households dependent on this source. About 47% of households in Bengaluru rural had untreated tapwater as the primary source as compared to about 7% of households in Udupi district. The disparity between Rural and Urban households with this source was marked in the districts of Mandya, Davanagere, Ramanagaram, Haveri and Bengaluru Urban (Annexure 4). In absolute terms, Bengaluru Urban and Tumakuru districts had the highest number of households dependent on untreated tap water. As compared to the proportion of households of the overall population, the proportion of SC and ST households dependent on untreated tapwater was higher with about 29.7% of households of both the communities relying on this source (Annexures 5 and 6).

10.2.2 Groundwater sources of water

India is the world's largest consumer of groundwater, accounting for 25% of global extraction. Across the country, despite increases in coverage of habitations, groundwater is being exploited beyond sustainable levels and India is facing a serious crisis of groundwater over-extraction and quality deterioration. During the last four decades, with about 84% of the total addition to the net irrigated area having come from groundwater, habitations in most Indian States have been grappling with the growing problem of "slip-back", with habitations suffering a fall in the water table and water quality, especially given the growing dependence on groundwater. 50% of urban water requirements and 85% of rural domestic water requirements in India are met by groundwater. In Karnataka too, groundwater sourced from open wells (covered/uncovered), handpumps, tubewells and borewells are the major sources of water for domestic uses especially for drinking. The annual groundwater availability in the State is estimated at 14.81 BCM with the State having undertaken development of about 64% of the ground water resources. With respect to groundwater status, 63 taluks are

India is the world's largest consumer of groundwater, accounting for 25% of global extraction. Across the country, despite increases in coverage of habitations, groundwater is being exploited beyond sustainable levels and India is facing a serious crisis of groundwater over-extraction and quality deterioration.

The situation has been aggravated by the over-extraction of groundwater with 115 taluks of the State being classified as over-exploited, critical or semi-critical.

overexploited, 21 taluks are critical and 34 taluks are semi-critical, thereby indicating a high level of dependence on groundwater across large regions of the State especially in the dry taluks of North and South interior Karnataka. Over the last few years, serious issues have emerged with respect to the suitability of groundwater for drinking in various taluks due to the presence of fluoride, chloride, nitrate etc. beyond the permissible limits. The situation has been aggravated by the over-extraction of groundwater with 115 taluks of the State being classified as over-exploited, critical or semi-critical.

30.4% of the state's households were dependent on groundwater sources in 2011 with 39.9% and 16.6% of the state's rural and urban households being dependent on these sources (Table 10.3). The disparity between Rural and Urban households in relation to dependence on groundwater was higher in the districts of Vijayapura, Hassan and Belagavi (Annexure 7). The proportion of All (Rural+Urban) SC and ST households dependent on these sources was marginally higher in the state as compared to the overall proportion of All (Rural+Urban) households. However,, the situation with respect to ST households was different in the districts of Dakshina Kannada, Yadgir, Mysuru and Dharwad with this proportion being markedly higher than the overall population. In rural Kodagu, the proportion of ST households dependent on groundwater sources was significantly higher than that of the general population while a contrarian situation to the contrary is seen in urban Uttara Kannada.

Table10.3

Proportion of households with groundwater sources as the main source of drinking water - Top 5 and bottom 5 districts*

District	Rural			Urban			Total		
	All	SC	ST	All	SC	ST	All	SC	ST
Udupi	82.4	68.5	76.0	70.0	59.0	68.0	78.8	66.2	74.3
Uttara Kannada	72.6	64.6	56.5	55.9	34.7	38.3	67.9	55.2	52.9
Dakshina Kannada	66.9	55.9	64.5	36.0	22.7	31.6	52.1	46.0	57.4
Yadgir	54.2	54.7	62.7	27.8	24.9	31.8	49.1	51.1	59.1
Vijayapura	58.9	60.4	58.0	15.3	22.9	12.7	48.4	53.5	46.4
Bengaluru	29.6	25.9	32.2	16.5	15.5	18.4	17.7	17.1	19.7
Gadag	21.1	27.1	25.8	7.4	8.3	8.5	16.2	21.8	22.4
Mysuru	24.7	29.3	30.0	4.5	5.3	7.5	16.2	22.5	24.6
Ballari	23.6	25.1	24.7	4.2	4.8	4.9	15.9	18.8	19.0
Dharwad	17.5	15.5	20.5	7.8	10.1	11.4	11.8	12.2	16.5
All Districts	**39.9**	**38.5**	**39.1**	**16.6**	**15.1**	**15.9**	**30.4**	**31.6**	**33.5**

** on the basis of proportion of total households (All), Source: Census, 2011*
Source: census - 2011

89% of the households in Bhatkal taluk (Uttara Kannada district) were dependent on groundwater sources as compared to 4.6% in Navalgund taluk (Dharwad district) (Annexure 8). The proportion of ST households dependent on groundwater sources was markedly higher than that of the overall population in the taluks of Channapatna, Ramanagara (Ramanagara district) and Yelbarga (Koppal district)

Among groundwater sources, the dependence on handwell/tubewell/ borewell has increased during the period 2001 to 2011 with more than one-fifth (21.49%) of the State's households dependent on these sources (Table 10.4). 11.88% of the State's urban households had these groundwater sources as the main source of drinking water as compared to 28.01% of rural households in 2011. In 2011, 37.16% of Yadgir district's households depended on these sources as compared to 5.23% in Udupi district. A wide disparity is seen in most districts between the proportion of rural and urban households dependent on these sources.

Among groundwater sources, the dependence on handwell/tubewell/ borewell has increased during the period 2001 to 2011 with more than one-fifth (21.49%) of the State's households dependent on these sources

Table 10.4

Proportion of households with hand-well/tube-well/bore-well as the main source of drinking water - Top and Bottom 5 districts*

District	Rural		Urban		Total	
	2001	2011	2001	2011	2001	2011
Yadgir	33.80	40.43	17.11	23.51	31.09	37.16
Vijayapura	41.60	42.50	16.30	12.25	36.11	35.25
Hassan	33.91	38.50	6.87	10.52	29.12	32.67
Chitradurga	33.16	36.89	5.37	11.67	28.06	31.75
Chamarajanagara	45.51	34.90	10.73	9.07	40.39	30.62
Dharwad	10.43	16.05	5.28	7.17	7.58	10.94
Shivamogga	12.69	15.15	4.09	3.08	9.64	10.80
Dakshina Kannada	2.71	11.31	1.68	6.37	2.30	8.93
Uttara Kannada	7.53	8.13	4.03	5.44	6.52	7.35
Udupi	2.94	5.01	3.52	5.78	3.05	5.23
All districts	**22.95**	**28.01**	**6.24**	**11.88**	**17.12**	**21.49**

** on the basis of proportion of total households in 2011* *Source: Census, 2011*

10.2.3 Surface sources of water

Surface sources of water include natural springs, rivers, canals, tanks, ponds and lakes. In Karnataka, in 2011, 2% of households depended on these sources of water with about 0.3% and 0.8% of households being dependent on springs and rivers/canals respectively. The dependence on different sources of surface water varied across districts with 11.1% and 10.2% of households in Raichur and Gadag districts respectively being dependent on these sources as compared to practically nil in

Overall, the dependence of ST households on surface water sources is higher than that of the general population and SC households.

Bengaluru rural (Table 10.5). 17.4% and 14.1% of rural ST and SC households in Chikmagalur and Dharwad districts respectively depended on these surface water sources (Annexure 9). 8.5% and 7.9% of Urban ST and SC households in Kolar were dependent on surface water sources. Overall, the dependence of ST households on surface water sources is higher than that of the general population and SC households.

Distinct disparities can be seen across Karnataka's taluks with 30.3% of All households of Navalgund taluk (Dharwad district) being dependent on surface water sources as compared to nil in Bengaluru North and South taluks of Bengaluru urban district (Annexure 10). 4.7% of the urban households of Athani taluk (Belagavi district) and 42.0% of rural households of Navalgund taluk (Dharwad district) had surface water sources as the main source of drinking water. 41.9% of ST households in Sringeri taluk (Chikmagalur district) depended on surface water sources as compared to 9.7% of urban ST households in Sindhanur taluk of Raichur district.

Table 10.5
Proportion of households with surface water sources as the main source of drinking water - Top 5 and bottom 5 districts*

District	Rural			Urban			Total		
	All	SC	ST	All	SC	ST	All	SC	ST
Raichur	14.6	13.0	13.0	1.5	1.8	2.1	11.1	10.5	11.8
Gadag	15.0	9.2	13.6	1.6	0.6	1.3	10.2	6.8	11.3
Dharwad	14.0	14.1	13.2	1.4	1.6	1.8	6.7	6.5	8.1
Kodagu	6.2	5.0	9.6	0.8	1.0	1.2	5.5	4.6	9.4
Chikkamagaluru	6.0	5.6	17.4	0.3	0.2	0.2	4.7	4.9	15.2
Mandya	0.2	0.2	0.6	0.4	0.6	0.9	0.3	0.3	0.7
Chikkaballapura	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3
Tumakuru	0.3	0.3	0.3	0.1	0.2	0.1	0.3	0.2	0.3
Ramanagara	0.0	0.0	0.1	0.2	0.0	0.1	0.1	0.0	0.1
Bengaluru Rural	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0
All districts	**3.0**	**2.1**	**3.7**	**0.8**	**1.2**	**1.0**	**2.0**	**1.9**	**3.1**

** on the basis of proportion of total All households in 2011* *Source: Census, 2011*

Tanks/Ponds/Lakes are the major source of surface water for the State's households. About 9% of the households in Gadag District continue to depend on tanks/ponds/lakes with the proportion of rural households depending on these sources increasing from 7.32% in 2001 to 14.02% in 2011 (Table 10.6). The proportion of rural households in Dharwad district dependent on this source is also significant. A high disparity between rural and urban households that are dependent on tanks/ponds/lakes is seen in most districts across the State with this difference being attributable to access to alternative sources, distance etc.

Table 10.6
Proportion of households with tanks/lakes/ponds as the main source of drinking water - Top 5 and bottom 5 districts*

District	Rural		Urban		Total	
	2001	2011	2001	2011	2001	2011
Gadag	7.32	14.02	0.08	0.36	4.82	9.09
Raichur	6.13	7.98	0.85	1.00	4.78	6.14
Dharwad	17.80	13.91	2.47	0.17	9.32	6.00
Dakshina Kannada	4.01	3.73	0.24	0.14	2.52	2.01
Kodagu	3.49	2.03	0.45	0.23	3.08	1.77
Tumakuru	0.11	0.08	0.01	0.08	0.09	0.08
Chamarajanagara	0.45	0.09	0.00	0.03	0.38	0.08
Bengaluru Rural	0.06	0.03	0.00	0.03	0.05	0.03
Mandya	0.11	0.04	0.04	0.01	0.10	0.03
Ramanagara	0.14	0.02	0.88	0.01	0.28	0.02
All districts	**1.54**	**1.38**	**0.34**	**0.38**	**1.10**	**0.96**

** on the basis of proportion of total households (All) in 2011 Source: Census, 2011*

The proportion of households with drinking water source away declined to 18.2% in 2011 from 21.9% in 2001

10.2.4 Location of drinking water source

In 2011, 36 per cent of households in informal settlements in India did not have basic facilities of electricity, tap water, and sanitation within house premises. Water sources could be located 'within the premises' of households, 'near the premises' and 'away from the premises'. Near the premises refers to the location of the source within a range of 100 metres from the premises in urban areas and within a distance of 500 metres in the case of rural areas. In contrast, 'away from the premises' refers to the location of the drinking water source which is located beyond 100 metres from the premises in urban areas and beyond 500 metres in rural areas.

10.2.4.1 Drinking water source away from the premises

The proportion of households with drinking water source away declined to 18.2% in 2011 from 21.9% in 2001 (Table 10.7). Disaggregating across rural and urban households, in 2011, 24.8% of rural households had drinking water source away as compared to 8.5% of urban households. This marks a distinct shift away from the situation in 2001 when 26.1% and 13.9% of rural and urban households respectively had drinking water source away.

Table 10.7
Households with drinking water source away (%) - Top 5 and Bottom 5 districts*

District	Rural		Urban		Total	
	2001	2011	2001	2011	2001	2011
Yadgir	41.6	45.3	25.6	20.7	39.0	40.6
Raichur	43.0	44.0	26.5	15.5	38.8	36.4
Vijayapura	36.0	39.9	22.2	17.0	33.0	34.4
Bidar	32.6	37.4	19.2	15.9	29.8	32.2
Kalaburagi	40.5	40.4	19.4	11.8	34.2	31.0
Kodagu	22.9	14.2	9.6	5.0	21.1	12.9
Udupi	18.9	13.1	10.6	6.1	17.3	11.0
Mysuru	18.9	15.1	6.5	2.1	14.2	9.7
Dakshina Kannada	14.7	9.9	8.9	4.3	12.4	7.2
Bengaluru Urban	21.2	12.0	10.0	5.9	11.3	6.4
All districts	**26.1**	**24.8**	**13.9**	**8.5**	**21.9**	**18.2**

** on the basis of proportion of total households (All) in 2011 Source: Census, 2011*

While 18.2% of the State's All households had water source away, 25.8% of SC and ST households (combined) had water source away

During the period 2001 to 2011, the proportion of households with water source away from the premises saw a marginal increase in the districts of Yadgir, Vijayapura, Bidar and Chitradurga while a marked increase was seen in Kolar district (Annexure 11). The proportion of rural households with water source away increased in the said period in the districts of Yadgir, Raichur, Vijayapura, Bidar, Kolar, Koppal, Chitradurga and Mandya with an increase in absolute number of households in these districts by about 2.1 lakh households. In contrast, the number of urban households with water source away saw a decline by about 41000 households although the proportion of such households saw a marked increase in Bengaluru rural district. On the whole, the proportion of urban households with water source away declined in most districts during 2001 to 2011. At the taluk level, 49.3% of households in Shorapur taluk (Yadgir district) had water source away as compared to 2.8% in Mysuru taluk of Mysuru district (Annexure 12). 48.6% of urban households in Indi taluk (Vijayapura district) had water source away.

While 18.2% of the State's All households had water source away, 25.8% of SC and ST households (combined) had water source away with the proportion of such ST households being 27.2% (vis-à-vis 25.2% of SC households) (Annexure 13). 54.02% of rural ST households in Yadgir district and 48.9% of rural SC households in Raichur district had water source away as compared to 31.4% and 29.5% of ST and SC households respectively in the State (Table 10.8). Also, as compared to 40.6% of All households in Yadgir

district having water source away in 2011, 52.2% of ST households in the district had water source away. The relative proportions indicate a strange correlation wherein a higher total proportion of all households having water source away coexisted with a low proportion of SC/ST households having the water source away and vice versa.

Table 10.8
Proportion of SC/ST households with drinking water source away 2011 - Top 5 and Bottom 5 districts*

Dis./trict	Rural		Urban		Total		Total	
	SC	ST	SC	ST	SC	ST	SC & ST	ALL
Yadgir	46.9	54.0	27.9	38.1	44.6	52.2	47.1	40.6
Raichur	48.9	47.3	22.7	30.0	43.1	45.5	44.3	36.4
Bidar	44.0	40.8	27.7	17.7	41.1	38.5	40.1	32.2
Vijayapura	42.4	40.9	27.6	23.0	39.6	36.2	39.3	34.4
Kalaburagi	44.1	48.1	21.2	13.8	38.3	35.1	38.0	31.0
Ramanagara	18.8	25.6	7.4	10.9	16.7	22.9	17.5	13.9
Shivamogga	17.8	19.5	10.0	6.0	15.7	16.1	15.8	13.0
Mysuru	18.5	20.2	4.6	5.0	14.6	16.5	15.4	9.7
Dakshina Kannada	18.2	13.7	8.0	6.2	15.2	12.1	14.1	7.2
Bengaluru Urban	15.5	15.5	10.5	8.9	11.3	9.6	10.9	6.4
All districts	**29.5**	**31.4**	**14.8**	**13.9**	**25.2**	**27.2**	**25.8**	**18.2**

** on the basis of proportion of total households (All)* *Source: Census, 2011*

10.2.4.2 Drinking water source within premises

Across the State, the proportion of households having the drinking water source within the premises increased from 31.8% in 2001 to 44.5% in 2011 (Table 10.9). However,, a vast disparity is seen within districts in 2011 with 19.8% of households in Yadgir district having drinking water source within the premises as compared to 79.3% in Dakshina Kannada district. Again, within urban and rural households, a disparity is seen in 2011 with 70.9% of urban households having the drinking water source within the premises as compared to 26.6% of rural households. The pervasiveness of the issue is evident in Bengaluru Urban wherein the absolute number of households which have within premises water sources was slightly more than half of the number of such urban households in the State.

Across the State, the proportion of households having the drinking water source within the premises increased from 31.8% in 2001 to 44.5% in 2011

Table 10.9
Households with drinking water source within premises (%) - Top 5 and Bottom 5 districts*

District	Rural		Urban		Total	
	2001	2011	2001	2011	2001	2011
Yadgir	9.2	13.3	37.7	46.9	13.8	19.8
Koppal	10.9	19.3	27.0	38.6	13.6	22.7
Chikkaballapura	12.0	16.6	41.8	46.9	17.7	23.2
Raichur	8.7	15.6	33.0	47.7	14.9	24.1
Chitradurga	12.9	17.6	36.9	51.6	17.3	24.5
Uttara Kannada	41.9	52.0	66.7	73.6	49.1	58.3
Mysuru	24.9	40.6	71.0	86.0	42.2	59.5
Udupi	56.1	71.6	73.1	84.2	59.3	75.3
Bengaluru Urban	19.8	41.3	66.4	80.2	61.0	76.8
Dakshina Kannada	54.3	72.2	70.1	86.9	60.5	79.3
All districts	**18.5**	**26.6**	**56.6**	**70.9**	**31.8**	**44.5**

** on the basis of proportion of total households (All) in 2011* *Source: Census, 2011*

However, the proportion of All households with surface water source away from the premises was significantly higher in the districts of Raichur, Gadag, Dharwad and Yadgir.

In 2011, 60.6% of urban households in Vijayapura district had water source within premises as compared to 14.8% of the district's rural households (Annexure 14). 70.3% of urban households in Ramanagara district had water source within premises as compared to 17.3% of rural households therein.

10.2.4.3 Type of source and Location of surface water source

With tanks/lakes/ponds being the major source of surface water in the State, these sources exist away or near the premises. Across All households, the proportion of households with surface water source near and away from the premises was comparable (Annexure 15). However, the proportion of All households with surface water source away from the premises was significantly higher in the districts of Raichur, Gadag, Dharwad and Yadgir.

The proportion of SC households that was dependent on surface water sources was lower at 1.86% (as compared to 2.98% of all households) with 1.01% of the households having surface water source away, with a higher proportion of such households being seen in the districts of Raichur, Gadag and Dharwad (Annexure 16). In contrast, the proportion of ST households with dependence on surface water sources was 3.06% with 1.88% of the households having surface water source away. 9.24% and 7.31% of ST households in Raichur and Gadag districts respectively had surface water source away (Annexure 17).

B. Rural Drinking water – Coverage and Quality

Karnataka has established a State Water

and Sanitation Mission to implement the National Rural Drinking Water Programme (NRDWP) in the State, with the mission being the nodal agency to approve and execute water supply programmes. Rural water supply schemes are implemented through Panchayat Raj Institutions.

The norms of the NRDWP recognize habitations that receive 55 LPCD as fully covered habitations as compared to 70-150 lpcd (varying with population) in urban areas. Although 55 lpcd has been defined under the new norm, 40 lpcd is considered as the minimum or lifeline supply that has to be provided to a habitation for considering it as 'fully covered' under the NRDWP. The proportion of population covered in a habitation with the minimum quantities is considered to evaluate coverage.

Considering 40 lpcd, 38.81% of rural habitations in the State had 100% coverage in 2016, while, with 55 lpcd, the proportion of rural habitations with 100% coverage was 13.61% (Table 10.10 and Annexure 18). Between 2013 and 2016, the proportion of habitations with 100% coverage at 40 lpcd has hovered around 40% while the proportion of habitations with 100% coverage at 55 lpcd has seen a gradual increase from 9.34% to 13.61%. At 40 lpcd, 70.62% of rural habitations in Dharwad district had 100% coverage in 2016 as compared to 14.05% of rural habitations in Bengaluru Rural. In contrast, at 55 lpcd, 39.33% of rural habitations in Raichur district had 100% coverage as compared to 0.66% of habitations in Kolar district.

Considering 40 lpcd, 38.81% of rural habitations in the State had 100% coverage in 2016, while, with 55 lpcd, the proportion of rural habitations with 100% coverage was 13.61%

Table 10.10
Fully covered rural habitations (%) 2013 to 2016 - Top 5 and bottom 5 districts*

District	55 lpcd				40 lpcd			
	2013	2014	2015	2016	2013	2014	2015	2016
Dharwad	0.00	0.26	2.84	2.84	55.93	50.00	69.33	70.62
Raichur	28.29	32.88	43.09	39.33	51.44	62.26	67.58	63.95
Yadgir	9.26	2.82	15.44	24.83	66.71	60.40	55.17	62.82
Vijayapura	4.29	1.14	23.55	26.12	65.01	35.27	63.30	62.44
Ballari	3.26	3.36	16.11	19.05	48.52	54.15	58.20	58.53
Hassan	3.78	11.78	10.81	7.32	24.98	43.82	28.86	20.82
Bengaluru Urban	5.01	2.31	1.83	1.54	28.83	21.41	27.19	16.60
Kalaburgi	3.78	5.91	3.80	2.80	47.99	46.89	53.22	16.23
Ramanagara	1.03	1.31	1.73	1.68	55.22	24.89	18.81	15.82
Bengaluru Rural	2.99	0.47	1.73	2.04	42.17	18.96	21.01	14.05
All Districts	**9.34**	**10.27**	**11.86**	**13.61**	**41.68**	**40.97**	**42.51**	**38.81**

**On the basis of proportion of households with 40 lpcd coverage in 2016 Source: NRDWP*

48.82% of the State's overall population had access to 40 lpcd or more in 2016 as compared to 46.84% in 2013 (Annexure 19). Across districts, 81.13% of the rural population of Dharwad district had coverage of 40 lpcd or more as compared to 10.76% of Bengaluru Rural's population. The population coverage in the districts of Bengaluru Rural, Kalaburgi, Bengaluru Urban, Ramanagara, Dakshina Kannada, Kodagu and Chamarajanagar has seen a decline since 2013 while districts such as Dharwad, Belagavi, Bagalkot, Ballari, Raichur, Mysuru, Koppal and Chikmagalur have seen an increase. 47.41% and 53.82% of the SC and ST population respectively have been covered in the State with 40 lpcd or more in 2016. Coverage of ST population in Bengaluru Rural and Kalburgi districts are significantly lower than the general population although the situation is to the contrary in most other districts.

Considering the norm of 55 lpcd, Table 10.11 indicates the coverage of non-water quality rural habitations across the State in 2015-16 as compared to that in 2009-10. It is seen that the proportion of habitations with 100% coverage in 2015-16 has declined sharply to about one-fourth of the proportion in 2009-10. An increase in the proportion of habitations with 25-50% and 50-75% is evident.

Additionally, 2365 habitations (3.95% of rural habitations) of the State were affected by water quality issues (arsenic, fluoride, iron, salinity and nitrate) in 2015-16 as compared to 6143 habitations (10.8%) in 2009-10.

Table 10.11
Coverage of non-water quality rural habitations - 55 lpcd

	2015-16		2009-10	
Coverage (%)	No	%	No	%
0-25	5673	9.5	857	1.7
25-50	18218	30.4	2829	5.6
50-75	15507	25.9	9395	1.8
75-100	11074	18.5	15174	30.0
100	7108	11.9	22389	44.2
Total	**57580**	**100.0**	**50644**	**100.0**

Additionally, 2365 habitations (3.95% of rural habitations) of the State were affected by water quality issues (arsenic, fluoride, iron, salinity and nitrate) in 2015-16 as compared to 6143 habitations (10.8%) in 2009-10.

The extent of coverage (% of non-water quality habitations) and the proportion of quality affected habitations in 2015-16 vary across districts as provided in Table 10.12.

Table 10.12
Coverage of habitations and proportion of quality affected habitations - select districts

District	Coverage (%)					% of quality affected habitations
	0-25	25-50	50-75	75-100	100	
Ramanagara	21.9	48.3	17.5	4.6	1.7	5.9
Tumakuru	14.7	39.5	20.5	12.4	4.5	8.3
Bengaluru urban	6.1	64.6	19.2	6.9	1.8	1.4
Kolar	9.9	21.0	41.9	11.1	0.4	15.7
Bengaluru rural	11.3	56.3	18.2	11.3	1.7	1.1
Hassan	21.1	40.9	12.7	12.8	10.8	1.6
Davangere	2.5	15.7	25.6	22.9	13.9	19.5
Belagavi	1.5	10.8	34.7	44.2	8.2	0.6
Raichur	0.7	12.4	15.6	22.1	43.1	6.1
All districts	**9.5**	**30.4**	**25.9**	**18.5**	**11.9**	**3.9**

In non-water quality districts, the proportion of habitations with 100% coverage varies widely when considered separately with 55 lpcd and 40 lpcd (Annexure 18). In 2015, 11.86% of habitations had 100% coverage with 55 lpcd as compared to 42.51% with 40 lpcd. During the period 2013 to 2016, while the proportion of habitations with 100% coverage with 55 lpcd increased from 9.34% to 13.61%, a decline from 41.68% to 38.81% is seen with 40 lpcd.

100% coverage of habitations with 55 lpcd sharply declined in Kodagu district from 54.70% in 2013 to 9.57% in 2016, as compared to a rise in Koppal district from 3.12% to 28.28% during the same period. Across taluks within a district, within Ramanagara district, 35.5% of habitations in Magadi taluk have 0-25% coverage as compared to 0.6% of habitations in Ramanagara taluk. Similarly, in Raichur district, 20.6% of habitations have 25-50% coverage as compared to just 1.2% in Lingsugur taluk (wherein 59.4% of habitations have 100% coverage).

At 40 lpcd, 100% coverage of habitations in Ramanagara district declined from 55.22% in 2013 to 15.82% in 2016. About 90% of the rural population of Bengaluru rural district received less than 40 lpcd in 2016. Considering the decline in 100% coverage with 40 lpcd and 55 lpcd, it can be seen that the coverage in Ramanagara, Dakshina Kannada, Kodagu, Bengaluru Rural and Kalaburagi has declined sharply during the four-year period. Across taluks within a district, while nearly all of Pavagada's rural population (Tumakuru district) receives less than 40 lpcd (Table 10.13), this situation was experienced by 53.5% of the population in Chikkanayakanahalli taluk of the same district.

While the proportion of SC-dominated habitations with 100% coverage of

40 lpcd declined from 40.06% in 2013 to 36.88% in 2016, an increase from 43.56% to 47.31% was seen in ST-dominated habitations in the same period (Annexure 19). As compared to the 100% coverage of 34.24% in All habitations in Shivamogga district in 2016, 45.88% and 59.52% of SC-dominated and ST-dominated habitations had 100% coverage of 40 lpcd. In contrast, while 56.00% of All habitations in Belagavi district had 100% coverage in 2016, the corresponding percentage for SC and ST-dominated habitations was 31.82% and 45.90% respectively.

The high rate of urbanization in Karnataka has seen a growing demand for drinking water in ULBs resulting in high pressure on the available water resources in the vicinity of the ULBs.

Table 10.13
Coverage of rural population (%) with < 40 LPCD (taluks) Top 5 and bottom 5 taluks*

Taluks	SC	ST	ALL	TOTAL
Pavagada	99.93	99.98	99.96	99.95
Sira	99.80	99.69	99.73	99.74
Devanahalli	94.92	95.86	95.12	95.15
Mangalore	92.55	92.37	93.15	93.09
Shirahatti	95.21	89.22	92.70	92.90
Gadag	18.91	5.93	6.07	7.87
Chikkodi	5.37	14.56	5.91	5.93
Gokak	2.39	8.73	3.50	4.04
Yelandur	1.10	2.58	4.83	3.15
Mundaragi	1.21	1.40	1.24	1.25
All Taluks	**46.98**	**43.53**	**45.72**	**45.76**

** on the basis of coverage of Total rural population Source: NRDWP*

Box 10.1
Innovating for sustainability of rural drinking water supply

With large tracts of arid lands and the increasing incidence of untimely/scarce rainfall, Karnataka has been in the forefront to adopt innovative mechanisms to ensure sustainability of rural drinking water supply.

As part of the Jal Nirmal Project (launched in 2004-05), a new participatory approach was introduced which made it mandatory for the Village Water and Sanitation Committee (VWSC) under the Gram Panchayat (GP) to assume responsibility for operations of piped water supply schemes implemented under the project. The successful implementation of this mechanism in villages such as Asoga (Belagavi district), has demonstrated the role of committed leadership and a motivated community in achieving the sustainability of piped water supply schemes.

In 2002, the Government of Karnataka issued orders stipulating that GPs should recover full O&M costs from users and that development grants should not be diverted to cover O&M expenses of piped water supply schemes. This led to metering of water connections. The widespread adoption of meters and systems for cost recovery in Dakshina Kannada District has shown that a motivated localised institutional leadership which understands local problems and provides solutions that are acceptable to the community will be able to successfully deliver high quality water services to the populace. It is also seen that the sustainability of the schemes can be ensured when consumers agree to abide by an efficient cost recovery plan.

Quality of rural water sources has emerged as a major issue in most arid zones of Karnataka with habitations being affected by groundwater sources with high levels of fluoride, nitrate, iron, salinity and Arsenic. Although various initiatives have led to creation of drinking water infrastructure such as water purification plants, the proportion of quality-affected rural habitations districts continues to be significant in districts such as Chikballapur (24.06%), Kolar (20.03%) and Mandya (15.91%).

C. Urban drinking water – Supply and Sustainability

Provision of drinking water and drainage facilities in urban areas in all districts of the State, other than Bengaluru city, is managed by the Karnataka Urban Water Supply and Drainage Board (KUWS&DB) while Bengaluru Water Supply and Sewerage Board (BWSSB) is responsible for provision of drinking water and underground drainage in Bengaluru city. The high rate of urbanization in Karnataka has seen a growing demand for drinking water in ULBs resulting in high pressure on the available water resources in the vicinity of the ULBs.

As against a recommended lpcd of 70-150 lpcd in urban areas, Shivamogga received 155 and 190 lpcd respectively while Kabbur received 20 lpcd (Table 10.14). Six of the bottom 10 ULBs are based in the districts of Kolar and Belagavi.

Table 10.14
Water supplied (lpcd) in ULBs - Top 10 and Bottom 10 ULBs (2014-15)*

ULB	Urban status	District	Lpcd
Shivamogga	CC	Shivamogga	155
Mysuru	CC	Mysuru	135
Madikeri	CMC	Kodagu	135
Malavalli	TMC	Mandya	135
Nagamangala	TP	Mandya	135
Pandavapura	TMC	Mandya	135
Srirangapatna	TMC	Mandya	135
Maddur	TMC	Mandya	135
Koppa	CMC	Chikkamagaluru	135
Sringeri	TP	Chikkamagaluru	135

ULB	Urban status	District	Lpcd
Kabbur	TP	Belagavi	20
Kolar	CMC	Kolar	26
Rabkhavi	TP	Belagavi	35
Kadur	TMC	Chikkamagaluru	40
Malebennur	TMC	Davanagere	40
Bangarapet	TMC	Kolar	40
Malur	TMC	Kolar	45
Almel	TP	Vijayapura	45
Bankapur	TMC	Haveri	48
Mugalkhod	TMC	Belagavi	50

**Based on LPCD*

Source: DMA, GoK

Considering the service indicator of continuity of water supply which refers to the average number of hours of pressurized water supply per day, Mangalore City Corporation in Dakshina Kannada district received 1080 mins as compared to 30 mins in TMCs (Chitaguppa, Humnabad) and TPs (Aurad and Bhalki) of Bidar district (Annexure 20). While coverage of water supply connection (calculated as the total number of households in the service area that are connected to the water supply network with direct service connections, as a percentage of the total number of households in that service area) was 100% in Mysuru City Corporation, 16% of households in Shahabad CMC of Kalburgi district and 14% of Kakkere TMC of Yadgir were covered.

Recognizing the role of effective governance mechanisms in ULBs in providing water supply

to the urban populace, the State implemented the World Bank-assisted Karnataka Urban Water Sector improvement project to demonstrate the feasibility of providing 24X7 water supply in a few towns of Hubli-Dharwad, Belagavi and Kalaburagi (refer box). The model is now being replicated in the remaining areas of Hubli-Dharwad as part of a World Bank-assisted Karnataka Urban Water Supply Modernization Project.

Box 10.2
24/7 Water supply in ULBs: Public-Private Partnerships

A few initiatives appear promising towards alleviating the situation with respect to urban water supply in the State. One such initiative relates to the provision of 24/7 water supply at adequate pressure in partnership with the private sector. The implementation of such projects in Belagavi, Hubli-Dharwad, and Kalburgi has been found to be cost effective along with improvement in bulk supply quantities, per capita consumption levels, metering coverage, proportion of authorized connections, revenues to ULBs, water pressure and user interface. Wastage/water losses were reduced and the mechanisms allowed for considerations of equity across the urban population. The continuous supply of water has also been associated with lower prevalence of dysentery in children in low-income households and lower typhoid fever incidence. However,, the effective implementation of such projects depends on the acceptance by users, risk allocation methods, flexibility in remuneration and management systems, equitable consumption-based tariff systems and effective project planning/development.

About 43% of water supplied in the State's ULBs constitutes non-revenue water (NRW). NRW, which includes unbilled consumption, apparent losses and real losses, indicates the extent of water produced which does not earn the utility any revenue. NRW appears to be at equal proportions across various classes of ULBs with towns such as Mugalkhod (TMC) and Kankanwadi (TP) of Belagavi district having higher levels of NRW. Larger ULBs such as Davanagere (CC) and Hoskote (CMC, Bengaluru Rural District) also have above-average NRW. The ULBs performance on another governance-related indicator, cost recovery of water supply related services, also indicates a higher recovery in City corporations and city municipal corporations although a large CC such as Shivamogga recovers only 4% of the costs of water supply as compared to Mysuru and Mangalore which recover more than 90% of the involved costs. The efficiency of collection of water supply related charges exceeds 80% in all ULBs of Dakshina Kannada while Chikballapur, Bengaluru Rural and Yadgir report low efficiencies.

Box 10.3
Augmentation of water resources in urban areas through rainwater harvesting

The Bengaluru Water Supply and Sewerage (Amendment) Act, 2009, made it obligatory for every owner or occupier of a building having a sital area of 2400 square feet and above or every owner who proposes to construct a building on total area of 1200 square feet and above, to provide for defined rainwater harvesting structures. By 2016, about 60000 buildings in the city had established rainwater harvesting structures. While this measure, albeit with slow rates of implementation, is expected to have contributed to the replenishment of groundwater, the rapid loss of lakes, tanks and watersheds in Bengaluru due to encroachment etc. has borne an adverse impact on the city's water resources.

C (i): Drinking water supply in Urban slums

Karnataka's slum population grew from 14,02,971 (2.6% of the State's population and 3.3% of India's slum population) to 32,91,434 (5.4% and 5.0%) during the period 2001 to 2011. 16.18% and 29.35% of slum households in the State had untreated tapwater and groundwater sources respectively as the main source of drinking water (Annexure 21). Across various classes of ULBs, it is seen that the proportion of slum households dependent on untreated tapwater and groundwater (absolute number of slum households) is highest in TMCs. Thereby, as compared to the overall urban population of the State, the proportion of slum households dependent on untreated tapwater is higher with slum households (16.18% as compared to 12.03%). Further, 8.5% of the overall urban households had drinking water sources away, as against 14.58% of slum households had drinking water source away from the household.

Karnataka is exposed to a complex situation with pressures for supply of water for irrigation, growing demand for water in urban areas, shrinking distributed sources of water such as ponds and tanks, and the lower storage capacities of surface water bodies. Further, with the State's water demand (particularly for industry and household water) being projected to increase by 40% from 37,419 million m^3 in 2000 to 52,366 million m^3 in 2025, the need to augment and effectively manage Karnataka's water resources is imminent.

Significant inequalities existed between the State's rural and urban households' with respect to access to tapwater, especially for treated tapwater in districts such as Haveri, Ramanagara and Tumakuru. Although major inequalities with respect to access to treated tapwater between the SC/ST and Overall population did not exist, ST households appeared to be at a disadvantage as compared to SC households on this service in districts such as Kodagu and Dharwad.

In 2012, 75% of rural households and 79.5% of urban households in Karnataka reported as having sufficient drinking water throughout the year as compared to the national average of 85.8% and 89.6% respectively. Also, 74.3% of rural households and 46.1% of urban households reported that they received water daily as compared to the national average of 75.3% and 78.1% respectively. It is evident that the water supply situation in Karnataka faces serious challenges especially with respect to urban water supply. Disparity is seen between larger cities such as Shivamogga, Mysuru and smaller towns/cities such as Kolar, Kabbur and Rabkhavi in the lpcd. The proportion of slum households that was dependent on untreated tapwater is higher than that of the overall population.

In 2012, 75% of rural households and 79.5% of urban households in Karnataka reported as having sufficient drinking water throughout the year as compared to the national average of 85.8% and 89.6% respectively.

The State's attempts at addressing issues relating to governance of water utilities have been well recognized. Although the proportion of non-revenue water has been declining over time in most urban bodies, low cost recoveries, seen even in major towns such as Shivamogga, can impact the investment abilities of the water supply boards.

To conclude, despite achieving progress in coverage and governance mechanisms, Karnataka needs to design and implement programs that address disparities that exist between rural/urban, All/SC/ST and slum households with respect to water supply in the State. Accelerated interventions are essential in regions which have seen deterioration in water supply, as indicated by specific measures e.g. slip-back, quality

issues etc.

10.3.Sanitation

Sanitation, along with drinking water, is seen as a basic necessity of human beings, and the United Nations General Assembly and the UN Human Rights Council have adopted resolutions (A/64/292 and A/HRC/RES/18/1) recognizing the Human Right to Safe Drinking Water and Sanitation. Recently, in 2015, the UN General Assembly adopted Resolution A/RES/70/169, recognising that 'the human right to sanitation entitles everyone, without discrimination, to have physical and affordable access to sanitation, in all spheres of life, that is safe, hygienic, secure, socially and culturally acceptable and that provides privacy and ensures dignity'. The Mar del Plata resolution of 1977 which declared the period 1981-1990 as the International Decade of Water and Sanitation was one of the earliest expressions of the global concern on sanitation.

Despite various initiatives to address the situation, the Census 2011 revealed that only 32.7% urban Indians were connected to a piped sewer system and 12.6% – roughly 50 million urban Indians – still defecated in the open.

As a responsible signatory to the Mar del Plata resolution, India introduced new programs during the sixth and the seventh five year plans to improve rural sanitation coverage. Further, the Central Rural Sanitation Programme (CRSP) was launched in 1986, and a more integrated, broad-based Total Sanitation Campaign (TSC) in 1999. Despite various initiatives to address the situation, the Census 2011 revealed that only 32.7% urban Indians were connected to a piped sewer system and 12.6% – roughly 50 million urban Indians – still defecated in the open. In 2012, 26% (19 cities) of 71 cities across India had no system for sewage collection while 40% (29 cities) had a partial provision in which 80 per cent of this sewage was not collected, while in the rest of the 23 cities with a sewage network did not have an account of sewage generated. Consequently, towards accelerating its efforts and to encourage the involvement of local governments/communities, the Government of India also launched the Nirmal Bharat Abhiyan in 2012. In 2014, towards intensifying efforts to promote basic sanitation, the Government of India launched the Swachh Bharat Mission to accelerate efforts to achieve universal sanitation coverage, improve cleanliness, and eliminate open defecation in India by 2019. This program is being implemented through two verticals - Swachh Bharat Mission, Urban (SBM-U) for cities and Swachh Bharat Mission, Gramin (SBM-G) for rural areas. The SBM's typical outcome parameters include reduction in open defecation, achievement of Open Defecation Free (ODF) villages and improvement in Solid and Liquid Waste Management (SLWM) with ODF being characterized as the termination of faecal-oral transmission, defined as: a) no visible feaces found in the environment/village; and b) every household as well as public/community institutions using safe technology option for disposal of feaces. However,, despite the series of programs with distinct strategies focusing on hardware and awareness creation, India's, especially rural India's progress in the area of basic sanitation remains slow. According to the recently launched Joint Monitoring Programme (JMP) update (2015), about 564 million people practiced open defecation in India out of 946 million open defecators of the world earning the country the unenviable distinction of having the

large number of individuals practicing open defecation even today in the World. As of 2015, about 10 percent of urban population of 419 million resorted to open defecation (OD) in India. India has been unable to achieve the Millennium Development Goal of halving the proportion of people with sustainable access to basic sanitation by 2015, and lack of sanitation in India has also led to economic losses for the country (6.4 % of India's GDP).

Karnataka, as in the national context, continues to grapple with the complex issues involved in providing basic sanitation facilities for its citizens. The State has been implementing the above-mentioned central programs and has also launched its own initiatives to accelerate the provision of sanitation services. Since 2007, 1070 Gram Panchayats, 6 Taluk Panchayats and One Zilla Panchayat in Karnataka have been awarded Nirmal Gram Puraskar Awards. Further, towards accelerating progress in the State, Karnataka has also launched "Nairmalya Award" at Taluk Level, "Rajata Nairmalya" at District level and "Nairmalya Rathna" at the State level to recognize the sanitation-related achievement of Gram Panchayats, Taluk Panchayats and Zilla Panchayats respectively. However,, the progress in providing basic sanitation is satisfactory in the Coastal and Malnad Districts of Dakshina Kannada, Uttara Kannada, Udupi, Shivamogga, Kodagu and Chikmagalur districts only, while in a majority of the districts, the progress achieved is not satisfactory.

10.3.1 Availability of latrines in households

The ongoing Swachh Bharat Mission has an extended vision of creating Open Defecation Free (ODF) villages rather than just focusing on the construction of individual household latrines. Under this programme which involves a higher level of financial assistance for construction of household-level latrines, 708309 Individual household latrines (IHHLs) were constructed in Karnataka in 2015-16, vis-à-vis the target of 1037478 indicating an achievement of 68.27%.

In 2011, 51.20% of the State's households had latrines with the proportion of rural households having individual latrines (28.40%) being about a third of the proportion of urban households (84.90%) having individual latrines (Table 10.15). 11.23% of Yadgir district's households had latrines (Rural - 4.18%, Urban – 38.60%) as compared to 90.18% of Dakshina Kannada's households (Rural – 87.40%, Urban – 96.60%).

Since 2007, 1070 Gram Panchayats, 6 Taluk Panchayats and One Zilla Panchayat in Karnataka have been awarded Nirmal Gram Puraskar Awards.

Table 10.15
Households with latrine - 2011 (%): Top5 and Bottom 5 districts*

District	Rural	Urban	Total
Yadgir	4.18	38.60	11.23
Vijayapura	4.98	42.90	14.78
Koppal	11.36	45.96	16.98
Kalaburgi	4.50	46.11	17.66
Gadag	8.82	38.43	18.78
Bengaluru Rural	76.10	91.64	80.36
Kodagu	79.20	96.80	81.83
Bengaluru	75.64	94.72	84.87
Udupi	84.05	95.63	86.68
Dakshina Kannada	87.40	96.60	90.18
All Districts	**28.40**	**84.90**	**51.20**

**based on the total proportion of households*
Source: Census, 2011

The disparity between the proportion of urban and rural households with latrines is evident in districts such as Yadgir, Vijayapura (Rural – 4.98%, Urban – 42.90%) and Kalburgi (Rural – 4.50%, Urban – 46.11%). This gap is also seen in some districts such as Kolar and Mysuru which have a relatively higher proportion of households (41.18% and 42.74%) that own toilets (Annexure 22). Across taluks, 4.90% of Jevargi taluk (Kalburgi district) households had latrines as compared to 96.90% of households in Mangalore taluk (Dakshina Kannada district) (Annexure 23).

As compared to 48.8% of the overall households in the State not having latrines, 68.5% and 71.3% of SC and ST households in the State did not have latrines indicating a wide gap in the availability of this basic infrastructure in the houses of these two disadvantaged communities. This disparity is seen in both rural and urban Karnataka with the proportion of such SC and ST households in urban areas (32.3% and 30.2%) being significantly higher than that of All households therein (15.1%). About 84% of SC and ST households in rural Karnataka did not have latrines (Annexure 24).

Across Districts, about 98% of SC and ST households in Yadgir district did not own a latrine. This is in contrast to Bengaluru Urban wherein 5.2% of households lack latrines with 46.1% and 33.2% of rural SC and ST households in Bengaluru urban lacking a latrine. About 96% of households in Rural Kalburgi did not have a latrine as compared to about 32% in urban areas of the district. A stark difference between rural and urban access to latrines in SC households is seen in Mysuru district on this count with 81% of rural SC households in the district lacking a latrine as compared to 13.5% of urban SC households.

10.3.2. Open defecation

92.2% (about 59 lakh households) of the State's 'All' households which did not own a latrine practiced Open defecation as compared to 92.2% and 93.8% of the State's SC and ST households (Table 10.16 and Annexure 25). In contrast, 95.2% of Karnataka's rural households which did not have a latrine practiced open defecation, with 95.7% of SC and ST households reporting this practice. Across districts, 97.9% of Mandya's households and 69.7% of Bengaluru Urban's households (92.7% of rural households) without latrines defecated in the open. About 76% of Karnataka's urban ST households without a latrine practiced open defecation.

Table 10.16
Practice of open defecation by households that do not have a latrine within premises – top and bottom 5 districts*

District	Rural		Urban		Total	
	No	%	No	%	No	%
Mandya	252709	98.5	8414	82.2	261123	97.9
Tumakuru	398830	98.5	21578	87.9	420408	97.9
Chamarajanagara	169083	98.0	12883	89.3	181966	97.4
Chikkamagaluru	96522	97.7	5412	89.8	101934	97.3
Mysuru	287641	98.1	13101	78.3	300742	97.0
Bagalkote	205148	92.6	47798	71.3	252946	87.7
Gadag	117266	93.8	31279	69.7	148545	87.4
Ballari	226523	88.5	45421	65.3	271944	83.5
Koppal	162204	86.4	13383	56.2	175587	83.0
Bengaluru Urban	48463	92.7	36933	52.6	85396	69.7
All Districts	**5356694**	**95.2**	**569604**	**71.1**	**5926298**	**92.2**

** On the basis of proportion of total households practicing open defecation Source: Census, 2011*

51.1% of Kolar's urban households without a latrine practiced open defecation as compared to 97.5% of such households in rural areas of the district. 98.6% of rural SC households without a latrine in Mandya district practiced open defecation.

10.3.3 Drainage connectivity for waste water outlet

About 74% of the State's households (about 97 lakh households) had open drainage (34.6%) or no drainage (39.3%) for their waste water outlet (Table 10.17 and Annexure 26). 94.5% of the State's rural households had open or no drainage as compared to 43.5% of urban households.

Table 10.17
Households with drainage connectivity for waste water outlet (2011)- Top 5 and Bottom 5 districts*

District	Rural		Urban		Total			
	Open drainage	No Drainage	Open drainage	No Drainage	Open drainage		No Drainage	
	%	%	%	%	No	%	No	%
Udupi	17.8	77.6	24.1	62.0	48260	19.6	179906	73.0
Vijayapura	17.8	79.9	21.1	28.8	75225	18.6	274012	67.6
Uttara Kannada	19.9	74.6	40.3	42.1	82682	25.8	208461	65.2
Yadgir	23.4	74.3	62.0	26.1	61889	30.9	130231	65.0
Raichur	17.3	79.0	49.3	21.1	92545	25.8	228846	63.7
Shivamogga	51.1	44.4	57.2	9.8	214342	53.3	128334	31.9
Davanagere	57.2	37.4	37.2	7.4	205304	50.7	111821	27.6
Mysuru	51.7	42.7	17.4	4.6	257701	37.4	184924	26.9
Bengaluru (R)	60.1	31.0	74.3	8.2	143941	64.0	55409	24.7
Bengaluru (U)	55.5	23.2	14.7	2.9	433141	18.2	111827	4.7
All Districts	**37.0**	**57.5**	**31.1**	**12.4**	**4562765**	**34.6**	**5178066**	**39.3**

**On the basis of proportion of households with no drainage connectivity*

Source: Census, 2011

95.9% and 92.6% of households in Yadgir and Udupi districts had open or no drainage. Bengaluru urban and Bengaluru rural districts present a stark contrast with 22.9% of households in urban Bengaluru having open drainage or no drainage as compared to 88.7% of Bengaluru rural's households. 97.7% of rural households in Vijayapura and Yadgir districts had open or no drainage while 88.1% and 86.1% of urban households in Yadgir and Udupi districts lacked closed drainage systems.

As compared to the 73.9% of the State's households with open or no drainage, 84.4% and 86.3% of SC and ST households respectively had open or no drainage (Annexures 27 and 28). Table 10.18 summarizes the disparity of this service in SC and ST households as compared with All households of the State.

Table 10.18
Proportion of households with open or no drainage (%)

	ALL	SC	ST
State	73.9	84.4	86.3
Urban	43.5	54.8	54.1
Rural	94.5	96.7	96.6

It is apparent that the proportion of SC and ST households with open or no drainage is higher than that of 'All' households in the State. 98.8% of rural SC households in Yadgir and Kalburgi districts, and 98.8% and 98.3% of rural ST households respectively in Yadgir and Hassan Districts had open or no drainage. Drainage facilities for waste water outlets are negligible in a few districts such as Yadgir with SC and ST households being at a disadvantage as compared to the overall population.

10.3.4 Sanitation services in ULBs

Sewage networks in TPs and TMCs of Karnataka are grossly inadequate with the provision of these services being at extremely low levels in districts such as Yadgir and Kalburgi although Yadgir CMC has coverage of 80%. A few CMCs such as Channapatna, Mandya, Tumakuru and Hassan have high levels

Box 10.4
Recognition of Karnataka's sanitation initiatives

The State's constraints notwithstanding, some of Karnataka's cities/towns and districts have been featured in lists that recognize cleanliness and sanitation services

Mysuru city topped the Swachh Bharat Rankings (2015) of 476 cities in the country while Hassan, Mandya and Bengaluru also featured in the top 10. The 476 Class-1 cities in 31 States and Union Territories, each with a population of above one lakh were surveyed for assessing total sanitation practices covering a set of parameters including the extent of open defecation, solid waste management, seepage management, waste water treatment, drinking water quality, surface water quality of water bodies and mortality due to water-borne diseases etc. Bengaluru topped the list of State capitals in the country.

Doing an encore, Mysuru city topped the list of 73 cities that were surveyed for cleanliness as part of Swachh Survekshan -2016. Although Karnataka obtained the 18th place in the ranking of 26 Indian States on households having access to sanitary toilets and using them, Udupi and Kodagu districts occupied the 7th and 11th places respectively in a list of 53 districts in the plains of India as part of the Swacch Sarvekshan Gramin 2016.

It is apparent that the proportion of SC and ST households with open or no drainage is higher than that of 'All' households in the State.

of sewage coverage while CCs such as Kalaburgi and Shivamogga have less than 50% coverage. A distinct difference in the level of service provision is seen between districts in southern Karnataka and those in other regions of the State. The low levels of collection efficiency of sewage and cost recovery for sewage management, inadequacy of sewage treatment capacities and low quality of sewage treatment have led to most ULBs in the State grappling with issues relating to sustainable sewage management.

The scope of management of Municipal Solid Waste (MSW), which includes organic and inorganic waste materials, involves the scientific collection, storage, transportation, treatment and effective disposal of the waste. The household level coverage of solid waste management services in most TPs of Vijayapura, Koppal and Belagavi districts is at very low levels (less than 25%).The households of CMCs of Shahabad (Kalaburgi district) and Gundlupet (Chamarajnagar district) have 20% coverage for solid waste

management services. In contrast, Mysuru (CC), Arsikere, Hassan and Koppa (CMCs) have high levels of coverage.The overall State average coverage for solid waste services is at about 65%. Segregation of solid waste has been Stated to be a pre-requisite for the effective management of the wastes. However, about 60% of the State's ULBs (other than Bengaluru) have less than 25% of the solid waste being segregated, thereby leading to a complex and overpowering situation for waste treatment and effective disposal. With the State average of solid waste segregation at about 27%, City corporations such as Ballari, Davangere, Tumakuru, Shivamogga, Hubli-Dharwad and Vijayapura too have very low or nil levels of segregation. This situation also prevails in CMCs such as Chikmagalur, Chitradurga, Hassan and Mandya. However, high levels of segregation have been reported in a few ULBs such as Moodabidre (TMC, D. Kannada district), Raichur (CMC, Raichur district) and Kushalnagar (TP, Kodagu district). Deriving from the low extent of waste segregation, about 40% of the State's ULBs, including CCs such as Davangere, Hubli-Dharwad and Vijayapura and CMCs such as Mandya and Hassan do not undertake scientific disposal of solid waste (Annexure 29).

However, about 60% of the State's ULBs (other than Bengaluru) have less than 25% of the solid waste being segregated, thereby leading to a complex and overpowering situation for waste treatment and effective disposal.

Box 10.5
Management of Municipal Solid Waste and Sewage in Bengaluru (BBMP)

Bengaluru generates about 5000 MT/day of Municipal Solid Waste (MSW) at an average of 0.5 kg/day/per capita considering the city's population at 10.18 million. While 16-25% of Bengaluru's MSW consists of recyclable materials such as paper, glass etc., organic waste constitutes 55-60% of the city's MSW output. About 10% of the city's MSW is recycled. Currently, the metro has infrastructure to handle 2100 MTs, and new facilities which can process an additional 2300 MTs of MSW are being established. Activities relating to waste collection, transportation and disposal in most parts of the city have been outsourced to private operators. However,, issues such as illegal dumpsites, inadequate/improper segregation and growing resistance to establishment of landfills/treatment facilities pose challenges to the effective management of MSW in the sprawling city. E-wastes too, growing over the years with its share of heavy metals, have been creating additional issues, which However,, have been better managed by better involvement of the private sector.

Bengaluru generates about 1300 MLD of sewage (domestic and industrial) of which, 450 MLD of sewage is being treated currently. While the city has capacity to treat about 720 MLD, an additional sewage treatment capacity of about 340 MLD is being created. Most of Bengaluru's untreated sewage enters lakes through a network of storm water drains, which is encroached in many locations.

Various initiatives, which involve local resident associations and citizen groups, to promote waste segregation, and treat organic solid wastes to produce compost, are currently being undertaken in the city. Also, new drainage infrastructure is being created to prevent the entry of raw sewage into lakes. However,, rapid growth in the city's population, change in lifestyles (leading to higher per capita waste generation) and the limited investment capabilities of the service providers have impeded the effective delivery of waste management services.

About two-thirds of the State's ULBs (other than Bengaluru) recover less than 5% of the costs involved in providing solid waste management services. None of the CCs reported to recovering more than 20% of the said costs. About 54% coverage of the storm water drainage network in the State's ULBs has been achieved with a higher coverage in Belthangady (TP, D. Kannada district) and Gokak (CMC, Belagavi district). The low levels of cost recovery and the resultant constrained abilities to invest in SWM infrastructure threaten the urban ecosystem in most ULBs of the State.

While 15.1% of all urban households lacked a latrine, 36.70% of households (2.67 lakh households) in Karnataka's slums did not have a latrine indicating a significant difference in access to this basic infrastructure

10.3.4.1 Sanitation services in slums

While 15.1% of all urban households lacked a latrine, 36.70% of households (2.67 lakh households) in Karnataka's slums did not have a latrine indicating a significant difference in access to this basic infrastructure (Annexure 30). 53.55% and 49.05% of slum households of TPs and TMCs respectively did not have a latrine as compared to 15.63% of slum households in Municipal corporations and their outgrowths. About 79% of such slum households in TMCs and TPs practiced open defecation, while the use of public latrines was higher in municipal corporations and TPs and their outgrowths.

About 65% of slum households (357117 households) had open drainage or no drainage connected to their waste water outlet (in contrast to the State average of 43.5% of urban households in Karnataka) (Annexure 31). 91.35% of slum households in TPs lacked closed drainage while about 29% of households in TMCs and their outgrowths lacked a drainage system. It is evident that the sanitation services in Karnataka's slums, especially in TPs and TMCs in terms of latrines and drainage facilities are lower as compared to all urban households.

10.3.5 Progress in provision of sanitation services

The ongoing Swachh Bharat Mission program aims to create a set of sanitation services in urban and rural India by resources being contributed by the Central and State governments. As part of this program, IHHLs are being constructed with liberal financial assistance to beneficiaries. Since 2013-14, about 21 lakh IHHLs have been constructed in Karnataka with about 82% of the beneficiaries in the State being BPL households (Annexure 32). While all the districts of the State have achieved 87.6% between 2013-14 and 2015-16, Chikmagalur district has achieved about 52% of its physical target as compared to 156.2% in Koppal district. A significant declining trend (during 2013-14 to 15-16) in the achievement of targets is seen in the districts of Chikkamagaluru, Ballari, Kalaburgi / Yadgir, Bidar and Gadag districts. Belagavi district, with an achievement of more than 1.08 lakh IHHLs has recorded an achievement of about 120% during the 3-year period. Chikmagalur district's coverage of BPL households has also been lowest among all the districts, in 2013-14. However,, the State's achievements with respect to BPL household targets have been commendable with the achievement of BPL households being higher than the overall State's achievements in each of the years between 2013-14 and 2015-16.

The taluk-level achievements of IHHL indicate a rather disappointing situation with the progress in some of the taluks that were identified under the Baseline Survey – 2012 as having low coverage, being inadequate to create a significant impact. The coverage in Shahpur taluk in Yadgir district has grown marginally to 12.82% i.e. an additional 5% of households (3079 households) were covered between 2013-14 and 2015-16 (Annexure 33). A low level of progress is seen in taluks such as Devadurga, Raichur, Aland and Manvi. This is in contrast with taluks such as Beltangadi, Koppa, Sulya and Bantval taluks wherein coverage of nearly all the households has been achieved with rapid progress in construction of IHHLs.

Summary

While Karnataka's achievements in the provision of drinking water have been impressive, the State's achievements in the area of sanitation leave much to be desired. The State's effort in this direction notwithstanding, it is seen that about half of the State's households (including about two-thirds of the rural households) lack a latrine, which is a primary indicator of sanitation infrastructure. With the proportion of rural households with a latrine being one-third of the proportion of urban households in the State, it is evident that inequalities across rural-urban households with respect to this infrastructure are marked. Further, inter-district variations in the proportion of households with this infrastructure are at high levels with 11.23% of Yadgir district's households having a IHHL as compared to 90.18% of households in Dakshina Kannada having this facility. Intra-district urban-rural disparities in the availability of latrines are also higher in districts such as Yadgir and Vijayapura. Taluk level disparities are higher with less than 5% of households in Jevargi taluk having a latrine as compared to about 97% in Mangalore taluk. A higher proportion of SC/ST households lacked a latrine as compared to the overall households in the State. The State has a long way to go in becoming ODF with about 92% of the households, which did not have a latrine, practicing open defecation. Although achievements with respect to IHHLs constructed as part of various State and central government programs have varied across districts, Karnataka has been effective in ensuring that most of the constructed IHHLs benefit the State's BPL households.

Also, with about three-fourths of the State's households having open drainage or no drainage, it is important that initiatives towards providing adequate closed drainage facilities are launched at the earliest. Along with a wide urban-rural disparity on this dimension, a higher proportion of the State's SC/ST households lacked closed drainage as compared to the State's overall households. Inequalities also exist in the provision of sewage networks across various classes of ULBs with sewage networks in TPs and TMCs being lower as compared to other urban classes. The household-level coverage of solid waste management services is lower in TPs of most districts of North Karnataka while waste segregation in CMCs such as Ballari and Davanagere too are at low levels. With low levels of recovery of costs involved in providing solid waste management services, the investment abilities of the urban bodies

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appear to be constrained. Further, spurred by increasing urbanization and changes in lifestyle, the severity of the waste management situation in Bengaluru has aggravated rapidly in the last few years, thereby calling for new waste processing/handling infrastructure to be established (with many of them in the pipeline).

To conclude, while pockets of success with respect to provision and utilization of sanitation services have emerged in the State (with formal recognition at the national level), Karnataka has to formulate and implement cost-effective strategies to adequately address the prevailing inequalities across rural-urban and between All/SC/ST households, and contribute to the national goals defined under the Swachh Bharat Mission – Gramin and Urban. Innovative modes of resource generation, implementation and monitoring (of construction and utilization) have to be developed with active collaboration of the public and private sectors.

10.4 Housing

Adequate housing has been a component of Article 25 of the Universal declaration of human rights which was adopted by the United Nations General Assembly in December 1948, with India voting in favour of the declaration. Further, Article 11.1 of the International Covenant on Economic, Social and Cultural Rights, a significant global legal instrument, affirms that, "The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions". More recently, since the 1980s, the United Nations Human Settlement Programme (UN-Habitat) has been striving to achieve the global goal of providing adequate shelter for all and for the development of sustainable human settlements. While the right to adequate housing includes the components of freedom (against forced evictions, arbitrary interference and place of living) and entitlements (security of tenure, housing, land and property restitution, and equal and non-discriminatory access to adequate housing), the UN's comments also clarify that adequate housing should be affordable, habitable, accessible, with security of tenure and the availability of services, materials, facilities and infrastructure (safe drinking water, adequate sanitation, energy for cooking, heating, lighting, food storage or refuse disposal. The recently-announced Sustainable Development Goal 11 which focuses on 'Making cities and human settlements inclusive, safe, resilient and sustainable' includes a subgoal (11.1) that seeks to, by 2030, ensure access for all to adequate, safe and affordable housing and basic services, and upgradation of slums.

The recently-announced Sustainable Development Goal 11 which focuses on 'Making cities and human settlements inclusive, safe, resilient and sustainable' includes a subgoal (11.1) that seeks to, by 2030, ensure access for all to adequate, safe and affordable housing and basic services, and upgradation of slums.

The Constitution of India links housing with various fundamental rights provided in Articles 14, 15, 19 and 21, and directive principles provided through Articles 39, 42 and 47. The right to housing has been upheld by the Supreme Court of India and several High Courts as an integral component of the fundamental right to life (guaranteed in Article 21 of the Constitution of India). In the post independence period, the Government of India has formulated and implemented various policies and programs to provide adequate housing

to its citizens. During the last three-four decades, factors such as rapid urbanization have led to policies (e.g. National Urban Housing and Habitat policy 2007) and targeted programs such as the Valmiki Ambedkar Awas Yojana (VAMBAY), Jawaharlal Nehru National Urban Renewal Mission (JNNURM), Rajiv Awas Yojana (RAY), Pradhan Mantri Awas Yojana - Gramin (earlier known as Indira Awas Yojana) and, most recently, the Housing for All (Gramin and Urban) program. The Government of India has also developed the urban-targeted Affordable Housing in Partnership program which seeks to involve the private sector in providing housing to the masses. However, as indicated by a committee that was established to estimate the urban housing shortage in India during the twelfth five year plan period (2012-17), India has to implement a series of interventions to address the shortage of 18.78 million dwelling units, and enable large numbers of its citizens to tide over 'housing poverty' which is defined as households living in unacceptable dwelling conditions or in unacceptable physical and social conditions. In India, 80% of the urban poor live in congested/obsolescent houses with nearly one million households living in non-serviceable katcha houses, while over half a million households are in homeless conditions. Further, the working group on rural housing for the twelfth five year plan estimated rural housing shortage at 40 million units by 2017.

Karnataka has established dedicated institutions to implement various programs that provide housing for its rural and urban populace. The Rajiv Gandhi Rural Housing Corporation and the Karnataka Housing Board have been implementing the central housing programs as well as the State's own programs such as the Rural Ashraya/Basava Vasathi Yojane, the Urban Ashraya/Vajpayee housing scheme, a special housing scheme for the differently-abled and other disadvantaged communities, the Nanna Mane program that seeks to provide affordable housing to low income groups, and Dr. B R Ambedkar Nivasa Yojane that provides houses to homeless SC/ST families. Since 2012-13, about 1.01 million houses have been provided under the schemes with a higher level of target achievement being recorded by the rural housing schemes.

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10.4.1 Condition of houses

In 2011, 2.90% of the State's occupied census houses were in a dilapidated condition as compared to 3.67% of houses in 2001. A reduction in the proportion of dilapidated houses is seen in both rural and urban areas of the State with 3.94% of rural houses being dilapidated in 2011 (as compared to 4.32% in 2001) and 1.42% of urban houses being dilapidated in 2011 (2.50% in 2001) (Table 10.19). Although the declining proportion of dilapidated households indicates an improvement in the situation, an increase in the absolute numbers of dilapidated houses is seen in the State. And this increase is attributable to the increase in the proportion of dilapidated houses in rural Karnataka.

Table 10.19
Dilapidated occupied census houses - Top 5 and Bottom 5 districts*

District	Rural				Urban				Total			
	2001		2011		2001		2011		2001		2011	
	No	%	No	%	No	%	No	%	No	%	No	%
Chamarajanagara	13024	5.9	14223	5.41	2205	5.4	1809	3.2	15229	5.8	16032	5.01
Raichur	8442	3	18666	5.65	2386	2.33	3435	2.7	10828	2.8	22101	4.85
Vijayapura	13814	4.3	20990	5.29	2821	2.93	2828	2.2	16635	4	23818	4.52
Ramanagara	15224	6.8	13669	5.12	2416	4.25	1937	2.3	17640	6.3	15606	4.44
Shivamogga	20171	6.8	18698	5.31	5548	3.45	4687	2.3	25719	5.6	23385	4.22
Udupi	16936	6.8	7282	2.7	1621	2.76	1487	1.3	18557	6	8769	2.28
Bengaluru Rural	6564	3.7	5994	2.59	1039	1.85	1076	1.1	7603	3.3	7070	2.17
Dharwad	5989	3.6	6149	3.08	4500	2.13	4253	1.5	10489	2.8	10402	2.15
Dakshina Kannada	14880	4.3	8211	2.47	4514	2.11	3296	1	19394	3.5	11507	1.77
Bengaluru Urban	7526	3.3	5089	1.69	32705	1.98	23686	0.8	40231	2.1	28775	0.88
All Districts	**389202**	**4.3**	**418725**	**3.94**	**120848**	**2.5**	**104620**	**1.4**	**508049**	**3.7**	**521334**	2.9

**Based on the percentage of total houses in 2011* *Source: Census, 2011*

Across districts, a mixed picture emerges regarding the dilapidated condition of houses with Raichur district seeing an increase in such houses from 2.84% in 2001 to 4.85% in 2011 as compared to Udupi district wherein the proportion of dilapidated houses declined from 6.00% in 2001 to 2.28% in 2011 (Annexure 34). The proportion (and number) of dilapidated occupied census houses increased significantly in Rural Raichur and Vijayapura districts during the decade. 8.8% of houses in Sindhanur taluk of Raichur district were in dilapidated condition as compared to 1.3% of houses in Chitapur taluk of Kalburgi taluk (Table 10.20 and Annexure 35). The proportion of dilapidated houses is higher in rural areas of the taluks (vis-à-vis urban) in most taluks of the State (with exceptions such as Nargund taluk)

Table 10.20
Dilapidated occupied census houses - Top 5 and Bottom 5 taluks* (2011)

Taluks	Rural	Urban	TOTAL
Sindhanur	9.5	6.1	8.8
Shikaripur	9.0	6.9	8.6
Heggadadevankote	8.8	5.3	8.5
Indi	8.8	4.8	8.5
Yelandur	8.3	6.4	8.1
Anekal	2.4	0.7	1.8
Belagavi	2.4	1.5	1.8
Mangaluru	3.1	1.4	1.8
Chincholi	1.6	0.5	1.5
Chitapur	1.5	1.0	1.3

**Based on the percentage of total houses in 2011*
Source: Census, 2011

In contrast to 2.9% of All census occupied houses being dilapidated in 2011 in Karnataka, 3.9% of census houses were dilapidated (Rural – 5.3%, Urban – 1.9%) with 6.6% of houses in Chamarajanagara in this condition (Annexure 36). A marked difference is visible between the proportion of rural and urban dilapidated census houses in the districts of Vijayapura, Shivamogga, Uttara Kannada and Chitradurga.

44.9% and 44.0% of All houses in Vijayapura and Bagalkote districts respectively had roof of Grass/ Thatch/ Bamboo/ Wood/Mud with a significant difference being seen between the proportion of such houses in Rural and Urban Dharwad (30.1% and 5.9% respectively) (Annexure 36). About a sixth of Raichur's houses had walls of grass/thatch/bamboo/wood/mud while 48.9% of Hassan district's houses (56.7% of houses in rural Hassan district) had walls of mud/unburnt brick. 34.6% and 32.6% of Kalaburgi and Yadgir districts' houses had walls of stone not packed with mortar. About half of Bidar and Haveri districts' houses had mud floors.

In 2011, 5.9% and 6.3% of SC and ST census houses respectively were in dilapidated condition in the State as compared to 3.9% of All census houses (Annexures 37 and 38). Table 10.21 contrasts the characteristics of 'All', SC and ST census houses in Karnataka in 2011.

A marked difference is visible between the proportion of rural and urban dilapidated census houses in the districts of Vijayapura, Shivamogga, Uttara Kannada and Chitradurga.

Table 10.21
'All', SC and ST Housing characteristics (% of houses) - 2011

District	ALL			SC			ST		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
% of houses dilapidated	5.3	1.9	3.9	6.7	4.2	5.9	7.0	3.9	6.3
Roof of Grass/ Thatch/ Bamboo/ Wood/Mud etc.	16.3	4.1	11.4	12.7	5.1	10.4	20.2	6.8	16.9
Wall of Grass/ Thatch/ Bamboo/ Wood/Mud etc.	5.5	1.6	4.0	5.9	3.2	5.1	8.0	3.8	7.0
Wall of Mud/Unburnt brick	28.9	10.9	21.6	28.0	15.7	24.4	28.5	15.5	25.4
Wall of Stone not packed with mortar	15.3	8.6	12.6	16.0	10.6	14.4	16.8	10.4	15.3
Mud floor	33.3	4.7	21.8	43.5	10.2	33.7	43.9	9.6	35.6

Source: Census, 2011

It is evident that the characteristics of SC and ST houses differ from that of All houses in the State. This is clearly seen in rural Dakshina Kannada district wherein 3.7% of All houses are in a dilapidated condition as compared to 10.3% of SC houses in the same region. As another instance, 4.5% of All houses in rural Mandya district are dilapidated as compared to 11.1% of ST houses in the same district. Further, along with the marked disparity between urban and rural houses, differences are also seen in the conditions of SC and

As compared to the 1.9% of the State's All houses being in a dilapidated condition, 4.2% of slum houses are in a dilapidated condition with this proportion being as high as 5.1% in CMCs and TPs

ST houses. e.g. 48.7% of ST houses in Raichur district had roof of grass/thatch etc. as compared to 32.4% of SC houses in the same district. It is estimated that 10.5 lakh persons dwell in huts in the State with Kalburgi, Tumakuru, Raichur and Ballari districts having about 35% of the State's hut dwelling population (GoK, 2016).

10.4.2 Slum housing

The Census of India (Registrar General of India) defines slums as a compact area of atleast 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities. With most of the elements of this definition being related to adequate housing, various schemes for slum housing, including slum development/upgrading and resettlement programs, have attempted to provide housing and related infrastructure. However,, issues such as slum notification and tenure security have influenced the improvement of housing conditions in slums.

As compared to the 1.9% of the State's All houses being in a dilapidated condition, 4.2% of slum houses are in a dilapidated condition with this proportion being as high as 5.1% in CMCs and TPs (Table 10.22). Similarly, on other indicators too, slum houses are seen to be at a disadvantage e.g. 10.0% of slum houses have mud floor as compared to 4.7% of All houses in urban Karnataka.

Table 10.22
Characteristics of Slum Census Houses (%)

	Dilapidated	Roof of Grass/ Thatch/ Bamboo/ Wood/ Mud, etc.	Wall of Roof of Grass/ Thatch/ Bamboo / Wood/ Mud, etc.	Wall of Mud/ Unburnt brick	Wall of Stone not packed with mortar	Mud floor
CMC	5.1	6.6	5.4	21.7	11.9	10.8
CMC+OG	3.8	3.1	5.8	17.3	14.1	12.2
M Corp	4.0	5.1	4.1	22.7	10.5	7.8
M Corp+OG	3.3	2.0	1.0	10.9	9.9	4.4
TMC	4.2	9.6	4.8	21.2	14.0	13.7
TMC+OG	4.3	12.2	2.9	17.0	12.9	10.0
TP	5.1	9.4	4.1	22.1	13.0	17.7
TP+OG	3.6	4.9	0.0	68.3	9.3	2.3
Karnataka	**4.2**	**6.0**	**3.8**	**18.3**	**12.0**	**10.0**

Source: Census, 2011

The availability of Patta or Possession certificate (PC) appears to be a factor that influences the decision by households (as well as slum development institutions) to undertake investments related to housing in slums. In Karnataka, 43.9% of slum houses with Patta/PC had pucca housing while 31.6% of slum houses with patta/PC had piped water supply as compared to 28% of slum houses in habitations without patta/PC (Annexure 39). This difference is evident in districts such as Ballari, Haveri, Kolar, Mysuru and Ramanagara. About 38% of slum

houses had a toilet while about three-fourths of the houses had a bathroom. About 27% of slum houses had access to LPG. However,, similar proportions of slum houses are seen on the indicators of availability of toilet, bathroom, electricity and LPG in patta/PC and without Patta/PC habitations.

10.4.3 Progress in provision of housing

Rural Ashraya/Basava Vasathi Yojane has been the primary State-government program for rural housing in the State with about 6 lakh houses being constructed under this scheme between 2012-13 and 2015-16. This program, with a unit cost being comparable to that under the Indira Awas Yojana, has met its target across most districts although a shortfall in achievement is seen in the districts of Chikballapur, Raichur, Bagalkot and Kolar. The performance of Indira Awas Yojana in Raichur and Bagalkot districts has also been lackluster based on the achievement of targets. Performance of the Vajpayee urban housing scheme during 2012-13 to 2015-16 has been lackadaisical with higher levels of non-achievement in the districts of Bengaluru urban, Raichur, Mandya and Bengaluru rural. Schemes that provide housing sites in rural and urban areas have also been unable to achieve their targets. It is evident that the implementation of housing schemes in districts such as Raichur and Bagalkot should be based on a customized approach based on local conditions incl. target groups' ability and willingness-to-pay and other factor endowments.

Summary: Although the proportion of dilapidated houses has declined during 2001-11 (but with an increase in the absolute numbers of houses) in the State, disparities across rural-urban and SC/ST are evident with these inequalities being higher in a few districts/taluks. About 5% of houses and about 9% of houses in Chamarajanagar district and Sindhanur taluk (Raichur district) respectively were in dilapidated condition. About a tenth of all houses in rural areas of Sindhanur and Shikaripur taluks were dilapidated. A higher proportion of SC and ST houses were in dilapidated condition as compared to All households in the State. Across all other characteristics too which indicated a lower quality of housing, the proportion of SC/ST and slum houses was seen to be higher as compared to the overall households in Karnataka.

It is evident that the conditions of houses in the State varied across districts especially across regions such as Hyderabad Karnataka and Southern Karnataka. While climatic conditions and availability of building materials could influence the conditions of roof, wall, floor etc. in the houses, the role of socio-economic constraints in having access to adequate housing (especially in districts such as Chamarajanagar, Raichur and Yadgir) needs to be examined and suitably addressed. The continuing shortfall in achievement of housing targets in those districts wherein the prevailing conditions indicate a lower access to decent housing needs to be examined, lest those districts (e.g. Raichur) continue to lag behind other districts of the State.

The role of socio-economic constraints in having access to adequate housing (especially in districts such as Chamarajanagar, Raichur and Yadgir) needs to be examined and suitably addressed.

10.5 Energy

In recent years, the growing role of energy in promoting livelihoods and various energy sources' impact on climate

change has been well-recognized. Although energy generation and consumption has been growing across the world, concerns regarding equitable access and sustainability have led to various policy interventions at the global, regional and national levels. With energy contributing about 60% of GHG emissions, the focus has gradually shifted towards 'clean' energy to minimize or eliminate carbon footprint. Reflecting these issues, Goal 7 of the Sustainable Development goals, formulated by the United Nations, seeks to ensure access to affordable, reliable, sustainable and modern energy for all. With access to modern energy services being defined as household access to electricity and to clean cooking facilities, countries have undertaken major investments in initiatives that integrate technological and structural innovations to identify/ exploit new, cleaner energy sources and make electricity and clean fuels available to large sections of the population.

Goal 7 of the Sustainable Development goals, formulated by the United Nations, seeks to ensure access to affordable, reliable, sustainable and modern energy for all.

India's efforts to increase access to energy for its citizens have been wrought with complexities that range from resource endowments to investment and technological constraints. Electricity generation capacity in the country rose from 145755 MW in 2006 to 316379 MW in March 2015 with the central and State utilities' generation capacity growing from 124287 MW to 271722 MW during the same period. About 71% of India's generation capacity was being met from thermal power plants (82% of utilities' generation capacity) and about 23% of the generation capacity of utilities was in the southern region of India. Coal and lignite were the major primary sources of energy, and coal imports have grown by 449% during the period 2005-06 to 2014-15. Net imports of crude oil have increased from 99.41MTs in 2005-06 to 189.43 MTs in 2014-15.

India's high dependence on imported crude, geopolitical constraints, fuel subsidies and volatile international crude prices has spurred the country to explore demand-side as well as supply-side energy solutions. Institutions such as the Bureau of energy efficiency have also been established in the country to reduce the energy intensity of various categories of consumers. India has clearly shown its intent towards clean energy by establishing a distinct Ministry for new and renewable energy (formerly Ministry of non-conventional energy sources) in 1992. India's Intended Nationally Determined Contribution (INDC) indicates a reduction in the country's emission intensity of its GDP by 33 to 35% by 2030 from the 2005 level. Further, towards enabling accelerated development of the power sector, various reforms such as implementation of an open access policy and establishment of power exchanges have been undertaken with the involvement of the central and State governments. However,, this progress has to be sustained and intensified to ensure equitable access to energy to all segments of consumers, including about 5 crore households that do not have access to electricity.

Karnataka, home to Asia's first hydroelectric generating station at Shivanasamudram, has over the years, been grappling with challenges to meet the ever growing demand for electricity. In 2015, Karnataka had an

installed capacity of utilities of 13.05 GW (15.72 GW, upon including the centre's share) accounting for about 4.8% of the country' total utilities' generation capacity, and grid interactive renewable power capacity of 4.81 GW (12.41% of the country's total grid interactive renewable power capacity), with about 41.8% of the State's total installed capacity being met from cogeneration and renewables. The State has been a pioneer in setting up distinct bodies for power generation and distribution, and in effecting power sector reforms. The Karnataka Electricity Reforms Act (1999) led to the establishment of the Karnataka Power Transmission Corporation Ltd. (KPTCL) and an autonomous Karnataka Electricity Regulatory Commission (KERC). In 2002, KPTCL was further unbundled to form transmission and distribution companies and, currently, the State has five electricity companies and one Rural Electricity Co-operative Society involved in distribution and retail supply of electricity. In 2015-16, 50894 MU were sold by the distribution companies to 22.26 million installations in the State (as compared to 43009 MU sold to 18.62 million installations in 2011-12). In 2014-15, 5915 MU were procured from other States through bilateral trade and purchase through energy exchanges.

During the last few years, Bhagya Jyothi/Kutira Jyothi (free power connections (upto 18 kWh/month) for BPL consumers for a single-point light connection) and Domestic AEH (incl. private educational institutions) accounted for 20-22% of Karnataka's electricity consumption. Free power is being supplied by the State to IP sets and Bhagya Jyothi / Kutira Jyothi consumers. Since 2011-12, about 4 lakh IP sets and more than 1200 hamlets have been electrified. Transmission and distribution companies are emerging as more efficient (as indicated by declining T&D losses) and the State has also achieved its Renewable energy Purchase Obligation for both solar and non-solar. Karnataka has formulated a Biofuel policy 2009, Solar policy (2014-21) and implemented the Soura Belaku programme for installation of solar street lights in Gram Panchayats. The State has also launched the Niranthara Jyothi Yojane to provide 24 hours of quality power supply to rural areas and assured hours of power supply to irrigation pumpsets.

10.5.1 Energy source for lighting in households

In 2011, 90.63% of the State's 'All' households used electricity as the main source of energy for lighting with 86.72% and 96.42% of rural and urban households depending on this source (Table 10.23). In Yadgir district, 77.95% of households used electricity for lighting as compared to 98.05% of households in Bengaluru urban district. Four north Karnataka districts are seen in the list of five lowest coverage districts (electricity for lighting) as compared to four southern districts in the list of the five highest coverage districts with electricity as the main source of energy for lighting. A significant difference is seen between the proportion of rural and urban households that depend on electricity for lighting in Kodagu district.

Karnataka has formulated a Biofuel policy 2009, Solar policy (2014-21) and implemented the Soura Belaku programme for installation of solar street lights in Gram Panchayats.

Table 10.23
'All' Households with electricity as main source of lighting (%) - Top 5 and Bottom 5 districts*

District	Rural	Urban	Total
Yadgir	75.09	89.87	77.95
Vijayapura	77.01	92.09	80.63
Kodagu	79.95	96.9	82.38
Belagavi	79.81	95.28	83.92
Bagalkote	82.03	90.49	84.81
Hassan	92.16	97.82	93.34
Kolar	92.37	95.96	93.51
Dharwad	90.82	95.52	93.52
Bengaluru Rural	94.79	96.73	95.33
Bengaluru Urban	95.76	98.27	98.05
All Districts	**86.72**	**96.42**	**90.63**

**Based on the proportion of total households* *Source: Census, 2011*

All the five taluks with lowest coverage of electricity for lighting are located in north Karnataka while four of the five highest coverage taluks are in central districts of the State, Thus, indicating a higher disparity among taluks in the southern districts

About 8.70% of the State's households used Kerosene and other oils to meet their lighting requirements (Annexure 40). About a fifth of Yadgir district's households (including about 23% of its rural households) used Kerosene for lighting while about 1% of the district's rural households did not have lighting facilities. About 18% of Kodagu's rural households used Kerosene for lighting as compared to 2.78% of the district's urban households while 0.69% of Kodagu's rural households did not have lighting as compared to 0.18% of the district's urban households, although penetration of solar lighting was higher in Rural Kodagu's households. A similar situation prevails in Dakshina Kannada and Chikmagalur districts.

Across taluks, 69.35% of households in Indi taluk of Vijayapura district used electricity as the main source of lighting as compared to 94.88% of households in Alur taluk of Hassan district (Table 10.24). About 31% of rural Indi's households used Kerosene as the main source of lighting. All the five taluks with lowest coverage of electricity for lighting are located in north Karnataka while four of the five highest coverage taluks are in central districts of the State, Thus, indicating a higher disparity among taluks in the southern districts (considering their overall high coverage at the district level). A significant difference is seen in electricity coverage for lighting between rural and urban households of Athani taluk of Belagavi district (with a large proportion of the taluk's rural households vis-à-vis urban households using kerosene). Households in Belthangadi and Sulya taluks of Dakshina Kannada district and Supa taluk of Uttara Kannada saw a higher penetration of solar lighting (Annexure 41). 1.40% of households in Raybag taluk did not have lighting.

Table 10.24
All' Households with Electricity and Kerosene as main source of lighting (%) - Top 5 and Bottom 5 districts*

Taluk's	Electricity			Kerosene		
	Rural	Urban	Total	Rural	Urban	Total
Indi	67.58	86.75	69.35	30.82	10.16	28.91
Athani	71.30	93.96	73.37	27.89	4.89	25.80
Raybag	72.07	89.63	73.95	25.62	8.51	23.78
Shorapur	72.28	87.72	74.16	26.56	11.44	24.71
Gokak	71.15	89.26	75.45	27.37	9.83	23.21
Ballari	91.38	97.20	94.61	7.04	2.46	4.50
Harihar	93.94	95.80	94.62	5.26	3.97	4.79
Gadag	94.38	94.91	94.66	5.15	4.71	4.92
Davanagere	90.52	97.10	94.72	8.57	2.53	4.72
Alur	94.53	99.23	94.88	4.59	0.64	4.29

**Based on the proportion of total households with electricity as the main source.*
Source: Census, 2011

About a sixth of SC and ST households in the State depended on Kerosene for their lighting requirements.

Box 10.6
Solar policy in Karnataka

The Karnataka Solar Policy 2014-2021, launched in 2014, envisaged the installation of atleast 400 MW of grid connected solar rooftop plants and 1600 MW of grid connected utility scale solar projects in the State by 2018. However, subsequent to the revision of the National Solar Mission targets in 2015, Karnataka has fixed a target of 2300 MW of rooftop solar to be met by 2021-22. As on 31st March 2016, the installed capacity of MW scale plants in the State was 134 MW. With tariffs and maximum installed capacity for rooftop solar being revised in May 2016, and potential adopters of rooftop systems being given the option of gross/net metering, it remains to be seen if domestic and commercial establishments establish these systems and contribute to power generation through renewable source in the State.

In contrast to 90.63% of the State's 'All' households, 85.1% and 83.6% of the State's SC and ST households respectively had electricity as the main source of energy for lighting (Annexures 42 and 43). A comparison of energy sources for lighting in 'All', SC and ST households indicates that a lower proportion of SC and ST households (across both rural and urban areas) in the State had electricity as the primary source of energy for lighting (Table 10.25). A larger proportion of SC and ST households were dependent on Kerosene to meet their lighting requirements as compared to 'All' households of the State. About a sixth of SC and ST households in the State depended on Kerosene for their lighting requirements. Also, a higher proportion of SC and ST households had no lighting as compared to 'All' households.

Table 10.25
Main source of energy for lighting in 'All, SC and ST households (%)

Fuel/status	ALL			SC			ST		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Electricity	86.7	96.4	90.6	82.4	91.4	85.1	81.0	91.8	83.6
Kerosene	12.3	3.1	8.6	16.2	7.5	13.6	17.5	7.1	15.0
No Lighting	0.5	0.2	0.4	0.8	0.7	0.8	0.7	0.7	0.7

Source: Census, 2011

A distinct difference in use of electricity for lighting by SC and 'All' households is seen in rural Dakshina Kannada wherein 58.8% of SC households used electricity for lighting as compared to 84.67% of 'All' households. In Kodagu district, 50% of rural ST households used electricity for lighting in contrast to about 97% of the district's urban ST households. 76.9% of ST households in Udupi district had electricity for lighting as compared to 91.3% of 'All' households in the district.

Across taluks, 52.8% of SC households in Beltangadi taluk and 49.4% of ST households in Virajpet taluk used electricity as the main source of lighting (Table 10.26). It is broadly seen that the use of electricity by SC households was lower in Dakshina Kannada while electricity use for lighting by ST households was lower in Kodagu district (Annexures 44 and 45). 1.8% of SC households in Madikeri and Raybag taluks and 3.3% of households in Hosanagara taluk (Shivamogga district) did not have electricity in 2011.

Table 10.26
Electricity as main source of lighting in SC and ST households in taluks (%) - Top 5 and Bottom 5 taluks*

Taluks	SC households		
	Rural	Urban	Total
Beltangadi	51.4	80.5	52.8
Puttur	50.7	76.8	54.4
Sulya	57.9	78.7	59.8
Madikeri	56.3	95.4	64.3
Karkal	64.1	80.1	65.9
Bhatkal	93.5	89.7	93.2
Bengaluru East	93.7	-	93.7
Hosakote	93.8	94.4	93.8
Mysuru	89.7	96.2	94.3
Anekal	93.8	97.2	94.4

Taluks	ST households		
	Rural	Urban	Total
Virajpet	48.7	93.6	49.4
Madikeri	47.8	98.9	52.3
Sringeri	53.0	91.7	54.7
Ankola	52.7	94.4	57.5
Athani	56.3	89.6	57.7
Gadag	93.4	93.1	93.3
Hosakote	93.9	91.5	93.4
Devanahalli	94.1	95.5	94.4
Mysuru	90.7	97.0	94.5
Bengaluru North	94.9	98.0	95.4

**Based on proportion of total households* *Source: Census, 2011*

92.31% of slum households used electricity as the main energy source for lighting in contrast to 96.4% of urban households using this source (Table 10.27). About 10% of slum households in TPs and TMCs used kerosene for lighting while 0.53% of households in M. Corp+OG did not have lighting.

Table 10.27
Main source of energy for lighting in slum households (%) - 2011

Urban status	Electricity	Kerosene	Solar	Other oil	Any other	No lighting
TP	88.75	10.51	0.07	0.22	0.02	0.43
TMC	89.63	9.49	0.18	0.16	0.06	0.47
CMC+OG	90.64	8.47	0.20	0.09	0.09	0.51
CMC	91.50	7.68	0.14	0.18	0.09	0.42
TMC+OG	93.01	6.43	0.04	0.08	0.01	0.42
M Corp	94.18	5.34	0.11	0.11	0.06	0.21
M Corp+OG	95.76	3.40	0.08	0.08	0.15	0.53
TP+OG	99.41	0.59	0.00	0.00	0.00	0.00
All areas	92.31	6.88	0.12	0.14	0.09	0.45

Source: Census, 2011

10.5.2 Fuel for cooking

Firewood continues to be the major fuel for cooking in Karnataka's households. In 2011, 57.5% of the State's households used fuelwood for cooking, with 82.0% and 21.2% of Karnataka's rural and urban households being dependent on fuelwood to meet their energy needs for cooking (Table 10.28). 2.9% and 5.4% of the State's households used Crop residue and Kerosene respectively as the primary fuel for cooking. About two-thirds of the State's 'All' households used Firewood, Crop residue and Kerosene as the major fuel for cooking. With about 90% of 'All' households (and 96% of rural households) in Yadgir district and more than 80% households in Koppal, Bagalkot, Vijayapura and Raichur districts' households using the 'dirty fuels' of Firewood, Crop residue and Kerosene to meet their cooking fuel needs, it is apparent that related issues such as indoor pollution, drudgery and women's health could be more pronounced in these districts located in north Karnataka.

Firewood continues to be the major fuel for cooking in Karnataka's households. In 2011, 57.5% of the State's households used fuelwood for cooking, with 82.0% and 21.2% of Karnataka's rural and urban households being dependent on fuelwood to meet their energy needs for cooking

Table 10.28
Use of Firewood, Crop residue and Kerosene as main fuel for cooking by 'All' households in districts (%) - Top 5 and bottom 5 districts*

Districts	Firewood			Crop residue			Kerosene		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Yadgir	93.3	58.7	86.6	2.6	2.0	2.5	0.2	2.2	0.6
Koppal	89.7	58.5	84.2	1.5	1.0	1.4	0.7	3.9	1.3
Bagalkote	92.7	60.4	82.1	2.5	1.3	2.1	0.2	2.7	1.0
Vijayapura	92.2	41.6	80.1	2.7	2.2	2.6	0.2	6.5	1.7
Raichur	89.0	52.5	79.3	3.0	2.3	2.8	0.4	3.8	1.3
Dakshina Kannada	81.4	27.9	55.7	0.5	0.3	0.4	0.2	2.9	1.5
Bengaluru Rural	68.6	16.4	54.1	0.8	0.5	0.7	4.6	20.0	8.9
Dharwad	81.5	27.1	50.2	12.0	1.5	6.0	0.3	7.7	4.6
Mysuru	77.1	11.4	49.8	3.0	0.4	1.9	1.4	15.6	7.3
Bengaluru Urban	31.7	4.1	6.5	0.8	0.3	0.4	17.0	15.8	15.9
All Districts	**82.0**	**21.2**	**57.5**	**4.3**	**0.9**	**2.9**	**1.1**	**11.7**	5.4

**Based on proportion of total households dependent on firewood* *Source: Census, 2011*

The use of crop residues as fuel for cooking was higher among 'All' rural households in the districts of Haveri (18.7%), Bidar (16.5) and Dharwad (12.0%), while the use of kerosene was higher among rural 'All" households of Bengaluru Urban (17.0%) and urban areas of Ramanagaram (21.9%), Bengaluru Rural (20.0%) and Kolar (19.5%) districts (Annexure 46). In rural areas of the State, 11% of households used LPG as compared to 32.5% of 'All' households that use this clean fuel. The use of biogas as fuel for cooking was higher in the districts of Uttara Kannada, Shivamogga and Hassan.

As compared to the 57.5% of the State's households that used firewood as the main fuel for cooking, 93.0% of households in Yelburga taluk of Koppal district depended on this fuel to meet their energy needs for cooking (Table 10.29). The proportion of All households that used kerosene as fuel for cooking was highest in Anekal taluk of Bengaluru Urban district.

Table 10.29
Use of Firewood, Crop residue and Kerosene as main fuel for cooking by 'All' households in taluks (%) - Top 5 and bottom 5 taluks*

Taluks	Firewood			Crop residue			Kerosene		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Yelburga	94.1	74.3	93.0	1.8	0.5	1.7	0.3	0.8	0.3
Devadurga	94.2	72.6	91.9	2.0	1.8	2.0	0.3	2.4	0.5
Jevargi	94.1	68.7	91.8	3.2	3.7	3.2	0.2	2.4	0.4
Kushtagi	94.8	64.2	91.8	1.5	1.3	1.5	0.2	1.6	0.4
Mundargi	95.5	72.3	91.3	1.8	1.9	1.8	0.2	1.2	0.4
Bengaluru South	33.9	8.3	28.7	1.0	0.3	0.8	13.9	21.5	15.4
Bengaluru North	31.9	10.3	28.0	0.7	0.3	0.6	13.8	14.5	13.9
Bengaluru East	25.2	-	25.2	0.6	-	0.6	17.7	-	17.7
Anekal	32.3	7.8	24.5	0.9	0.5	0.8	20.3	23.3	21.3
Mysuru	62.5	6.7	18.0	1.2	0.3	0.5	4.5	16.2	13.9

**Based on proportion of total households dependent on firewood* *Source: Census, 2011*

The dependence of SC and ST households on biomass-based fuels was higher as compared to 'All' households in Karnataka. About three-fourths of the State's SC and ST households used Firewood as the primary fuel for cooking, and a higher proportion of SC/ST households used Crop residue and Kerosene as compared to 'All' households (Table 10.30). The use of clean fuels by SC and ST households in the State was lower than 'All' households with a significant difference seen in the proportion of households that used LPG/PNG. It is essential that focused initiatives to promote clean technologies and fuels are to be launched to reach out to rural areas, SC and ST households in the State.

Table 10.30
Use of Firewood, Crop Residue and Kerosene by All, SC and ST households

	Firewood			Crop residue			Kerosene		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
All	82.0	21.2	57.5	4.3	0.9	2.9	1.1	11.7	5.4
SC	89.9	36.9	74.3	4.4	1.4	3.5	0.8	19.2	6.2
ST	89.9	35.8	76.9	4.9	1.5	4.1	0.7	15.2	4.2

	LPG/PNG			Electricity			Biogas		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
All	11.0	64.3	32.5	0.1	0.2	0.1	1.0	0.8	0.9
SC	4.1	40.7	14.9	0.1	0.2	0.1	0.2	0.6	0.3
ST	3.7	45.6	13.8	0.1	0.2	0.1	0.2	0.7	0.3

It is evident that ST households in the State were exposed to a greater extent to the ill-effects of using smoky fuels such as Firewood, Crop residue and Kerosene.

As in the case of 'All' households, the use of crop residues by SC and ST households was higher in the districts of Bidar, Haveri and Dharwad while higher dependence on Kerosene as cooking fuel is seen in urban SC households of Karnataka's southern districts (Annexures 48 and 49). It is evident that ST households in the State were exposed to a greater extent to the ill-effects of using smoky fuels such as Firewood, Crop residue and Kerosene. With Kerosene prices on an upward trend during the last few years, the dependence of ST households on firewood and crop residue was higher than that of 'All' households.

An overwhelming 96.3% of SC households in Sulya taluk of Dakshina Kannada district and 96.9% of ST households in Bilagi taluk of Bagalkot district depended on firewood as the primary fuel for cooking (Table 10.31). In contrast, 36.7% of SC households in Mysuru taluk (dependence of 18% of 'All' households) and 34.2% of ST households in Anekal taluk (dependence of 24.5% of 'All' households) relied on this source of fuel to meet their energy needs for cooking. Apparently, SC and ST households in the State across districts and taluks have a higher level of dependence on firewood and crop residues in both urban and rural areas as compared to 'All' households. About a third of Gubbi taluk's (Tumakuru district) urban SC households used LPG as the primary fuel for cooking as compared to 1.3% of rural households of the taluk (Annexure 50). Similarly, 68% of Mudigere taluk's urban ST households (Chikmagalur district) used LPG as compared to 2.3% of the taluk's rural ST households (Annexure 51). It is, therefore, evident that the use of LPG varies between urban and rural SC and ST households and, distinct strategies are necessary to enhance the use of clean fuels for cooking to address the barriers to achieve transition to cleaner cooking fuels.

Table 10.31
Dependence of SC and ST households on firewood - Top 5 and bottom 5 taluks* (%)

Taluks	SC		
	Rural	Urban	Total
Sulya	97.4	85.3	96.3
Yelbarga	97.1	81.9	96.3
Bilgi	98.3	77.7	96.2
Chiknayakanhalli	97.7	75.6	95.5
Mundargi	97.4	82.5	95.4
Bengaluru South	55.3	21.3	51.9
Karwar	49.4	41.6	45.3
Belagavi	81.4	29.6	43.8
Bengaluru East	43.5	-	43.5
Mysuru	80.7	18.1	36.7

Taluks	ST		
	Rural	Urban	Total
Bilgi	97.5	80.2	96.9
Kushtagi	97.5	76.3	96.8
Yelbarga	96.8	63.5	96.5
Molakalmuru	97.3	73.9	96.2
Devadurga	96.5	90.6	96.0
Mysuru	81.8	10.3	39.2
Karwar	41.6	29.9	36.5
Bengaluru North	39.7	15.4	36.4
Bengaluru East	36.2	-	36.2
Anekal	41.8	9.8	34.2

**Based on proportion of total households dependent on firewood* *Source: Census, 2011*

Despite the location of slums in urban areas, it is interesting to note that firewood constituted the largest use fuel for cooking in slum households with about 43% of slum households in the State's ULBs being dependent on this fuel (Table 10.32). While 64.69% of slum households in TPs depended on firewood, the use of kerosene as the major fuel for cooking was popular in Municipal Corporations and Outgrowths' slum households. On the whole, the use of fossil fuels for cooking applications was higher in slums in the larger ULBs (but for a small number of slum households in TP+OGs).

Table 10.32
Use of cooking fuels by slum households

	Fire-wood	Crop residue	Kerosene	LPG/PNG	Electricity	Biogas	Others
TP	64.69	2.24	3.75	28.24	0.21	0.36	0.52
TMC	58.93	2.27	7.61	29.78	0.10	0.57	0.74
CMC	54.71	1.95	11.52	30.11	0.10	0.85	0.77
CMC+OG	52.84	2.18	14.03	28.51	0.03	0.81	1.60
M.Corp	47.27	1.45	12.03	37.06	0.06	0.67	1.47
TMC+OG	45.30	0.96	10.08	42.24	0.07	0.74	0.61
TP+OG	18.93	0.59	9.47	68.64	0.00	1.18	1.18
M.Corp+OG	11.28	0.74	39.51	46.72	0.10	0.74	0.92
All ULBs	42.93	1.65	18.32	35.40	0.10	0.69	0.90

Source: Census, 2011

Summary: Karnataka, with a well-defined network of power generation, transmission and distribution entities that are overseen by an active regulator, has been in the forefront to formulate innovative policies (e.g. Solar policy 2014-21) to address the chronic shortages of electricity and the ever-growing demand for reliable power supply. Despite the augmentation of power generation from various sources, Karnataka has been dependent, to a significant extent, on short-term power purchases and imports from other Indian States to tide over the shortfall between peak demand and supply (power shortage, measured in MWs, has been increasing in the State since 2011-12). Despite meeting 15-20% of its energy demand from expensive short-term purchases, Karnataka has been facing an annual peak shortage of about 15% of unrestricted demand. While the State has been providing free electricity for IP sets (more than 23 lakh IP sets cumulatively) and basic lighting under the Bhagya/Kutira Jyothi schemes (constituting 12.73% of installations and about 1% of sales), commercial LT installations and HT industrial and commercial consumers pay significantly higher prices for electricity. Lower T&D losses, coupled with demand side management (DSM) initiatives such as the solar rooftop generation scheme, have enabled the ESCOMs to minimize their losses while meeting demands from various categories of consumers.

Despite the augmentation of power generation from various sources, Karnataka has been dependent, to a significant extent, on short-term power purchases and imports from other Indian States to tide over the shortfall between peak demand and supply

However,, a wide disparity exists in access to electricity by rural and urban households e.g. in 2014-15, BESCOM, which manages electricity distribution in Bengaluru, accounted for about 46% of consumers and power consumption in the State.

Electricity remains the major commercial and clean source of energy for lighting with about 96% of the State's urban households using this source as compared to about 87% of rural households. Inequalities exist in electricity use for lighting with about a fourth of Yadgir district's households being dependent on Kerosene and other oils for lighting. The disparities across taluks is higher with about 69% of households in Indi taluk (Vijayapura district) using electricity as compared to about 95% in Alur taluk (Hassan district). The proportion of SC/ST households using electricity for lighting was lower than of the overall households in the State. About a sixth of SC and ST households depended on Kerosene to meet their lighting requirements. Firewood is the primary cooking fuel used in Karnataka with 82.0% of rural households in Karnataka being dependent on this source (as compared to 21.2% of urban households). The use of clean fuels for cooking is low in rural Karnataka as seen in Yadgir district wherein 96% of rural households used Firewood, Crop residue and Kerosene as the cooking fuels. Most of the households that use cleaner fuels such as LPG/PNG, Electricity and Biogas are based in urban areas of the State. About two-fifths of slum households in Karnataka's ULBs depended on firewood for their energy requirements for cooking.

Karnataka, one of the fastest industrializing States in the country, needs to continue its focus on demand management and augmentation of supply while striving to address inequalities in access and environmental concerns.

While various policy reforms-led initiatives of the State in augmenting its generation capacity and streamlining its transmission and distribution infrastructure have yielded significant results, Karnataka, one of the fastest industrializing States in the country, needs to continue its focus on demand management and augmentation of supply while striving to address inequalities in access and environmental concerns. It is imperative that the State continue its efforts at developing its diversified energy portfolio to meet the requirements of rural and disadvantaged communities in a sustainable manner.

10.6 Roads

Efficient and affordable transport connectivity enabled by safe road infrastructure and transport services, especially in rural areas, is an essential part of the enabling environment for sustainable economic growth in developing countries. In the long term, better transportation infrastructure increases a country/region's output by enhancing the mobility and productivity of resources, while immediate impacts relate to better access to markets and facilities. The World Bank has observed that poor transportation infrastructure causes many developing economies to be spatially fragmented, limiting their residents' access to markets and public services. It is also noted that one billion people, or thirty-one percent of the world's rural population, live in settlements located more than 2 km away from a paved road, and 98% of people lacking such access to outside markets and government services live in developing

countries. Globally, governments and multilateral developmental institutions have implemented programs that involve large investments to enhance road infrastructure, and the overall transportation infrastructure in various contexts. Research has shown that investments in such programs, especially in poorer and densely populated regions, are socially profitable with additional external and spill-over effects that lead to a wider set of benefits Rural roads also lead to larger proportional decrease in total transportation costs to external demand for rural labor and production. Also, it may be observed that achievement of a few targets of the recently-announced sustainable development goals (especially SDG 9 and SDG 2, target 2.3, which aim to build resilient infrastructure and promote sustainable agriculture through secure and equal access to productive resources and inputs respectively) are dependent on access to transport.

India has seen a gradual transition from rail-dominated transport to a road-dominated one. Roads in India carry almost 90 per cent of the country's passenger traffic and around 65 per cent of its freight. The total road length of the country increased from 3.99 lakh kms in 1951 to 54.72 lakh kms in 2015, growing at a CAGR of 4.2% during the period 1951-2015. Rural roads have the largest share of 61% of the country's road network of 5472144 kms. During the decade, 2004-05 to 2014-15, the highest CAGR was that of urban roads (5.0%) followed by National Highways (4.1%), rural roads (3.9%), State Highways and Other PWD roads (3.1%), and Project roads (1.5%). The States of Maharashtra, Uttar Pradesh, Karnataka, West Bengal and Assam had about 43.04 % of the total road length of the country. The average road density of India per 100 square kms of area was 166 kms. As per an administrative categorization, India has five categories of roads: National Highways (NH), State Highways (SH), Major District Roads (MDR), Other District Roads (ODR) and Village Roads (VR). While the National Highways are developed and maintained by the Government of India (Ministry of Shipping, Road Transport and Highways), State governments and local bodies are responsible for all other roads. Towards enhancing access to the country's rural areas, the Government of India is implementing the Pradhan Mantri Gram Sadak Yojana, which was launched in December 2000. This scheme has the goal of bringing all villages with a population of atleast 500 and above in the plain areas and 250 persons and above in hill States, the tribal and the desert areas within reach of the nearest market via an all-weather road. Most of the expansion of the country's road network during the last few years has occurred due to the growth in rural roads although about half of India's villages are yet to be connected with all-weather roads. In 2015, nearly 40%, including rural, intra-district and State highways, were not metalled. Over 14 lakh kms of road is yet to be surfaced with about 82% of such roads being rural and project roads.

Towards enhancing access to the country's rural areas, the Government of India is implementing the Pradhan Mantri Gram Sadak Yojana, which was launched in December 2000.

Karnataka's Public Works Ports & Inland Water Transport Department is responsible for the development and maintenance of National Highways, State Highways and Major District Roads in the State. The State has also established the Karnataka Road

A distinct Karnataka Rural Road Development Agency has been formed in 2005 to implement the PMGSY in an effective manner.

Development Corporation Limited (KRDCL) in 1999 as a State-owned enterprise for the development of road infrastructure facilities. In 1999, Karnataka launched the Karnataka State Highways Improvement Project (KSHIP, Phase 1) for improvement of road network of the State with external assistance. Subsequently, the State has also implemented KSHIP-II, stages I and II, and KSHIP-III. In 2012-13, Karnataka also launched the State Highways Development Programme for the improvement and strengthening of the existing State Highways. Further, the State has also been undertaking development of rural roads through the NABARD-assisted Rural Infrastructure Development Fund (RIDF) and the PMGSY. A distinct Karnataka Rural Road Development Agency has been formed in 2005 to implement the PMGSY in an effective manner. From 2013-14, the State has also been implementing the Chief Minister's rural roads development scheme through the Zilla panchayats for maintenance of rural roads.

With a road network of 240131 kms in 2014-15, Karnataka has about 4.38% of the country's road network and 6.56% of the country's national highways (< 2 lane: 2315 kms, 2 lane: 2751 kms, 4 lane and above: 1366 kms). 99.50% of Karnataka's State highways had BT (Black top)/ CC (Cement concrete) surface with 81.96% of these roads being of width below standard single lane or standard single lane. In contrast, in 2015, 57.08% of the State's rural roads (excluding JRY roads), and 52.18% of Karnataka's Panchayati Raj roads were surfaced. 91.87% of the State's PMGSY roads were surfaced. The State's road network is yet to connect 1771 (population between 250-499) & 10269 (population less than 250) unconnected habitations (2013-14).

10.6.1 PWD Road length in districts

The average length of Karnataka's PWD roads (NH, SH &MDR) per 100 sq km area in 2015 was 40.07 Km. Across districts, Mandya district had a PWD road length of 69.34 kms while Kalburgi district had a road length of 26.10 kms (Table 10.33). The CAGR of PWD roads in Kalburgi district during 2009-15 was -7.81% with the district's road length declining from 42.53 kms in 2009 to 26.10 kms in 2015. Raichur (7.11%), Bagalkot (6.24) and Dharwad (2.00%) districts saw a faster annual growth in road length during 2009-15 while declines were visible in Chikballapur (-0.55%), Chitradurga (-0.48%) and Koppal (-0.37%) districts (Annexure 52).

Table 10.33
Length of PWD roads in Karnataka's districts (2009-15) - Top 5 and bottom 5 districts*

District	2009	2010	2012	2013	2015	CAGR (2009-15)
Mandya	70.69	70.71	69.32	69.32	69.34	-0.32
Hassan	64.15	63.21	64.04	64.11	64.27	0.03
Ramanagara	54.64	54.42	54.67	54.67	54.00	-0.20
Haveri	52.85	52.54	52.54	52.54	53.59	0.23
Mysuru	48.32	48.77	48.41	47.79	50.08	0.60
Koppal	32.51	32.51	32.50	32.50	31.79	-0.37
Bidar	30.32	30.32	30.33	30.33	31.78	0.79
Chamarajanagara	29.88	29.92	29.89	29.89	29.72	-0.09
Chikkaballapura	30.61	29.73	29.62	29.62	29.62	-0.55
Kalaburagi	42.53	41.86	25.37	25.22	26.10	-7.81

**Based on road length per 100 sq. kms in 2015* *Source: PWD*

Across zones, south zone districts had a road length of 42.95 kms per 100 sq. kms in 2014-15 as compared to 36.60 kms in north zone districts although the CAGR of road length in the north zone was higher than that in the south zone.

Table 10.34
Lenght of PWD roads in Karnataka's Districts across south & North Zones

District	2009	2010	2012	2013	2015	CAGR (2009-15)
South Zone	42.49	42.27	42.10	42.08	42.95	0.18
North Zone	35.27	38.25	36.34	36.31	36.60	0.62

Source: PWD

Also, the length of rural roads (2013-14) per 100 sq. km as per the District Rural Roads Plan was higher in the south zone districts (92.17 kms) as compared to 70.46 kms in districts of the north zone.

10.6.2 Surface and width of major district roads

The State's road network has a significant proportion of major district roads which are single lane and with surface of water bound macadam or unsurfaced. In 2014-15, 15.93% of the MDRs of Dharwad district was WMB/unsurfaced as compared to nil in Bengaluru Rural and Kolar districts (Annexure 53). In Yadgir district, 94.90% of the MDRs were single lane as compared to 48.82% in Dakshina Kannada district. Across zones, while south zone districts have a higher proportion of WBM and unsurfaced roads, the proportion of single lane

Across zones, south zone districts had a road length of 42.95 kms per 100 sq. kms in 2014-15 as compared to 36.60 kms in north zone districts.

MDR roads is higher in the north zone districts. However,, a faster decline in the proportion of WBM and unsurfaced roads is seen in the south zone during 2009-15.

The Government of Karnataka's large-scale road development/improvement programs have led to the State's road network increasing from 175901 kms in 2004-05 to 240131 kms in 2014-15 with National and State highways constituting 10.94% of this network in 2014-15 (as compared to 12.05% in 2004-05). Although the road network in the State has widened, opportunities exist to improve the condition of these roads with respect to their surface and carriageway width. With just about 57% and 52% of Karnataka's rural roads and Panchayati Raj roads being metalled, it is necessary to examine ways of enhancing the State's rural road infrastructure.

Conclusion

While inequalities in access to basic infrastructure exist in Karnataka, the magnitude of inequality is seen to vary across regions and communities of the State. With basic infrastructure of drinking water, sanitation and housing bearing a strong impact on human health and quality of life, it is imperative that the State and the private sector align their efforts to alleviate human suffering and address threats to social, economic and environmental sustainability. Towards optimizing the use of resources to obtain short-term as well as long-term benefits, it may be useful to prioritize target segments and issues that need to be addressed. An immediate intervention could aim at providing necessary infrastructure to households that lack access to multiple amenities. 63633 households in the State lacked in-premises drinking water, electricity and a latrine in 2011 (Annexure 54). 0.48% of the State's households and more than 1% of households in Kodagu, Belagavi and Yadgir lacked these services, indicating severe deprivation to a decent quality of life. Further, 41091 of these households, including 4246 households in Raichur district (1.18% of all households) also had water source away. Although the proportion of such households appears minimal, principles of inclusive growth call for this segment to be served at the earliest. In the State's ULBs too, 16.12% (17127 households) of slum households lacked electricity, in-premises/near-premises drinking water source and a latrine (Annexure 55). The proportion of such households is highest among those who are served by a handpump and tubewell/ borehole (away from premises). Also, 8.14% of slum households had water source near the premises but lacked electricity and a latrine. The State could initiate targeted interventions, in partnership with civil society organizations, to identify such households and initiate action to provide the basic services. It has been attempted to identify the basic infrastructure status in various districts of the State by considering five dimensions including – i. Condition of housing – good ii. Treated tapwater as the main source of drinking water iii. Electricity as the main energy source for lighting iv. Availability of latrine in premises and v. Density of PWD road network in the district (kms of road length per 100 sq. kms). Indicators i to iv considered the proportion of households with access to the infrastructure/service. Based on the five indicators, a composite index score (termed as the Basic Infrastructure score or BASIN score) was developed (geometric mean of the five measures) for each of the districts (Table 10.35). Equal weights have been considered for each of the five measures.

Table 10.35
BASIN scores of Karnataka's districts

Sl. No	District	Proportion of Households with					
		Good condition of house	Treated tap water	Electricity for lighting	Latrine in premises	PWD Road length per 100 sq. km	BASIN score
1	Bengaluru Urban	1	1	1	1	0.42	0.84
2	Dharwad	0.61	0.88	0.84	0.55	0.55	0.67
3	Mysuru	0.41	0.91	0.82	0.53	0.55	0.62
4	Mandya	0.35	0.55	0.77	0.32	1	0.54
5	Dakshina Kannada	0.61	0.38	0.74	0.98	0.25	0.53
6	Bengaluru Rural	0.58	0.16	0.9	0.82	0.51	0.51
7	Shivamogga	0.34	0.58	0.73	0.72	0.32	0.51
8	Ramanagara	0.32	0.46	0.78	0.38	0.68	0.49
9	Davanagere	0.36	0.51	0.79	0.43	0.39	0.47
10	Hassan	0.24	0.35	0.83	0.35	0.89	0.47
11	Haveri	0.35	0.37	0.75	0.32	0.64	0.46
12	Ballari	0.52	0.66	0.76	0.26	0.28	0.45
13	Kolar	0.46	0.33	0.84	0.39	0.34	0.44
14	Kodagu	0.42	0.39	0.44	0.84	0.24	0.43
15	Belagavi	0.54	0.46	0.49	0.27	0.4	0.42
16	Chikkamagaluru	0.32	0.37	0.63	0.61	0.23	0.4
17	Gadag	0.41	0.58	0.78	0.13	0.42	0.4
18	Tumakuru	0.43	0.26	0.66	0.26	0.46	0.39
19	Chikkaballapura	0.51	0.32	0.75	0.31	0.15	0.35
20	Raichur	0.35	0.5	0.62	0.13	0.3	0.33
21	Chitradurga	0.32	0.36	0.6	0.24	0.25	0.33
22	Bagalkote	0.4	0.43	0.53	0.1	0.36	0.32
23	Uttara Kannada	0.24	0.12	0.75	0.58	0.27	0.32
24	Koppal	0.46	0.44	0.57	0.1	0.21	0.3
25	Udupi	0.64	0.02	0.76	0.91	0.22	0.29
26	Kalaburagi	0.47	0.45	0.61	0.18	0.05	0.26
27	Vijayapura	0.4	0.38	0.38	0.09	0.2	0.26
28	Chamarajanagara	0.18	0.39	0.6	0.16	0.15	0.25
29	Bidar	0.12	0.27	0.59	0.15	0.16	0.22
30	Yadgir	0.17	0.25	0.28	0.01	0.23	0.13
All districts		**0.45**	**0.54**	**0.63**	**0.48**	**0.31**	**0.47**
Range (Max-Min)		**32.8**	**54.9**	**20.1**	**83.6**	**43.9**	**40.8**

** Excluding the indicator of 'Treated tap water as main source of drinking water, Udupi district obtains an overall score of 50.20*
Source: Census, 2011 and PWD

The proposition that districts in the northern regions of the State are low in basic infrastructure appears to be validated with Kalaburagi division obtaining the lowest score among the four divisions across both rural and urban areas.

The BASIN score reveals the highest score of Bengaluru Urban district (0.84) while Yadgir district obtains the lowest score of 0.13. It may be seen that most of the top ten scores are obtained by districts which are mainly based in southern Karnataka while most of the districts (other than Udupi) that have obtained the lowest ten scores are based in the northern region of the State. Further, only six districts obtain scores above the State average indicating a skewness in basic infrastructure across districts. Udupi and Dakshina Kannada indicate a situation wherein the low scores on access to treated tapwater leads to a low score although these districts perform well on other indicators. Despite the low coverage of treated tapwater in Udupi district, the range (maximum – minimum) of proportion of households across measures indicates that the difference in coverage is greater for sanitation as compared to treated tapwater for drinking.

Regional inequalities in basic infrastructure have been examined by considering the BASIN score for the four revenue divisions of the State (Table 10.36). The proposition that districts in the northern regions of the State are low in basic infrastructure appears to be validated with Kalburagi division obtaining the lowest score among the four divisions across both rural and urban areas. Although Bengaluru division has a higher total BASIN score, Mysuru division has better basic infrastructure at a disaggregated level (Rural and Urban), with the lower total score of Mysuru division being impacted by the relative proportion of rural and urban households, and the range of proportions within rural/urban. However,, it is evident that districts of Kalburagi and Belagavi revenue divisions, especially the rural areas of these districts, have lower access to basic infrastructure.

An examination of BASIN scores across All households and SC/ST households further confirms the existence of inequalities with respect to access to basic infrastructure (Table 10.37). At the State level, SC and ST households obtain a lower BASIN score as compared to All households with this inequality being seen in both rural and urban areas of the State. Rural areas of Bengaluru (Urban) district and Yadgir districts obtain the highest and lowest BASIN scores for Rural and All households while Urban Mysuru, Mandya and Hassan districts obtain the highest score for Urban households. ST and SC households have obtained a higher score as compared to All households in districts such as Dharwad (SC), Mandya (ST), Bengaluru Rural (ST), Shivamogga (ST), Hassan (ST), Uttara Kannada (SC and ST), Kalaburagi (ST), Vijayapura (ST), and Chamarajanagar (ST) have a higher score than 'All' households in those districts. A marked difference in BASIN score between SC and ST households is seen in a few districts with ST households faring better in Mandya, Dakshina Kannada, Bengaluru Rural, Shivamogga, Davanagere, Hassan, Haveri, Kolar, Chikkamagalur, Kalaburagi, Vijayapura and Bidar. On the whole, as indicated by the BASIN score, inequalities exist between districts, between urban/rural and between All, SC and ST households in the State.

Table 10.36
BASIN scores of Karnataka's revenue divisions

	Rural	Urban	Total
Kalaburagi	25.73	39.19	21.59
Belagavi	56.18	59.14	42.84
Mysuru	89.47	87.39	62.26
Bengaluru	71.24	90.54	93.74

Derived from data obtained from: Census 2011, PWD

Table 10.37
BASIN scores of All, SC and ST households across districts

District	All			SC			ST		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Bengaluru Urban	0.75	0.79	0.84	0.73	0.79	0.84	0.77	0.77	0.84
Dharwad	0.52	0.73	0.67	0.49	0.74	0.71	0.48	0.67	0.60
Mysuru	0.53	0.80	0.62	0.55	0.81	0.58	0.47	0.75	0.52
Mandya	0.61	0.80	0.54	0.57	0.75	0.52	0.59	0.83	0.60
Dakshina Kannada	0.44	0.61	0.53	0.28	0.54	0.32	0.42	0.58	0.44
Bengaluru Rural	0.65	0.37	0.51	0.62	0.32	0.44	0.73	0.42	0.60
Shivamogga	0.48	0.63	0.51	0.46	0.62	0.45	0.54	0.66	0.54
Ramanagara	0.53	0.68	0.49	0.52	0.73	0.49	0.48	0.70	0.48
Davanagere	0.44	0.64	0.47	0.35	0.60	0.36	0.41	0.61	0.42
Hassan	0.47	0.80	0.47	0.35	0.78	0.33	0.47	0.82	0.52
Haveri	0.50	0.61	0.46	0.44	0.60	0.39	0.49	0.67	0.44
Ballari	0.36	0.56	0.45	0.32	0.52	0.41	0.34	0.53	0.41
Kolar	0.47	0.51	0.44	0.43	0.41	0.39	0.43	0.53	0.41
Kodagu	0.50	0.58	0.43	0.49	0.49	0.39	0.23	0.59	0.19
Belagavi	0.40	0.65	0.42	0.41	0.61	0.42	0.33	0.54	0.35
Chikkamagaluru	0.44	0.57	0.40	0.39	0.52	0.31	0.42	0.57	0.38
Gadag	0.38	0.35	0.40	0.39	0.35	0.39	0.37	0.47	0.38
Tumakuru	0.36	0.66	0.39	0.29	0.57	0.30	0.38	0.64	0.39
Chikkaballapura	0.38	0.49	0.35	0.32	0.43	0.27	0.37	0.49	0.34
Raichur	0.32	0.45	0.33	0.32	0.41	0.33	0.27	0.30	0.24
Chitradurga	0.35	0.52	0.33	0.34	0.48	0.31	0.35	0.50	0.34
Bagalkote	0.28	0.35	0.32	0.31	0.30	0.32	0.31	0.32	0.30
Uttara Kannada	0.32	0.41	0.32	0.32	0.46	0.37	0.35	0.41	0.34
Koppal	0.34	0.41	0.30	0.32	0.28	0.28	0.31	0.37	0.26
Udupi	0.30	0.41	0.29	0.30	0.42	0.27	0.25	0.31	0.25
Kalaburagi	0.14	0.39	0.26	0.17	0.35	0.24	0.19	0.38	0.31
Vijayapura	0.17	0.48	0.26	0.22	0.43	0.26	0.33	0.51	0.39
Chamarajanagara	0.29	0.38	0.25	0.36	0.43	0.32	0.23	0.40	0.26
Bidar	0.19	0.40	0.22	0.16	0.33	0.16	0.21	0.40	0.21
Yadgir	0.12	0.27	0.13	0.13	0.23	0.12	0.10	0.19	0.10
Range	**0.62**	**0.53**	**0.71**	**0.60**	**0.58**	**0.72**	**0.67**	**0.64**	**0.74**

Derived from data obtained from: Census 2011, PWD

With inequalities being pronounced with respect to sanitation-related services in the State, it is necessary that the intensity of interventions to address sanitation-related issues be enhanced so as to achieve broad-based impacts. While the State has been able to construct a considerable number of latrines, attempts at 'intensive sanitation' should be better focused to ensure that the latrines are used on a regular basis. Social pressure and community networks should be leveraged to encourage latrine use. Considering the relative preferences for drinking water and sanitation, strategies that lead to the convergence of drinking water supply and sanitation should be implemented on priority. Also, with the large proportion of households lacking access to closed drains, drinking water schemes should also be integrated with programs for waste water disposal/treatment and recycling (if feasible). The need for convergence of drinking water and sanitation is imminent considering the growing dependence on groundwater, and deleterious impacts of inadequate sanitation on aquifers. In the medium term, the State should also intensify its efforts at adopting aquifer management strategies to optimize and sustain the supply and demand for water.

Attempts at 'intensive sanitation' should be better focused to ensure that the latrines are used on a regular basis.

Towards achieving long-term impacts that benefit all sections of society, it should be attempted by local bodies to reduce the dependence on public subsidies to meet the operational and maintenance costs of sanitation-related services. Along with developing capacities of the involved personnel, issues such as autonomy, accountability, cost recovery and incentives need to be addressed to achieve more efficient implementation of schemes. In urban areas too, better sanitation systems also help in reducing inequalities across communities as it is seen that the poorest urban households bear the highest per capita economic impact of inadequate sanitation, with the impact being upto 60% more than the urban average. With households in the lowest monthly per capita expenditure quintile being more likely to lack access to toilet facilities, it is evident that sanitation programs should continue to focus on poor households, both urban and rural. With sanitation being a public good, and as health outcomes from an intervention are dependent on 'neighbours'' access to adequate sanitation, sanitation-related programmes, while providing IHHLs, should also focus on community-level interventions. In slums of ULBs, such community-level interventions would also require ingenious solutions to issues of tenure. Effective sanitation-related interventions are essential to obtain the desired outcomes from programs that seek to improve water or hygiene.

Despite major interventions by the State to offer safe, affordable, and reliable drinking water services to various segments of the population, the issue of inequalities in access to water has to be addressed with renewed vigour. With about a third of the State's population being dependent on groundwater sources, and the increased incidence of untimely or delayed or scarce rainfall in a majority of the State's districts, coupled with the emergence of water quality problems (fluoride, nitrates, salinity, iron and arsenic), the State has to urgently adopt a multi-dimensional strategy to ensure water security for its citizens, especially its citizens in rural areas and in urban slums. With surface water sources being a major source of decentralized replenishment of groundwater sources, interventions to conserve/augment surface water would also enable recharging of groundwater. Considering the rapid growth of urban areas in Karnataka, investments in water supply must be oriented towards demand management and to reduce intra-city

disparities as well as to enhance the quality of water that is supplied to all consumers (subsidized or otherwise).

Karnataka has been visionary in its deployment of resources to schemes that provide housing to most of the disadvantaged sections of its society including the urban poor. With more than one million houses being constructed under various schemes since 2012-13, the State has ensured that its portfolio of housing schemes enhance the access to housing by its citizens. Considering the relative disadvantage of SC/ST population with respect to housing in the State, it may be useful to consider intensifying and accelerating the Dr. B. R Ambedkar housing scheme after undertaking a concurrent impact evaluation of this scheme which has been launched in 2015-16.

Access to electricity has been growing across the State although disparities exist between regions and urban/rural with respect to the duration and quality of power supply. Most rural households (electrified) bear 6-8 hours of power cuts each day. Supply targets in the State include 6 hours of 3-phase supply to agricultural pump sets (fully subsidised by State) and single phase supply to rural areas for most hours at night as compared to 24 hours of supply in Bengaluru and 22 hours in other urban areas. While subsidies may be a justification for load-shedding in rural areas, rural consumers have also been shown to be cross-subsidizing urban consumers of electricity in Bengaluru. Also, reliability of power supply is lower in rural and non-Bengaluru urban areas of the State. This is clearly evident in CESC (headquarted in Mysuru) wherein the reliability of power supply in rural areas in 2015-16 was 70.96% as compared to 95.69% in Mysuru city and other district headquarters, and 89.52% in other towns and cities that were being served by CESC (Annexure 56). A distinct difference in reliability levels existed between the utilities serving Bengaluru (with comparable efficiencies across all regions in the BESCOM region) and the other four electricity utilities of Karnataka. With the State having adopted the Supervisory Control and Data Acquisition System for monitoring of power supply and consumption at the sub-station level, it would be feasible to explore the disparities across feeders and examine ways to address inequalities. To address supply constraints, small-scale biomass and solar plants to serve un-electrified rural households and agricultural pump set loads, and captive solar plants to meet both electricity and heating/cooling needs of commercial/ industrial consumers could be promoted on a program mode.

Disparities exist in the trends in PWD road length across districts as well as between the south zone and north zone districts. Inequalities also exist in the proportion of MDR roads with single lane in districts such as Yadgir as compared to other districts such as Dakshina Kannada. With roads being an enabler of economic activity and growth, managing/upgrading/expanding the State's road network in an equitable manner could contribute to a more balanced growth across regions and communities.

To conclude, while Karnataka has made considerable progress in making basic services accessible to a majority of its citizens, the ongoing interventions should be realigned and new interventions should be designed to improve the provision of basic infrastructure such as water, electricity, roads, sanitation and housing, with additional components to address the inequalities which prevail in the State across regions and disadvantaged communities.

Karnataka has been visionary in its deployment of resources to schemes that provide housing to most of the disadvantaged sections of its society including the urban poor.

ANNEXURE

The Basic Infrastructure score (BASIN score) by Sri Ashwin Kumar

Towards obtaining an overall score representing the access to basic infrastructure of a. Housing b. Sanitation c. Drinking water d. Electricity and e. Roads, a composite score termed the BASIN score has been calculated for each district of Karnataka. The input data for the score relating to the five indicators are as follows –

A. Housing: Proportion of households with access to good housing (%)

B. Sanitation: Proportion of households that have a latrine in premises (%)

C. Drinking water: Proportion of households with treated tap water as the main source of drinking water (%)

D. Electricity: Proportion of households with electricity as the main source of energy for lighting (%)

E. Roads: PWD road length per 100 sq. kms geographical area of a district

Sources of data: Indicators A to D = Census, 2001. Indicator E = PWD, Government of Karnataka

Calculation of score

1. The input data were normalized by using the following relationship = Actual value – Modified Minimum value/ Maximum value – Modified Minimum value As adopted in the DHDRs, the modified minimum value for each of the indicators was calculated as 90% of the actual minimum value.

2. The geometric mean of the normalized values of the five indicators was calculated as follows -

(A * B * C * D * E)(1/5)

e.g. Calculation of BASIN score for Bengaluru Urban district

Table 10.38
BASIN Infrastrocture Indicators

Indicator	Value	Normalized value
Proportion of households with access to good housing	78.1	1.00
Proportion of households with treated tap water as the main source of drinking water	66.6	1.00
Proportion of households with electricity as the main source of energy for lighting	98.0	1.00
Proportion of households that have a latrine in premises	94.8	1.00
PWD road length per 100 sq. kms geographical area of a district	42.3	0.42

BASIN score = (1.00 * 1.00 * 1.00 * 1.00 * 0.42) (1/5) = 0.84

Interpretation: A Higher BASIN score indicates a higher level of access to the five indicators of basic infrastructure as listed above.

Annexure 1: HHs with tap water as main source – All, Rural / Urban, 2001 / 2011 (Number and % of total HHs)

District	Rural				Urban				Total			
	2001		2011		2001		2011		2001		2011	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Udupi	16528	9.88	24931	14.28	9503	24.45	20806	28.99	26031	12.62	45737	18.57
Uttara Kannada	32489	17.19	48660	21.45	33309	42.98	39131	42.03	65798	24.69	87791	27.44
Dakshina Kannada	30472	14.38	56718	25.69	77994	56.59	129045	63.11	108466	31.02	185763	43.68
Yadgir	51899	37.70	66977	41.43	17051	63.95	27369	70.61	68950	41.96	94346	47.07
Vijayapura	74336	29.37	117573	38.18	47427	67.62	77745	80.07	121763	37.67	195318	48.22
Kodagu	28911	26.94	51028	43.06	13415	80.01	15696	79.30	42326	34.11	66724	48.24
Bidar	97667	49.85	116496	49.08	30091	58.53	42432	55.73	127758	51.65	158928	50.69
Belagavi	242581	41.95	318799	45.02	134453	73.21	201721	78.87	377034	49.49	520520	54.01
Kalaburagi	96215	36.36	144778	46.47	82669	72.54	119572	77.79	178884	47.25	264350	56.82
Raichur	90760	40.85	133529	50.53	63648	83.82	86020	90.49	154408	51.80	219549	61.10
Kolar	116568	62.56	137663	60.85	67136	85.75	71291	68.06	183704	69.42	208954	63.13
Bagalkote	100027	47.97	140905	59.02	58427	68.86	84481	72.43	158454	54.02	225386	63.42
Hassan	140425	47.39	193129	56.82	56189	88.11	79140	88.54	196614	54.60	272269	63.42
Chamarajanagara	68908	39.82	119546	58.67	25929	86.77	35968	88.92	94837	46.74	155514	63.68
Shivamogga	92651	43.37	132759	51.65	98824	84.31	129742	89.43	191475	57.88	262501	65.28
Chitradurga	126233	52.47	170501	60.46	47009	86.84	61627	85.45	173242	58.78	232128	65.55
Bengaluru Rural	75351	58.57	100639	61.97	33595	86.08	49523	79.43	108946	64.97	150162	66.81
Tumakuru	210056	47.82	304259	61.36	91354	85.98	121110	86.19	301410	55.25	425369	66.84
Chikkamagaluru	92835	48.19	135403	62.88	39733	84.36	50611	89.04	132568	55.30	186014	68.34
Davanagere	144355	62.32	170147	62.34	80578	78.81	112039	84.94	224933	67.37	282186	69.70
Chikkaballapura	132541	69.70	153080	69.48	38264	85.50	48716	78.57	170805	72.71	201796	71.48
Koppal	100111	57.27	146586	68.75	28081	78.32	40317	87.31	128192	60.86	186903	72.05
Gadag	72403	61.33	86810	63.00	55617	89.28	69876	89.81	128020	70.98	156686	72.67
Haveri	140626	68.72	185089	72.82	38271	74.87	59566	83.57	178897	69.95	244655	75.17
Mandya	193955	62.51	266544	75.28	49755	85.05	64283	88.63	243710	66.08	330827	77.55
Bengaluru Urban	103818	63.33	141373	68.09	998943	79.64	1738782	80.15	1102761	77.75	1880155	79.10
Ballari	165550	69.84	208623	71.60	115683	88.08	179812	94.48	281233	76.35	388435	80.64
Dharwad	76244	58.89	107452	68.02	136553	85.17	192707	90.01	212797	73.43	300159	80.68
Ramanagara	122207	70.13	155424	77.65	36953	88.70	54971	92.20	159160	73.71	210395	80.99
Mysuru	199095	59.50	296694	73.87	183093	90.96	270750	94.41	382188	71.31	567444	82.43
All districts	**3237818**	**48.49**	**4434126**	**56.37**	**2791548**	**78.44**	**4276860**	**80.43**	**6027365**	**58.89**	**8708975**	**66.07**

Annexure 2: HHs with treated tap water – % of HHs - All / SC / ST, Rural / Urban – 2011

District	All			SC			ST		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Udupi	6.7	23.7	11.7	11.5	28.9	15.8	5.1	22.7	8.7
Uttara Kannada	9.5	36.3	17.3	13.1	53.0	25.5	12.5	51.5	20.2
Bengaluru Rural	19.3	20.0	19.5	17.8	19.7	18.1	22.5	23.2	22.6
Yadgir	18.2	51.7	24.6	17.0	56.0	21.6	14.1	50.8	18.4
Tumakuru	13.7	64.9	25.0	13.8	59.8	20.5	13.3	53.7	19.6
Bidar	20.5	41.1	25.5	17.8	32.9	20.4	21.0	34.5	22.4
Chikkaballapura	23.2	46.9	28.4	21.9	39.9	24.0	22.9	43.4	25.2
Kolar	24.7	38.7	29.1	24.2	26.4	24.8	22.2	36.1	24.4
Hassan	19.3	70.4	30.0	16.2	66.9	22.6	15.2	70.2	26.4
Chitradurga	20.9	69.7	30.9	21.9	66.0	28.3	22.1	68.7	28.2
Chikkamagaluru	22.8	63.2	31.3	23.6	58.9	28.2	18.4	59.4	23.4
Haveri	22.7	62.5	31.4	20.1	58.9	25.5	21.6	60.6	26.1
Vijayapura	18.6	72.9	31.6	16.6	60.3	24.8	20.2	75.8	34.6
Dakshina Kannada	12.6	52.7	31.9	17.2	61.6	30.3	10.2	54.7	19.7
Chamarajanagara	24.1	74.6	32.5	27.0	73.6	33.4	19.2	69.2	28.9
Kodagu	26.2	70.8	32.6	29.2	77.0	34.7	15.9	70.7	17.7
Bagalkote	22.6	60.1	34.9	22.5	61.3	32.8	23.6	57.4	30.0
Koppal	27.7	70.2	35.3	27.2	69.9	33.5	24.4	61.3	27.4
Kalaburagi	22.5	62.6	35.7	19.8	56.7	29.3	20.1	59.3	34.9
Ramanagara	27.0	68.3	36.5	28.7	66.2	35.4	24.3	59.1	30.7
Belagavi	23.9	72.0	36.6	25.9	70.5	35.8	20.4	67.4	28.3
Raichur	24.4	77.6	38.4	23.5	77.1	35.5	20.5	60.5	24.5
Davanagere	20.8	76.3	38.9	19.0	72.0	29.1	17.8	75.0	28.6
Mandya	33.0	81.8	41.3	28.2	79.9	36.5	34.1	83.7	45.0
Gadag	30.1	65.6	42.9	31.8	61.5	40.2	27.2	64.1	34.4
Shivamogga	21.3	82.4	43.3	26.5	83.3	41.5	23.4	82.4	38.4
Ballari	24.1	83.2	47.5	23.4	78.7	40.5	23.2	78.7	38.9
Dharwad	26.4	84.1	59.6	25.2	80.4	58.8	24.1	75.9	47.1
Mysuru	41.9	89.4	61.7	39.1	85.6	52.3	35.5	83.6	47.1
Bengaluru Urban	29.7	70.1	66.6	28.1	67.3	61.2	29.4	64.9	61.3
All Districts	**22.9**	**68.4**	**41.2**	**22.7**	**65.3**	**35.2**	**21.5**	**66.2**	**32.3**

Annexure 3: Tapwater from treated source: % of HHs – 2011
All taluks - Bottom 15*

District	Taluk	Rural			Urban			Total		
		ALL	SC	ST	ALL	SC	ST	ALL	SC	ST
Uttara Kannada	Ankola	2.9	14.7	2.2	3.9	1.9	2.8	3.2	8.7	2.2
Uttara Kannada	Siddapur	1.9	2.7	0	13.2	27.6	22.2	3.5	5.4	6.8
Uttara Kannada	Bhatkal	2.8	4.8	1.0	12.7	27.7	4.8	5.3	6.6	1.6
Udupi	Karkal	3.1	4.7	1.9	18.4	16.7	17.9	5.3	6.1	2.6
Uttara Kannada	Honavar	2.8	6.4	5.9	31.5	41.7	57.1	6.1	8.9	9.2
Uttara Kannada	Kumta	3.8	5.7	0	14.7	25.1	6.7	6.4	10.3	1.9
Udupi	Kundapura	6.3	13.6	4.1	21.1	40.7	26.7	7.8	15.1	4.7
Shivamogga	Hosanagara	8.4	15.1	4.4	20.8	26.7	26.2	9.0	15.7	5.8
Vijayapura	Indi	8.4	9.2	8.7	37.2	22.5	25.9	11.0	10.7	9.9
Tumakuru	Pavagada	10.6	10.1	9.8	17.3	11.2	13.6	11.4	10.2	10.2
Bengaluru Rural	Dod Ballapur	13.1	10.9	14.8	8.4	6.5	18.0	11.5	10.2	15.5
Tumakuru	Koratagere	12.1	12.9	14.5	8.1	7.1	8.6	11.7	12.5	13.6
Uttara Kannada	Karwar	18.5	48.8	46.9	6.9	13.0	16.0	12.5	29.8	33.5
Dakshina Kannada	Beltangadi	11.8	14.5	8.9	29.8	62.0	41.3	12.8	16.8	9.9
Vijayapura	Sindgi	10.0	6.9	9.1	49.9	40.3	48.5	13.8	9.5	11.6

All taluks - Top 15*

District	Taluk	Rural			Urban			Total		
		ALL	SC	ST	ALL	SC	ST	ALL	SC	ST
Mysuru	Mysuru	55.2	55.8	52.1	91.9	89.0	88.6	84.5	79.1	73.8
Shivamogga	Shivamogga	32.8	38.1	31.1	86.8	82.8	85.7	67.5	58.1	58.1
Ballari	Ballari	36.5	33.8	35.4	88.0	84.8	83.5	65.1	58.1	53.4
Shivamogga	Bhadravati	42.2	40.3	45.4	88.2	88.2	87.1	63.7	58.2	57.6
Mandya	Shrirangapattana	55.1	41.0	46.9	89.0	86.8	90.4	61.4	47.9	64.0
Raichur	Raichur	39.5	40.6	37.9	82.0	78.9	78.9	61.3	58.9	45.6
Ballari	Hospet	23.2	20.7	19.3	79.6	73.0	76.3	58.0	47.2	48.8
Davanagere	Davanagere	19.1	17.9	15.4	78.7	76.1	76.4	57.1	44.8	42.5
Belagavi	Belagavi	20.7	17.6	13.5	73.3	72.1	60.6	56.7	57.2	31.6
Mandya	Mandya	46.9	44.0	38.8	76.0	74.6	77.6	56.5	53.5	55.9
Dharwad	Navalgund	41.8	36.0	36.6	93.4	94.4	93.8	56.3	56.5	47.2
Kalaburagi	Kalaburagi	30.1	26.1	22.3	68.6	66.5	66.1	55.6	46.3	53.8
Ramanagara	Ramanagara	34.8	33.7	28.9	81.5	79.8	81.1	52.3	49.3	39.1
Koppal	Koppal	42.4	35.1	42.2	87.4	83.5	89.6	52.2	43.0	46.9
Uttara Kannada	Haliyal	39.6	46.0	34.5	90.1	95.5	91.0	52.1	64.2	41.0

* on the basis of Total (All) households

Annexure 4: HHs with untreated tap water as main drinking water source All, Rural / Urban – 2011

District	Rural			Urban			Total		
	Total No. of HHs	No. with untreated tapwater	%	Total No. of HHs	No. with untreated tapwater	%	Total No. of HHs	No. with untreated tapwater	%
Bengaluru Rural	162398	69215	42.62	62347	37059	59.44	224745	106274	47.29
Ramanagara	200171	101316	50.61	59623	14229	23.86	259794	115545	44.48
Haveri	254181	127301	50.08	71275	15052	21.12	325456	142353	43.74
Chikkaballapura	220309	101915	46.26	62002	19647	31.69	282311	121562	43.06
Tumakuru	495885	236083	47.61	140509	29972	21.33	636394	266055	41.81
Chikkamagaluru	215334	86214	40.04	56839	14686	25.84	272173	100900	37.07
Koppal	213217	87511	41.04	46179	7888	17.08	259396	95399	36.78
Mandya	354049	149788	42.31	72529	4984	6.87	426578	154772	36.28
Chitradurga	282019	111482	39.53	72124	11352	15.74	354143	122834	34.68
Kolar	226245	81754	36.14	104745	30802	29.41	330990	112556	34.01
Hassan	339911	127404	37.48	89381	16227	18.15	429292	143631	33.46
Ballari	291383	138332	47.47	190321	21394	11.24	481704	159726	33.16
Chamarajanagara	203748	70415	34.56	40450	5783	14.30	244198	76198	31.20
Davanagere	272929	113386	41.54	131911	11422	8.66	404840	124808	30.83
Gadag	137799	45386	32.94	77803	18868	24.25	215602	64254	29.80
Bagalkote	238746	86880	36.39	116631	14331	12.29	355377	101211	28.48
Bidar	237380	67920	28.61	76141	11127	14.61	313521	79047	25.21
Raichur	264274	69175	26.18	95063	12220	12.85	359337	81395	22.65
Yadgir	161665	37625	23.27	38759	7336	18.93	200424	44961	22.43
Shivamogga	257060	78046	30.36	145079	10232	7.05	402139	88278	21.95
Kalaburagi	311531	74794	24.01	153714	23403	15.23	465245	98197	21.11
Dharwad	157960	65799	41.66	214094	12600	5.89	372054	78399	21.07
Mysuru	401655	128228	31.92	286767	14309	4.99	688422	142537	20.70
Belagavi	708069	149728	21.15	255756	17600	6.88	963825	167328	17.36
Vijayapura	307984	60183	19.54	97092	6960	7.17	405076	67143	16.58
Kodagu	118509	19931	16.82	19794	1686	8.52	138303	21617	15.63
Bengaluru Urban	207628	79677	38.37	2169428	218070	10.05	2377056	297747	12.53
Dakshina Kannada	220806	28909	13.09	204485	21238	10.39	425291	50147	11.79
Uttara Kannada	226803	27031	11.92	93109	5349	5.74	319912	32380	10.12
Udupi	174548	13185	7.55	71765	3801	5.30	246313	16986	6.90
All Districts	**7864196**	**2634613**	**33.50**	**5315715**	**639627**	**12.03**	**13179911**	**3274240**	**24.84**

Annexure 5: HHs with untreated tap water as main drinking water source SC, Rural / Urban – 2011

District	Rural			Urban			Total		
	No. of HHs	No. with untreated tapwater	%	No. of HHs	No. with untreated tapwater	%	No. of HHs	No. with untreated tapwater	%
Haveri	37029	19327	52.19	5977	1309	21.90	43006	20636	47.98
Bengaluru Rural	39194	17658	45.05	6613	4265	64.49	45807	21923	47.86
Chikkaballapura	60076	29293	48.76	8087	2955	36.54	68163	32248	47.31
Tumakuru	99967	49526	49.54	17110	4129	24.13	117077	53655	45.83
Ramanagara	38861	18849	48.50	8506	1956	23.00	47367	20805	43.92
Koppal	37201	15656	42.08	6420	1262	19.66	43621	16918	38.78
Chikkamagaluru	49304	19612	39.78	7382	2259	30.60	56686	21871	38.58
Ballari	63035	30106	47.76	28371	4158	14.66	91406	34264	37.49
Mandya	50353	21024	41.75	9536	781	8.19	59889	21805	36.41
Chitradurga	68694	26829	39.06	11542	2167	18.77	80236	28996	36.14
Davanagere	63360	25625	40.44	14855	1538	10.35	78215	27163	34.73
Hassan	67348	24278	36.05	9752	2119	21.73	77100	26397	34.24
Kolar	67497	24725	36.63	27375	6983	25.51	94872	31708	33.42
Bagalkote	42766	16214	37.91	15570	1881	12.08	58336	18095	31.02
Chamarajanagara	49951	16497	33.03	7952	1226	15.42	57903	17723	30.61
Shivamogga	50226	19278	38.38	17983	1541	8.57	68209	20819	30.52
Gadag	23361	7193	30.79	9151	2569	28.07	32512	9762	30.03
Bidar	59905	16041	26.78	12584	2432	19.33	72489	18473	25.48
Mysuru	82901	25138	30.32	32754	2658	8.12	115655	27796	24.03
Yadgir	39659	9618	24.25	5324	927	17.41	44983	10545	23.44
Kalaburagi	85193	21785	25.57	29306	4814	16.43	114499	26599	23.23
Raichur	55665	14269	25.63	16043	2180	13.59	71708	16449	22.94
Dharwad	13514	6095	45.10	21089	1374	6.52	34603	7469	21.58
Kodagu	15759	3375	21.42	2047	192	9.38	17806	3567	20.03
Belagavi	90461	20859	23.06	25703	1744	6.79	116164	22603	19.46
Vijayapura	64414	12943	20.09	14783	1671	11.30	79197	14614	18.45
Bengaluru Urban	43701	19494	44.61	237532	31940	13.45	281233	51434	18.29
Dakshina Kannada	21454	3656	17.04	8997	1314	14.60	30451	4970	16.32
Uttara Kannada	18068	3483	19.28	8131	745	9.16	26199	4228	16.14
Udupi	11223	1711	15.25	3689	346	9.38	14912	2057	13.79
All Districts	**1510140**	**540157**	**35.77**	**630164**	**95435**	**15.14**	**2140304**	**635592**	**29.70**

Annexure 6: HHs with untreated tap water as main drinking water source ST, Rural / Urban – 2011

District	Rural			Urban			Total		
	No. of HHs	No. with untreated tapwater	%	No. of HHs	No. with untreated tapwater	%	No. of HHs	No. with untreated tapwater	%
Haveri	27251	13833	50.76	3485	763	21.89	30736	14596	47.49
Chikkaballapura	32250	15538	48.18	4040	1348	33.37	36290	16886	46.53
Tumakuru	43446	21626	49.78	7949	1892	23.80	51395	23518	45.76
Bengaluru Rural	10182	4418	43.39	2478	1374	55.45	12660	5792	45.75
Ramanagara	5125	2496	48.70	1146	367	32.02	6271	2863	45.65
Bagalkote	15458	6777	43.84	3590	532	14.82	19048	7309	38.37
Koppal	27794	11005	39.59	2427	472	19.45	30221	11477	37.98
Ballari	61424	28772	46.84	24315	3492	14.36	85739	32264	37.63
Davanagere	39478	16523	41.85	9230	848	9.19	48708	17371	35.66
Hassan	7823	2931	37.47	1993	352	17.66	9816	3283	33.45
Chikkamagaluru	11006	3710	33.71	1531	465	30.37	12537	4175	33.30
Kolar	16265	5584	34.33	2976	802	26.95	19241	6386	33.19
Chitradurga	52984	18463	34.85	8019	1451	18.09	61003	19914	32.64
Chamarajanagara	23933	8396	35.08	5775	1228	21.26	29708	9624	32.40
Mandya	5581	2096	37.56	1564	96	6.14	7145	2192	30.68
Gadag	10631	3396	31.94	2549	618	24.24	13180	4014	30.46
Shivamogga	13375	5022	37.55	4570	305	6.67	17945	5327	29.69
Bidar	39967	11506	28.79	4468	694	15.53	44435	12200	27.46
Dharwad	10340	4293	41.52	8258	775	9.38	18598	5068	27.25
Mysuru	59455	18946	31.87	18859	1257	6.67	78314	20203	25.80
Raichur	59799	15093	25.24	6709	960	14.31	66508	16053	24.14
Belagavi	53169	12407	23.34	10751	780	7.26	63920	13187	20.63
Kalaburagi	5766	1218	21.12	3498	639	18.27	9264	1857	20.05
Yadgir	19932	3589	18.01	2646	421	15.91	22578	4010	17.76
Uttara Kannada	6625	1285	19.40	1626	84	5.17	8251	1369	16.59
Vijayapura	5861	1140	19.45	2051	153	7.46	7912	1293	16.34
Bengaluru Urban	8239	2969	36.04	72741	9297	12.78	80980	12266	15.15
Dakshina Kannada	13988	1505	10.76	3817	439	11.50	17805	1944	10.92
Kodagu	14931	1523	10.20	502	36	7.17	15433	1559	10.10
Udupi	9032	750	8.30	2322	177	7.62	11354	927	8.16
All Districts	**711110**	**246810**	**34.71**	**225885**	**32117**	**14.22**	**936995**	**278927**	**29.77**

Annexure 7: % of HHs dependent on ground water sources - 2011

District	Rural			Urban			Total		
	ALL	SC	ST	ALL	SC	ST	ALL	SC	ST
Udupi	82.4	68.5	76.0	70.0	59.0	68.0	78.8	66.2	74.3
Uttara Kannada	72.6	64.6	56.5	55.9	34.7	38.3	67.9	55.2	52.9
Dakshina Kannada	66.9	55.9	64.5	36.0	22.7	31.6	52.1	46.0	57.4
Yadgir	54.2	54.7	62.7	27.8	24.9	31.8	49.1	51.1	59.1
Vijayapura	58.9	60.4	58.0	15.3	22.9	12.7	48.4	53.5	46.4
Bidar	48.8	53.2	48.2	39.6	42.6	47.7	46.6	51.3	48.1
Kodagu	49.9	43.6	63.1	19.8	12.5	20.4	45.6	40.1	61.7
Belagavi	49.9	46.1	52.6	18.4	19.0	22.0	41.7	40.1	47.5
Kalaburagi	50.5	52.4	53.3	20.1	23.7	19.9	40.5	45.1	40.6
Hassan	42.1	46.4	45.6	10.9	11.0	11.4	35.4	41.9	38.6
Chamarajanagara	39.8	38.6	43.6	9.8	8.0	8.9	34.9	34.4	36.8
Chitradurga	38.6	38.4	41.6	12.0	13.4	10.6	33.2	34.8	37.7
Bagalkote	36.4	35.6	30.2	23.7	24.4	21.9	32.3	32.6	28.5
Tumakuru	38.0	35.9	36.1	10.6	10.6	14.9	31.9	32.2	33.0
Shivamogga	44.1	32.8	34.6	9.5	6.3	8.4	31.7	25.8	28.0
Kolar	38.2	38.2	42.1	13.3	16.4	13.3	30.4	31.9	37.6
Bengaluru Rural	37.1	36.2	33.7	10.4	7.1	8.5	29.6	31.9	28.7
Davanagere	36.4	39.4	38.8	12.0	13.5	13.4	28.5	34.6	34.0
Raichur	33.6	36.4	40.0	7.0	6.3	21.3	26.6	29.8	38.1
Chikkaballapura	29.7	28.7	27.9	14.7	16.1	15.5	26.4	27.1	26.6
Chikkamagalura	30.3	30.2	29.3	10.0	9.9	8.0	26.1	27.5	26.6
Koppal	27.5	26.4	33.7	11.4	9.7	15.8	24.7	24.0	32.4
Haveri	25.7	26.6	26.6	12.0	14.1	12.6	22.7	24.9	25.1
Mandya	24.1	29.3	26.9	10.1	10.3	8.6	21.6	26.3	23.1
Ramanagara	21.7	22.1	25.2	6.8	10.2	8.0	18.3	20.0	22.0
Bengaluru Urban	29.6	25.9	32.2	16.5	15.5	18.4	17.7	17.1	19.7
Gadag	21.1	27.1	25.8	7.4	8.3	8.5	16.2	21.8	22.4
Mysuru	24.7	29.3	30.0	4.5	5.3	7.5	16.2	22.5	24.6
Ballari	23.6	25.1	24.7	4.2	4.8	4.9	15.9	18.8	19.0
Dharwad	17.5	15.5	20.5	7.8	10.1	11.4	11.8	12.2	16.5
All Districts	**39.9**	**38.5**	**39.1**	**16.6**	**15.1**	**15.9**	**30.4**	**31.6**	**33.5**

Annexure 8: % of HHs dependent on ground water sources – 2011 Top 15 taluk

District	Taluk	Rural			Urban			Total		
		ALL	SC	ST	ALL	SC	ST	ALL	SC	ST
Uttara Kannada	Bhatkal	91.6	87.5	85.2	81.1	69.0	84.6	89.0	86.0	85.2
Uttara Kannada	Kumta	89.6	85.7	93.4	80.6	66.2	89.9	87.5	81.2	92.4
Uttara Kannada	Honavar	90.4	84.2	88.3	62.6	47.3	42.9	87.2	81.5	85.3
Uttara Kannada	Ankola	86.3	79.6	39.3	82.4	66.0	77.8	85.1	73.2	43.8
Uttara Kannada	Karwar	75.1	44.2	46.1	89.9	83.3	73.8	82.7	64.9	58.1
Uttara Kannada	Siddapur	82.2	80.7	83.0	85.2	71.2	77.8	82.6	79.6	81.3
Udupi	Karkal	83.7	74.2	80.3	71.8	73.6	62.5	82.0	74.2	79.5
Udupi	Kundapura	82.3	69.0	68.8	77.0	52.4	56.0	81.7	68.0	68.4
Shivamogga	Hosanagara	75.7	70.5	74.1	76.1	70.7	64.2	75.6	70.5	73.4
Udupi	Udupi	81.6	62.2	79.9	68.7	57.4	68.8	75.5	60.0	75.5
Uttara Kannada	Sirsi	85.2	80.2	80.0	49.3	37.2	44.7	72.8	64.6	63.5
Dakshina Kannada	Beltangadi	73.1	64.3	68.9	55.9	34.6	50.1	72.1	62.7	68.3
Vijayapura	Indi	71.5	73.4	69.6	51.7	70.3	62.0	69.6	73.0	69.1
Belagavi	Raybag	73.3	62.3	79.9	28.5	36.5	22.1	68.6	60.1	72.0
Shivamogga	Sagar	78.7	75.9	74.8	44.1	25.5	38.1	67.4	62.0	65.1

Bottom 15 taluks

District	Taluk	Rural			Urban			Total		
		ALL	SC	ST	ALL	SC	ST	ALL	SC	ST
Mandya	Pandavapura	16.7	29.2	21.1	1.7	3.5	1.3	14.9	26.5	19.4
Gadag	Gadag	20.0	18.5	27.1	10.0	11.0	12.9	14.8	15.3	22.0
Koppal	Yelbarga	13.9	13.8	20.7	16.8	6.8	19.2	14.0	13.4	20.7
Ramanagara	Ramanagaram	17.3	15.6	28.3	7.9	12.2	11.1	13.7	14.4	24.9
Ramanagara	Channapatna	16.9	20.3	46.2	2.7	1.9	1.5	13.3	16.4	28.4
Gadag	Ron	16.3	18.3	21.4	2.2	4.6	2.5	12.5	14.4	18.1
Ballari	Hospet	18.3	17.0	26.4	8.6	9.0	8.9	12.4	12.9	17.4
Shivamogga	Shimoga	25.4	25.4	20.2	5.3	5.9	6.4	12.4	16.8	13.4
Dharwad	Kalghatgi	13.1	10.5	20.0	5.1	1.2	16.7	12.2	8.8	19.8
Mandya	Shrirangapattana	12.6	15.6	20.9	0.6	1.3	1.0	10.3	13.3	13.0
Ballari	Bellary	20.2	20.3	19.2	1.5	2.5	1.5	9.7	11.8	12.6
Shivamogga	Bhadravati	14.4	16.8	12.4	3.7	2.6	3.2	9.4	11.5	9.7
Mysuru	Mysore	17.5	20.3	15.3	3.5	4.4	4.6	6.5	9.2	8.8
Gadag	Nargund	8.6	6.7	6.2	2.0	3.7	6.1	6.1	5.5	6.2
Dharwad	Navalgund	5.6	3.6	5.8	1.9	2.2	4.1	4.6	3.2	5.3

Annexure 9: % of HHs dependent on surface water sources 2011 District wise

District	Rural			Urban			Total		
	ALL	SC	ST	ALL	SC	ST	ALL	SC	ST
Raichur	14.60	13.00	13.00	1.50	1.80	2.10	11.10	10.50	11.80
Gadag	15.00	9.20	13.60	1.60	0.60	1.30	10.20	6.80	11.30
Dharwad	14.00	14.10	13.20	1.40	1.60	1.80	6.70	6.50	8.10
Kodagu	6.20	5.00	9.60	0.80	1.00	1.20	5.50	4.60	9.40
Chikkamagaluru	6.00	5.60	17.40	0.30	0.20	0.20	4.70	4.90	15.20
Uttara Kannada	4.90	1.80	10.60	1.10	2.40	3.00	3.80	2.00	9.10
Belagavi	3.90	3.40	2.60	1.50	2.20	1.30	3.30	3.10	2.40
Bagalkote	3.60	2.80	1.30	2.30	1.30	1.50	3.20	2.40	1.40
Dakshina Kannada	5.40	6.90	11.60	0.30	0.50	0.80	3.00	5.00	9.30
Yadgir	3.30	3.00	3.80	0.80	0.50	0.60	2.80	2.80	3.30
Ballari	4.20	3.20	4.80	0.30	0.40	0.40	2.60	2.40	3.60
Koppal	3.10	3.60	1.90	0.50	0.30	0.40	2.60	3.10	1.70
Shivamogga	3.30	1.20	3.30	0.70	1.40	1.50	2.30	1.20	2.80
Vijayapura	2.00	1.50	1.20	2.40	2.90	0.70	2.10	1.80	0.90
Kalaburagi	2.40	1.50	4.90	1.00	1.50	1.10	1.80	1.40	3.50
Udupi	2.00	2.20	8.50	0.10	0.20	0.10	1.40	1.80	6.80
Kolar	0.10	0.10	0.10	3.90	7.90	8.50	1.30	2.40	1.40
Davanagere	0.70	0.50	0.90	2.50	3.70	1.50	1.30	1.10	1.10
Bidar	0.90	1.00	1.00	1.50	1.30	0.40	1.10	1.10	1.00
Haveri	0.80	0.40	0.40	1.90	2.70	3.40	1.00	0.80	0.70
Mysuru	0.80	0.60	2.20	0.60	0.40	0.60	0.70	0.60	1.80
Chitradurga	0.30	0.20	0.20	1.80	1.20	1.20	0.70	0.30	0.30
Chamarajanagara	0.80	0.50	1.40	0.30	0.60	0.00	0.60	0.60	1.20
Hassan	0.80	0.90	0.80	0.30	0.20	0.30	0.60	0.80	0.70
Bengaluru Urban	0.20	0.20	0.40	0.60	0.60	0.70	0.50	0.50	0.70
Mandya	0.20	0.20	0.60	0.40	0.60	0.90	0.30	0.30	0.70
Chikkaballapura	0.40	0.30	0.30	0.30	0.30	0.20	0.30	0.30	0.30
Tumakuru	0.30	0.30	0.30	0.10	0.20	0.10	0.30	0.20	0.30
Ramanagara	0.00	0.00	0.10	0.20	0.00	0.10	0.10	0.00	0.10
Bengaluru Rural	0.00	0.10	0.00	0.00	0.00	0.10	0.00	0.10	0.00
All districts	**3.00**	**2.10**	**3.70**	**0.80**	**1.20**	**1.00**	**2.00**	**1.90**	**3.10**

Annexure 10: % of HHs dependent on surface water sources – 2011 – Talukwise

Top 15 taluks

District		Total			Rural			Urban		
		ALL	SC	ST	ALL	SC	ST	ALL	SC	ST
Dharwad	Navalgund	30.3	35.3	34.9	42.0	53.7	42.8	0.6	1.1	0.6
Raichur	Sindhnur	26.8	30.3	34.0	32.6	33.6	36.1	2.8	4.2	9.7
Gadag	Nargund	25.6	22.6	37.0	40.7	38.6	46.6	0.2	0.0	0.5
Dharwad	Hubli	17.9	16.9	9.8	17.9	16.9	9.8	0.0	0.0	0.0
Chikkamagaluru	Sringeri	17.5	14.0	41.9	19.5	15.1	43.6	2.0	0.0	2.8
Dharwad	Kundgol	17.2	13.2	22.2	19.2	14.9	22.9	1.5	0.0	1.3
Dakshina Kannada	Sulya	16.1	14.6	24.6	18.1	15.7	26.4	1.6	3.3	4.8
Raichur	Manvi	14.5	13.1	16.9	16.5	14.3	18.1	1.6	0.2	0.6
Kodagu	Madikeri	14.1	15.4	31.6	18.1	19.3	34.6	1.0	0.2	1.0
Chikkamagaluru	Koppa	13.7	14.1	24.3	14.6	14.4	24.9	0.3	0.0	0.0
Uttara Kannada	Supa	13.5	4.9	7.0	13.5	4.9	7.0	0.0	0.0	0.0
Gadag	Ron	13.1	11.7	13.4	18.0	16.4	16.0	0.2	0.0	0.0
Chikkamagaluru	Mudigere	13.0	10.0	24.7	14.5	10.6	25.5	0.2	0.0	0.0
Uttara Kannada	Yellapur	12.4	1.5	18.7	16.2	1.3	20.2	1.9	1.8	1.7
Belagavi	Athni	10.6	9.0	7.5	11.2	9.0	7.5	4.7	9.1	5.5

Bottom 15 taluks

District		Total			Rural			Urban		
		ALL	SC	ST	ALL	SC	ST	ALL	SC	ST
Bengaluru Urban	Bangalore North	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0
Bengaluru Urban	Bangalore South	0.0	0.0	0.6	0.0	0.0	0.9	0.1	0.0	0.0
Mandya	Nagamangala	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mandya	Maddur	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Hassan	Arsikere	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.3
Hassan	Channarayapatna	0.0	0.2	0.1	0.0	0.2	0.1	0.0	0.2	0.0
Chamarajanagara	Yelandur	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0
Kolar	Malur	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Chikkaballapura	Chintamani	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Bengaluru Rural	Nelamangala	0.0	0.2	0.0	0.1	0.2	0.0	0.0	0.2	0.0
Bengaluru Rural	Dod Ballapur	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bengaluru Rural	Devanahalli	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Ramanagara	Ramanagara	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ramanagara	Channapatna	0.0	0.0	0.4	0.0	0.0	0.6	0.0	0.0	0.0
Ramanagara	Kanakapura	0.0	0.1	0.2	0.0	0.1	0.3	0.0	0.0	0.0

Annexure 11: HHs with Drinking Water Source Away (No. and % of HHs) Rural / Urban – 2001 / 2011

District	Rural				Urban				Total			
	2001		2011		2001		2011		2001		2011	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yadgir	57279	41.61	73254	45.31	6814	25.56	8031	20.72	64093	39.00	81285	40.56
Raichur	95520	42.99	116171	43.96	20125	26.50	14738	15.50	115645	38.79	130909	36.43
Vijayapura	91159	36.01	122866	39.89	15569	22.20	16543	17.04	106728	33.01	139409	34.42
Bidar	63827	32.58	88855	37.43	9851	19.16	12106	15.90	73678	29.79	100961	32.20
Kalaburagi	107281	40.54	125973	40.44	22097	19.39	18155	11.81	129378	34.17	144128	30.98
Kolar	50795	27.26	74322	32.85	12095	15.45	27464	26.22	62890	23.77	101786	30.75
Koppal	52100	29.81	65624	30.78	9480	26.44	7473	16.18	61580	29.23	73097	28.18
Gadag	36714	31.10	43004	31.21	13692	21.98	11920	15.32	50406	27.95	54924	25.47
Chikkaballapura	55261	29.06	59226	26.88	8527	19.05	10968	17.69	63788	27.15	70194	24.86
Bagalkote	59411	28.49	65707	27.52	20111	23.70	20572	17.64	79522	27.11	86279	24.28
Belagavi	166803	28.85	206519	29.17	27266	14.85	24656	9.64	194069	25.47	231175	23.99
Ballari	74387	31.38	90665	31.12	32609	24.83	24208	12.72	106996	29.05	114873	23.85
Chitradurga	53115	22.08	68503	24.29	8579	15.85	8475	11.75	61694	20.93	76978	21.74
Haveri	56911	27.81	57886	22.77	15172	29.68	11221	15.74	72083	28.18	69107	21.23
Tumakuru	103382	23.54	103732	20.92	12339	11.61	18667	13.29	115721	21.21	122399	19.23
Bengaluru Rural	35843	27.86	30960	19.06	5715	14.64	11889	19.07	41558	24.78	42849	19.07
Davanagere	55390	23.91	65087	23.85	19405	18.98	9768	7.40	74795	22.40	74855	18.49
Chamarajanagara	35580	20.56	40620	19.94	4294	14.37	3625	8.96	39874	19.65	44245	18.12
Uttara Kannada	40257	21.30	39477	17.41	8913	11.50	8710	9.35	49170	18.45	48187	15.06
Hassan	56427	19.04	60476	17.79	5663	8.88	3555	3.98	62090	17.24	64031	14.92
Dharwad	36081	27.87	40525	25.66	25624	15.98	12288	5.74	61705	21.29	52813	14.19
Ramanagara	33415	19.18	32826	16.40	6049	14.52	3367	5.65	39464	18.28	36193	13.93
Mandya	44488	14.34	54308	15.34	4992	8.53	3087	4.26	49480	13.42	57395	13.45
Chikkamagaluru	46035	23.90	31960	14.84	5799	12.31	3982	7.01	51834	21.62	35942	13.21
Shivamogga	50711	23.74	44097	17.15	14612	12.47	8353	5.76	65323	19.75	52450	13.04
Kodagu	24526	22.85	16798	14.17	1614	9.63	987	4.99	26140	21.06	17785	12.86
Udupi	31672	18.92	22782	13.05	4103	10.56	4412	6.15	35775	17.35	27194	11.04
Mysuru	63082	18.85	60570	15.08	13144	6.53	6077	2.12	76226	14.22	66647	9.68
Dakshina Kannada	31078	14.67	21788	9.87	12257	8.89	8768	4.29	43335	12.39	30556	7.18
Bengaluru Urban	34705	21.17	24909	12.00	125544	10.01	127145	5.86	160249	11.30	152054	6.40
All districts	**1745236**	**26.14**	**1951501**	**24.81**	**494055**	**13.88**	**453221**	**8.52**	**2237290**	**21.86**	**2402711**	**18.23**

Annexure 12: Water source away*

All taluks - Top 15

District	Taluk	Rural	Urban	Total
Mysuru	Mysuru	9.1	1.2	2.8
Dakshina Kannada	Mangaluru	8.0	3.8	4.7
Shivamogga	Shivamogga	10.2	4.6	6.6
Ramanagara	Ramanagara	8.8	5.5	7.5
Dakshina Kannada	Bantval	9.7	7.0	8.9
Dakshina Kannada	Beltangadi	9.3	2.5	8.9
Dharwad	Kalaghatgi	8.6	12.1	9.0
Udupi	Udupi	12.0	6.0	9.2
Dakshina Kannada	Puttur	10.4	5.6	9.4
Shivamogga	Bhadravati	12.3	6.8	9.7
Kodagu	Somvarpet	11.0	2.0	10.1
Mandya	Shrirangapattana	11.7	3.2	10.1
Bengaluru	Bengaluru North	10.4	9.2	10.2
Bengaluru Rural	Nelamangala	12.5	3.1	10.3
Hassan	Alur	10.9	3.0	10.3

All taluks –bottom 15

District	Taluk	Rural	Urban	Total
Yadgir	Shorapur	51.6	32.9	49.3
Raichur	Manvi	51.3	18.2	47.0
Kalaburagi	Afzalpur	48.4	24.9	45.3
kalaburagi	Jevargi	47.9	15.1	44.9
Vijayapura	Indi	43.5	48.6	44.0
Raichur	Devadurga	43.7	26.0	41.9
Yadgir	Shahpur	46.5	21.7	41.6
Vijayapura	Sindgi	42.7	26.8	41.2
Raichur	Sindhnur	45.2	18.5	39.9
Kolar	Srinivaspur	43.5	10.6	39.3
Vijayapura	Muddebihal	44.0	20.8	38.5
Bidar	Aurad	39.9	25.3	38.3
Bidar	Bhalki	40.4	19.8	37.5
Koppal	Kushtagi	37.6	26.4	36.5
Raichur	Lingsugur	42.8	15.4	36.3

* Away from the premises: drinking water source was located beyond 100 metres from the premises in urban areas and beyond 500 metres in rural areas.
Within the premises: source was located within the premises where the household lived.
Near the premises: source was located within a range of 100 metres from the premises in urban areas and within a distance of 500 metres in the case of rural areas.

Annexure 13: HHs with Drinking Water Source Away (% of HHs) Rural / Urban, SC / ST - 2011

District	Rural		Urban		Total		Rural	Urban	Total
	SC	ST	SC	ST	SC	ST	Both SC and ST		
Yadgir	46.88	54.02	27.91	38.10	44.63	52.15	49.27	31.29	47.15
Raichur	48.93	47.28	22.74	29.99	43.07	45.54	48.08	24.88	44.26
Bidar	43.96	40.77	27.67	17.73	41.14	38.45	42.69	25.06	40.12
Vijayapura	42.36	40.86	27.57	22.96	39.60	36.22	42.23	27.00	39.29
Kalaburagi	44.13	48.09	21.22	13.81	38.27	35.15	44.38	20.43	38.03
Kolar	37.60	39.32	37.44	33.64	37.55	38.44	37.93	37.06	37.70
Koppal	35.40	31.38	24.52	21.63	33.80	30.59	33.68	23.73	32.49
Belgaum	31.86	41.21	14.72	19.95	28.06	37.64	35.32	16.26	31.46
Ballari	34.00	37.62	18.69	19.13	29.25	32.37	35.78	18.89	30.76
Gadag	33.65	33.93	20.41	16.59	29.92	30.58	33.74	19.58	30.11
Bagalkote	31.67	31.13	24.37	28.80	29.72	30.69	31.52	25.20	29.96
Chikkaballapura	31.26	28.13	22.46	22.05	30.22	27.45	30.17	22.32	29.26
Chitradurga	28.40	28.71	16.57	18.59	26.69	27.38	28.53	17.40	26.99
Davanagere	28.38	28.00	10.28	10.92	24.94	24.76	28.23	10.53	24.87
Haveri	26.26	25.20	20.16	13.37	25.41	23.85	25.81	17.66	24.76
Tumakuru	23.45	23.06	19.70	22.62	22.91	22.99	23.33	20.62	22.93
Udupi	24.82	22.64	19.38	13.35	23.48	20.74	23.85	17.05	22.29
Bengaluru Rural	20.93	20.05	23.54	22.96	21.31	20.62	20.75	23.39	21.16
Hassan	23.36	20.13	7.89	4.62	21.40	16.98	23.02	7.33	20.90
Uttara Kannada	22.31	23.38	15.53	14.27	20.21	21.59	22.60	15.32	20.54
Chamarajanagara	20.46	23.95	12.46	13.14	19.37	21.85	21.59	12.75	20.21
Kodagu	16.13	22.64	9.14	4.98	15.33	22.07	19.30	8.32	18.46
Mandya	19.86	24.33	7.06	4.35	17.82	19.96	20.30	6.68	18.05
Chikkamagaluru	18.71	20.10	11.85	11.10	17.81	19.00	18.96	11.72	18.03
Dharwad	29.47	27.56	7.69	11.26	16.20	20.32	28.64	8.70	17.64
Ramanagara	18.78	25.62	7.42	10.91	16.74	22.93	19.58	7.83	17.47
Shivamogga	17.76	19.48	9.96	6.04	15.70	16.05	18.12	9.17	15.78
Mysuru	18.53	20.19	4.59	5.00	14.58	16.53	19.23	4.74	15.37
Dakshina Kannada	18.23	13.70	7.99	6.18	15.20	12.09	16.44	7.45	14.05
Bengaluru Urban	15.54	15.49	10.47	8.94	11.26	9.61	15.53	10.11	10.89
All districts	**29.51**	**31.38**	**14.83**	**13.92**	**25.19**	**27.17**	**30.11**	**14.59**	**25.79**

Annexure 14: HHs with Drinking Water Source within premises (%) Rural / Urban – 2001 & 2011

District	Rural		Urban		Total	
	2001	2011	2001	2011	2001	2011
Yadgir	9.2	13.3	37.7	46.9	13.8	19.8
Koppal	10.9	19.3	27.0	38.6	13.6	22.7
Chikkaballapura	12.0	16.6	41.8	46.9	17.7	23.2
Raichur	8.7	15.6	33.0	47.7	14.9	24.1
Chitradurga	12.9	17.6	36.9	51.6	17.3	24.5
Tumakuru	12.8	16.1	46.6	59.7	19.4	25.7
Vijayapura	10.1	14.8	47.6	60.6	18.2	25.8
Kolar	12.7	17.6	52.0	44.1	24.3	26.0
Bengaluru Rural	13.9	21.4	41.6	39.5	20.3	26.4
Haveri	13.5	20.9	37.6	54.0	18.4	28.2
Bagalkote	14.8	20.7	36.4	45.6	21.0	28.8
Bidar	17.7	20.1	54.9	58.3	25.4	29.4
Ramanagara	11.6	17.3	41.9	70.3	17.5	29.5
Gadag	14.3	21.4	34.3	44.2	21.2	29.6
Davanagere	12.3	16.8	37.0	57.2	19.9	30.0
Kalaburagi	10.5	16.7	49.0	61.2	22.1	31.4
Chamarajanagara	18.6	26.5	44.2	57.0	22.4	31.6
Ballari	12.2	18.6	36.3	58.0	20.7	34.2
Hassan	16.6	25.3	55.3	69.2	23.5	34.5
Belagavi	16.4	24.2	55.9	66.1	25.9	35.3
Mandya	21.3	30.1	57.5	74.7	27.1	37.7
Chikkamagaluru	21.4	33.3	46.7	64.1	26.3	39.7
Shivamogga	23.4	34.2	53.6	64.1	34.1	45.0
Kodagu	30.9	50.8	63.4	79.7	35.3	55.0
Dharwad	16.8	29.4	60.2	77.8	40.8	57.3
Uttara Kannada	41.9	52.0	66.7	73.6	49.1	58.3
Mysuru	24.9	40.6	71.0	86.0	42.2	59.5
Udupi	56.1	71.6	73.1	84.2	59.3	75.3
Bengaluru Urban	19.8	41.3	66.4	80.2	61.0	76.8
Dakshina Kannada	54.3	72.2	70.1	86.9	60.5	79.3
All districts	**18.5**	**26.6**	**56.6**	**70.9**	**31.8**	**44.5**

Annexure 15: HHs dependent on surface water sources based on location (All)

District	Location: Away		Location: Near		Total	
	No.	%	No.	%	No.	%
Raichur	29383	8.18	10654	2.96	40037	11.14
Gadag	14202	6.59	7739	3.59	21941	10.18
Dharwad	16069	4.32	8966	2.41	25035	6.73
Kodagu	3347	2.42	4234	3.06	7581	5.48
Chikkamagaluru	4018	1.48	9033	3.32	13051	4.80
Uttara Kannada	3575	1.12	8552	2.67	12127	3.79
Belagavi	11629	1.21	20478	2.12	32107	3.33
Bagalkote	3649	1.03	7694	2.17	11343	3.19
Dakshina Kannada	3776	0.89	9032	2.12	12808	3.01
Yadgir	4284	2.14	1401	0.70	5685	2.84
Ballari	7777	1.61	4842	1.01	12619	2.62
Koppal	4387	1.69	2404	0.93	6791	2.62
Shivamogga	4931	1.23	4540	1.13	9471	2.36
Vijayapura	3442	0.85	5202	1.28	8644	2.13
Kalaburagi	5229	1.12	3559	0.76	8788	1.89
Udupi	1749	0.71	1808	0.73	3557	1.44
Kolar	2125	0.64	2321	0.70	4446	1.34
Davanagere	1138	0.28	4129	1.02	5267	1.30
Bidar	1324	0.42	2057	0.66	3381	1.08
Haveri	1697	0.52	1583	0.49	3280	1.01
Mysuru	1962	0.28	3202	0.47	5164	0.75
Chamarajanagara	741	0.30	804	0.33	1545	0.63
Hassan	1025	0.24	1629	0.38	2654	0.62
Chitradurga	422	0.12	1672	0.47	2094	0.59
Bengaluru Urban	2117	0.09	9354	0.39	11471	0.48
Chikkaballapura	677	0.24	290	0.10	967	0.34
Mandya	271	0.06	887	0.21	1158	0.27
Tumakuru	531	0.08	693	0.11	1224	0.19
Ramanagara	88	0.03	197	0.08	285	0.11
Bengaluru Rural	49	0.02	113	0.05	162	0.07
All Districts	**135614**	**1.03**	**139069**	**1.06**	**274683**	**2.08**

Annexure 16: HHs dependent on surface water sources based on location (SC)

District	Total No. of households	Location: Away		Location: Near		Total	
		No.	%	No.	%	No.	%
Raichur	71708	5803	8.09	1698	2.37	7501	10.46
Gadag	32512	1634	5.03	564	1.73	2198	6.76
Dharwad	34603	1600	4.62	671	1.94	2271	6.56
Dakshina Kannada	30451	603	1.98	933	3.06	1536	5.04
Chikkamagaluru	56686	810	1.43	1984	3.50	2794	4.93
Kodagu	17806	383	2.15	423	2.38	806	4.53
Belagavi	116164	1552	1.34	2091	1.80	3643	3.14
Koppal	43621	858	1.97	494	1.13	1352	3.10
Yadgir	44983	968	2.15	247	0.55	1215	2.70
Kolar	94872	880	0.93	1400	1.48	2280	2.40
Bagalkote	58336	509	0.87	888	1.52	1397	2.39
Ballari	91406	1359	1.49	825	0.90	2184	2.39
Uttara Kannada	26199	159	0.61	370	1.41	529	2.02
Vijayapura	79197	641	0.81	750	0.95	1391	1.76
Udupi	14912	172	1.15	88	0.59	260	1.74
Kalaburagi	114499	956	0.83	791	0.69	1747	1.53
Shivamogga	68209	343	0.50	486	0.71	829	1.22
Davanagere	78215	273	0.35	603	0.77	876	1.12
Bidar	72489	375	0.52	394	0.54	769	1.06
Haveri	43006	171	0.40	181	0.42	352	0.82
Hassan	77100	231	0.30	383	0.50	614	0.80
Mysuru	115655	314	0.27	396	0.34	710	0.61
Chamarajanagara	57903	112	0.19	218	0.38	330	0.57
Bengaluru Urban	281233	342	0.12	903	0.32	1245	0.44
Mandya	59889	74	0.12	120	0.20	194	0.32
Chitradurga	80236	98	0.12	148	0.18	246	0.31
Chikkaballapura	68163	113	0.17	68	0.10	181	0.27
Tumakuru	117077	164	0.14	145	0.12	309	0.26
Bengaluru Rural	45807	22	0.05	16	0.03	38	0.08
Ramanagara	47367	24	0.05	11	0.02	35	0.07
All Districts	**2140304**	**21543**	**1.01**	**18289**	**0.85**	**39832**	**1.86**

Annexure 17: HHs dependent on surface water sources based on location (ST)

District	Total No. of households	Location: Away		Location: Near		Total	
		No.	%	No.	%	No.	%
Chikkamagaluru	12537	680	5.42	1231	9.82	1911	15.24
Raichur	66508	6147	9.24	1733	2.61	7880	11.85
Gadag	13180	963	7.31	520	3.95	1483	11.25
Kodagu	15433	778	5.04	677	4.39	1455	9.43
Dakshina Kannada	17805	541	3.04	1104	6.20	1645	9.24
Uttara Kannada	8251	245	2.97	510	6.18	755	9.15
Dharwad	18598	929	5.00	592	3.18	1521	8.18
Udupi	11354	336	2.96	437	3.85	773	6.81
Ballari	85739	2131	2.49	942	1.10	3073	3.58
Kalaburagi	9264	254	2.74	66	0.71	320	3.45
Yadgir	22578	630	2.79	128	0.57	758	3.36
Shivamogga	17945	269	1.50	234	1.30	503	2.80
Belagavi	63920	948	1.48	609	0.95	1557	2.44
Mysuru	78314	952	1.22	491	0.63	1443	1.84
Koppal	30221	330	1.09	195	0.65	525	1.74
Kolar	19241	229	1.19	49	0.25	278	1.44
Bagalkote	19048	116	0.61	146	0.77	262	1.38
Chamarajanagara	29708	184	0.62	150	0.50	334	1.12
Davanagere	48708	175	0.36	318	0.65	493	1.01
Vijayapura	7912	37	0.47	41	0.52	78	0.99
Bidar	44435	216	0.49	168	0.38	384	0.86
Haveri	30736	103	0.34	119	0.39	222	0.72
Hassan	9816	25	0.25	39	0.40	64	0.65
Bengaluru Urban	80980	159	0.20	326	0.40	485	0.60
Mandya	7145	18	0.25	24	0.34	42	0.59
Chikkaballapura	36290	85	0.23	36	0.10	121	0.33
Chitradurga	61003	61	0.10	124	0.20	185	0.30
Tumakuru	51395	38	0.07	67	0.13	105	0.20
Ramanagara	6271	6	0.10	2	0.03	8	0.13
Bengaluru Rural	12660	2	0.02	5	0.04	7	0.06
All Districts	**936995**	**17587**	**1.88**	**11083**	**1.18**	**28670**	**3.06**

Annexure 18: Coverage of Habitations - 100% (All Rural habitations) 2013 to 2016 – 55 and 40 lpcd

District	55 lpcd				40 lpcd			
	2013	2014	2015	2016	2013	2014	2015	2016
Dharwad	0.00	0.26	2.84	2.84	55.93	50.00	69.33	70.62
Raichur	28.29	32.88	43.09	39.33	51.44	62.26	67.58	63.95
Yadgir	9.26	2.82	15.44	24.83	66.71	60.40	55.17	62.82
Vijayapura	4.29	1.14	23.55	26.12	65.01	35.27	63.30	62.44
Ballari	3.26	3.36	16.11	19.05	48.52	54.15	58.20	58.53
Belagavi	3.63	12.01	8.16	8.93	52.68	48.49	80.73	56.00
Mysuru	5.89	10.88	7.67	11.55	26.61	52.82	55.58	55.53
Uttara Kannada	31.15	22.15	24.94	33.56	54.61	41.23	46.78	53.19
Haveri	0.00	0.00	19.27	13.19	58.51	32.63	62.73	51.68
Gadag	4.09	4.39	8.77	9.17	67.54	55.26	54.97	50.83
Chamarajanagara	9.52	18.43	1.81	2.12	97.71	87.71	68.72	49.24
Davangere	5.38	5.03	13.91	14.35	60.76	56.44	58.10	46.92
Bagalkote	12.29	18.43	17.43	23.05	51.83	59.76	48.91	44.91
Chitradurga	2.27	2.64	4.48	5.32	41.14	36.05	37.52	44.80
Koppal	3.12	21.17	12.33	28.28	38.53	67.98	56.64	41.95
Tumakuru	3.26	6.06	4.52	11.17	33.34	36.48	24.18	40.00
Chikkamagaluru	3.99	10.98	16.97	16.83	29.35	36.02	42.01	39.26
Mandya	3.68	12.54	13.54	12.29	22.21	60.42	57.85	36.56
Kodagu	54.70	34.02	16.54	9.57	68.23	72.18	55.26	35.11
Shivamogga	6.98	8.19	13.15	11.72	24.37	27.83	32.08	34.24
Udupi	9.72	7.35	13.04	11.73	27.65	28.28	39.39	33.91
Bidar	4.09	19.41	3.18	13.45	36.32	59.14	25.20	31.64
Kolar	2.76	1.53	0.41	0.66	39.49	31.38	51.98	30.07
Chikkaballapura	1.67	2.50	2.97	1.50	40.08	45.29	49.40	27.73
Dakshina Kannada	11.56	8.01	5.19	5.25	54.16	32.69	29.40	25.17
Hassan	3.78	11.78	10.81	7.32	24.98	43.82	28.86	20.82
Bengaluru Urban	5.01	2.31	1.83	1.54	28.83	21.41	27.19	16.60
Kalaburagi	3.78	5.91	3.80	2.80	47.99	46.89	53.22	16.23
Ramanagara	1.03	1.31	1.73	1.68	55.22	24.89	18.81	15.82
Bengaluru Rural	2.99	0.47	1.73	2.04	42.17	18.96	21.01	14.05
All Districts	9.34	10.27	11.86	13.61	41.68	40.97	42.51	38.81

Annexure 19: Coverage of Habitations - 100% (All, SC and ST) 2013 to 2016 – 40 lpcd

District	ALL				SC				ST			
	2013	2014	2015	2016	2013	2014	2015	2016	2013	2014	2015	2016
Dharwad	55.93	50.00	69.33	70.62	85.71	50.00	50.00	50.00	50.00	0.00	0.00	0.00
Raichur	51.44	62.26	67.58	63.95	60.89	69.71	71.49	59.92	56.53	66.95	71.43	69.47
Yadgir	66.71	60.40	55.17	62.82	64.57	63.46	46.79	54.49	44.05	62.14	70.87	77.67
Vijayapura	65.01	35.27	63.30	62.44	60.16	42.14	58.49	60.38	100.00	25.00	75.00	75.00
Ballari	48.52	54.15	58.20	58.53	48.98	60.16	52.34	55.12	53.26	55.84	67.01	63.27
Belagavi	52.68	48.49	80.73	56.00	43.86	27.27	68.18	31.82	37.98	43.70	74.79	45.90
Mysuru	26.61	52.82	55.58	55.53	23.84	48.56	59.74	59.42	21.93	53.70	57.87	53.24
Uttara Kannada	54.61	41.23	46.78	53.19	47.39	50.00	51.35	55.84	22.54	23.33	28.33	26.67
Haveri	58.51	32.63	62.73	51.68	39.39	24.64	53.62	48.10	54.84	33.33	51.52	39.39
Gadag	67.54	55.26	54.97	50.83	64.44	22.73	22.73	29.63	50.00	0.00	0.00	0.00
Chamarajanagara	97.71	87.71	68.72	49.24	98.16	89.66	80.56	63.27	96.74	86.96	80.85	52.94
Davangere	60.76	56.44	58.10	46.92	60.92	55.20	62.80	42.80	57.80	67.59	61.11	50.00
Bagalkote	51.83	59.76	48.91	44.91	55.05	53.85	53.85	61.54	56.25	85.00	75.00	85.00
Chitradurga	41.14	36.05	37.52	44.80	36.28	32.30	40.63	45.53	40.24	40.58	35.51	43.53
Koppal	38.53	67.98	56.64	41.95	38.96	61.64	61.64	50.68	36.25	64.10	56.41	42.31
Tumakuru	33.34	36.48	24.18	40.00	29.28	37.54	23.28	41.55	38.33	41.44	22.10	46.99
Chikkamagaluru	29.35	36.02	42.01	39.26	30.12	34.93	36.66	35.18	36.45	24.68	32.47	29.49
Mandya	22.21	60.42	57.85	36.56	26.28	64.29	63.39	52.68	36.36	42.86	42.86	42.86
Kodagu	68.23	72.18	55.26	35.11	69.70	70.59	58.82	31.82	81.82	86.36	90.91	50.00
Shivamogga	24.37	27.83	32.08	34.24	18.54	29.63	48.63	45.88	21.82	23.08	47.62	59.52
Udupi	27.65	28.28	39.39	33.91	27.95	30.00	41.43	40.00	32.17	30.61	38.67	35.33
Bidar	36.32	59.14	25.20	31.64	33.73	70.13	28.14	36.91	50.75	62.00	18.00	30.00
Kolar	39.49	31.38	51.98	30.07	41.01	29.71	48.72	27.18	40.37	34.38	40.63	21.88
Chikkaballapura	40.08	45.29	49.40	27.73	37.33	50.48	51.91	27.27	34.84	39.76	46.99	20.00
Dakshina Kannada	54.16	32.69	29.40	25.17	55.05	66.67	0.00	0.00	62.00	50.00	0.00	0.00
Hassan	24.98	43.82	28.86	20.82	27.52	44.89	36.00	26.57	40.00	50.00	29.73	29.73
Benagaluru Urban	28.83	21.41	27.19	16.60	28.43	18.52	23.81	15.03	22.58	22.22	33.33	36.36
Kalaburagi	47.99	46.89	53.22	16.23	48.41	43.52	52.10	17.93	61.54	33.33	66.67	0.00
Ramanagara	55.22	24.89	18.81	15.82	50.74	29.58	17.25	15.14	38.00	27.27	9.09	18.18
Bengaluru Rural	42.17	18.96	21.01	14.05	35.48	17.65	23.14	16.86	46.15	22.73	20.45	15.91
All Districts	**41.68**	**40.97**	**42.51**	**38.81**	**40.06**	**42.93**	**43.65**	**36.88**	**43.56**	**49.17**	**51.19**	**47.31**

Annexure 19: Coverage of Population - 100% (All, SC and ST) 2013 to 2016 ≥ 40 lpcd

District	All				SC				ST			
	2013	2014	2015	2016	2013	2014	2015	2016	2013	2014	2015	2016
Dharwad	66.62	58.41	79.00	81.13	67.11	55.94	77.64	79.23	65.92	57.88	75.25	76.85
Vijayapura	73.48	33.66	68.67	71.49	69.65	36.00	68.16	70.20	68.93	38.87	65.23	69.25
Chamarajanagara	99.10	94.14	82.87	66.50	99.42	94.39	85.76	69.97	98.80	92.56	82.61	67.23
Belagavi	54.19	44.92	88.14	65.74	60.06	41.56	89.24	71.74	43.71	46.95	84.92	58.09
Bagalkote	54.84	66.01	61.80	62.90	55.27	64.03	58.04	62.17	52.64	72.35	73.35	71.87
Yadgir	76.77	55.64	51.53	61.99	75.00	56.52	48.67	58.11	66.95	59.96	56.75	67.74
Haveri	65.32	41.23	71.01	60.56	59.48	40.78	69.26	58.58	64.98	38.11	68.41	59.20
Ballari	51.18	61.54	61.22	60.52	53.08	61.41	59.33	58.96	50.53	63.58	65.63	64.00
Raichur	41.75	62.93	62.43	60.37	42.91	65.08	59.70	55.55	40.87	65.18	61.95	59.49
Mysuru	27.98	56.35	59.69	59.75	28.03	56.25	60.27	60.00	22.67	57.60	62.56	61.90
Gadag	71.07	60.81	64.79	57.93	69.24	55.81	57.16	55.09	73.53	59.58	59.79	55.10
Chitradurga	56.31	44.26	46.87	56.90	54.38	41.16	48.36	58.40	58.02	48.37	45.11	59.34
Koppal	35.01	76.15	67.53	56.57	35.28	73.61	69.22	57.69	37.11	74.02	63.43	51.41
Davangere	62.92	58.11	63.46	56.40	62.07	55.60	63.31	52.24	61.83	61.36	63.06	54.39
Chikkamagaluru	28.87	39.08	50.12	56.33	29.58	37.63	47.69	54.87	34.68	42.13	48.03	50.32
Tumakuru	39.46	42.12	21.64	52.77	37.81	43.23	19.80	52.53	45.11	46.64	17.89	55.64
Uttar Kannada	36.46	34.84	43.71	51.92	33.57	36.08	42.01	49.48	26.99	31.61	41.38	45.11
Kodagu	63.77	69.05	53.15	44.13	60.48	67.20	52.01	41.62	70.96	80.33	66.06	50.82
Shivamogga	18.67	28.29	45.02	43.95	19.28	29.47	50.27	47.56	18.79	29.94	51.46	48.81
Kolar	37.45	27.82	62.13	39.46	38.43	26.67	60.10	37.20	35.83	29.20	57.17	35.84
Mandya	21.68	67.40	62.72	39.00	20.77	66.46	64.15	42.33	32.78	73.06	62.56	46.09
Chikkaballapura	45.53	47.50	54.75	38.28	44.52	48.86	54.28	37.28	45.88	46.24	54.08	36.21
Udupi	25.13	26.02	42.60	33.71	27.68	29.45	46.99	38.89	27.08	29.39	42.74	36.00
Bidar	36.89	56.38	23.91	28.19	38.60	57.02	22.62	27.21	39.29	57.45	24.56	30.15
Ramanagara	71.39	19.80	26.96	24.63	68.95	19.27	25.97	24.69	58.00	21.51	26.87	22.89
Dakshina Kannada	47.48	27.90	25.84	23.09	49.79	32.44	32.18	27.44	48.30	33.77	33.41	29.14
Hassan	17.66	43.27	25.03	20.37	19.20	44.99	27.11	21.77	24.02	42.90	22.55	18.62
Bengaluru Urban	26.14	18.11	20.16	12.67	26.91	17.99	19.43	11.76	30.18	19.04	20.33	13.98
Kalaburagi	47.58	55.35	62.98	12.21	46.46	54.12	62.55	12.92	41.41	50.60	61.55	10.59
Bengaluru Rural	49.69	18.35	15.42	10.76	48.26	19.29	16.48	11.63	49.42	22.53	11.09	7.31
All Districts	46.84	48.60	54.24	48.82	46.96	49.36	53.02	47.41	48.20	56.00	56.47	53.82

Annexure 20: Water supply in ULBs (excluding Bangalore Urban) – 2014-15*

District	Continuity of water supply (mins)				Coverage of water Supply connection (%)				Per capita supply of water (ltrs)				Extent of non revenue water (%)				Cost recovery in water supply services (%)				Efficiency in collection of water supply related charges (%)			
	CC	CMC	TMC	TP	CC	CMC	TMC	TP	CC	CMC	TMC	TP	CC	CMC	TMC	TP	CC	CMC	TMC	TP	CC	CMC	TMC	TP
Bagalkote		102	312	168		71	60	51		103	90	86		35	27	34		37	65	25		70	56	56
Bengaluru Rural		45	90			70	58			64	61			55	40			50	11			55	35	
Belagavi	n.a.	83	163	66	60	89	58	46	110	113	85	76	28	30	31	46	50	32	61	44	26	88	74	65
Ballari	180	83	250	115	70	73	70	54	125	113	84	90	25	25	23	19	15	13	29	22	70	80	70	63
Bidar			30	30			68	75			80	85			30	20			58	63			70	73
Chamarajanagara		280		180		68		63		102		100		32		18		30		45		60		45
Chikkaballapura		60	100			80	77			80	87			30	37			30	47			35	55	
Chikkamagaluru		90	120	65		85	57	91		118	87	113		28	32	22		23	22	35		85	73	75
Chitradurga		315	80	120		84	53	78		80	71	108		28	32	25		25	13	15		53	29	50
DakshinaKannada	1080	600	540	456	77	99	93	72	135	120	128	103	34	20	35	29	100	100	83	72	92	90	88	84
Davanagere	60	90	90	90	60	75	23	60	80	100	63	100	45	50	49	37	20	73	33	43	50	80	53	82
Dharwad	120		120	100	78		69	72	102		73	83	35		38	36	60		43	42	69		65	70
Gadag		60	138	160		70	66	91		80	82	93		25	30	39		30	39	40		60	80	78
Hassan		645	810	165		92	80	95		115	128	90		20	28	39		58	65	40		77	90	85
Haveri		90	78	90		74	74	90		88	83	110		21	19	25		13	27	23		68	84	80
Kalaburagi	120	120	84		70	16	49		105	100	92		25	60	25		10	40	24		75	60	82	
Kodagu		180		120		85		87		135		108		15		27		45		37		70		85
Kolar		60	96			38	70			61	59			50	27			20	39			48	65	
Koppal		105	105	123		50	58	49		90	75	63		30	40	34		23	20	14		70	70	54
Mandya		60	120	120		77	89	70		105	127	135		40	19	20		35	43	43		70	66	14
Mysuru	300	120	105	120	100	85	81	85	135	100	100	80	30	30	28	23	90	30	36	35	82	75	73	85
Raichur		90	83			70	70			108	91			34	34			45	62			78	83	
Ramanagara		80	150			82	86			97	108			21	25			35	31			68	52	
Shivamogga	60	90	120	156	92	70	85	82	155	108	135	108	35	38	25	27	4	34	20	64	85	79	90	89
Tumakuru	90	95	60	75	75	68	66	78	90	87	83	93	30	28	12	27	35	38	59	62	68	70	72	77
Udupi		960	420	180		78	47	15		105	103	67		23	21	40		94	45	30		99	77	65
Uttara Kannada		100	90	98		75	45	44		131	100	105		20	10	17		25	27	47		66	50	59
Vijayapura	60		42	51	70		48	43	95		62	61	28		40	37	47		18	21	60		69	49
Yadgir		90	90			45	45			87	83			37	29			25	4			40	39	
Total	230	169	151	125	75	71	64	62	113	100	87	89	32	31	29	32	43	35	40	40	68	68	68	67

* Average values calculated as simple average across ULBs

Annexure 20 : Water Supply to ULBs – LPCD – 2015-16

Top 10 ULBs		Bottom 15 ULBs	
ULB	LPCD	ULB	LPCD
Shivamogga	220	Pavagada	17
Mysuru	190	Bangarpet	30
Shikaripura	175	Siddlaghatta	35
Udupi	162	Kerur	35
Somwarpet	145	Kadur	40
Mangaluru	135	Bankapur	40
Belagavi	135	Chikkanayakanahalli	43
Vijayapura	135	Chintamani	45
Bhadravathi	135	Gouribidanur	45
Kollegala	135	Shirahatti	45
Dandeli	135	Karwar	46
Indi	135	Ramadurga	47
Sindhagi	135	Bagalkote	49
Muddebihal	135	Vijayapura	49
Talikote	135	Mulbagal	50

Annexure 21 : Source and Location of Drinking water in slums, based on urban status - 2011

Urban Status	Away							Near the premises							Total of all slum HHs (away, near, within)						
	Total No. of HHs	Untreated tapwater		Groundwater sources		Surfacewater sources		Total No. of HHs	Untreated tapwater		Groundwater sources		Surfacewater sources		Total No. of HHs	Untreated tapwater		Groundwater sources		Surfacewater sources	
		No.	%	No.	%	No.	%		No.	%	No.	%	No.	%		No.	%	No.	%	No.	%
TMC	32402	7646	23.60	9747	30.08	272	0.84	74132	23630	31.88	9821	13.25	504	0.68	167493	43549	26.00	68765	41.06	776	0.46
TP	9346	2133	22.82	2671	28.58	100	1.07	24247	6367	26.26	2870	11.84	452	1.86	53539	11833	22.10	19059	35.60	552	1.03
CMC+OG	10225	1774	17.35	2976	29.11	174	1.70	19914	4799	24.10	2798	14.05	725	3.64	45957	8043	17.50	18275	39.77	899	1.96
TMC+OG	1153	84	7.29	278	24.11	55	4.77	4226	664	15.71	655	15.50	218	5.16	9482	1216	12.82	2761	29.12	273	2.88
CMC	24309	3449	14.19	4934	20.30	633	2.60	76823	12342	16.07	6962	9.06	1081	1.41	173797	21818	12.55	40322	23.20	1714	0.99
M.Corp+OG	20992	4031	19.20	5973	28.45	269	1.28	62682	13825	22.06	13281	21.19	617	0.98	210391	25829	12.28	53410	25.39	886	0.42
M.Corp	7751	862	11.12	1064	13.73	171	2.21	21848	3142	14.38	2626	12.02	837	3.83	67449	5525	8.19	11040	16.37	1008	1.49
TP+OG	42	1	2.38	33	78.57	0	0.00	105	3	2.86	66	62.86	0	0.00	169	6	3.55	120	71.01	0	0.00
Total	**106220**	**19980**	**18.81**	**27676**	**26.06**	**1674**	**1.58**	**283977**	**64772**	**22.81**	**39079**	**13.76**	**4434**	**1.56**	**728277**	**117819**	**16.18**	**213752**	**29.35**	**6108**	**0.84**

Annexure 22 : % of HHs with latrine 2011 districtwise

District	Rural	Urban	Total
Yadgir	4.18	38.60	11.23
Vijayapura	4.98	42.90	14.78
Koppal	11.36	45.96	16.98
Kalaburagi	4.50	46.11	17.66
Gadag	8.82	38.43	18.78
Raichur	9.62	43.65	19.02
Bagalkote	7.21	41.24	19.68
Bidar	8.83	59.27	21.33
Chamarajanagara	15.08	60.90	22.26
Ballari	12.06	55.53	27.03
Balagavi	18.85	57.82	27.12
Tumakuru	18.15	76.29	28.75
Chitradurga	19.30	71.11	29.01
Chikkaballapura	23.21	81.20	35.79
Mandya	27.88	83.04	36.33
Haveri	27.90	68.96	37.05
Dharwad	22.58	63.27	38.61
Hassan	29.36	85.17	39.83
Davanagere	29.06	73.23	41.01
Kolar	25.28	83.67	41.18
Ramanagara	28.98	87.02	42.36
Mysuru	27.41	83.23	42.74
Uttara Kannada	50.48	78.86	58.41
Chikkamagaluru	62.56	91.35	68.03
Shivamogga	61.93	89.33	68.68
Bengaluru Rural	76.10	91.64	80.36
Kodagu	79.20	96.80	81.83
Bengaluru Urban	75.64	94.72	84.87
Udupi	84.05	95.63	86.68
Dakshina Kannada	87.40	96.60	90.18
All Districts	**28.40**	**84.90**	**51.20**

Annexure 23 : % of HHs with latrine 2011 talukwise

Bottom 15 taluks

District	Taluk	Rural	Urban	Total
Kalaburagi	Jevargi	2.70	27.40	4.90
Kalaburagi	Chincholi	4.30	33.00	6.50
Vijayapura	Indi	3.90	33.50	6.60
Raichur	Devadurga	5.00	20.60	6.60
Kalaburagi	Afzalpur	3.70	27.10	6.70
Vijayapura	Sindgi	4.00	43.50	7.80
Kalaburagi	Aland	3.40	41.20	7.80
Vijayapura	Basavana Bagevadi	7.20	16.80	8.10
Koppal	Yelbarga	6.60	33.10	8.10
Yadgir	Shorapur	6.50	28.40	9.10
Bidar	Aurad	6.70	32.20	9.50
Koppal	Kushtagi	5.70	47.20	9.70
Vijayapura	Muddebihal	3.80	30.20	10.00
Yadgir	Shahpur	3.50	39.20	10.60
Belagavi	Ramdurg	5.80	39.90	10.70

Top 15 taluks

District	Taluk	Rural	Urban	Total
Dakshina Kannada	Mangaluru	90.60	97.80	96.30
Dakshina Kannada	Bantval	91.10	96.30	92.60
Udupi	Udupi	87.50	96.20	91.60
Dakshina Kannada	Beltangadi	90.30	96.30	90.70
Dakshina Kannada	Puttur	85.40	97.60	88.00
Udupi	Karkal	87.00	94.00	88.00
Chikkamagaluru	Koppal	85.80	99.40	86.60
Kodagu	Madikeri	82.60	98.70	86.40
Mysuru	Mysuru	33.10	97.70	84.60
Bengaluru Rural	Nelamangala	80.90	96.50	84.50
Chikkamagaluru	Sringeri	81.50	97.60	83.40
Bengaluru Rural	Devanahalli	81.80	85.50	82.90
Bengaluru Urban	Bengaluru North	79.10	93.70	81.70
Shivamogga	Shivamogga	64.70	91.10	81.70
Bengaluru	Bengaluru East	81.30		81.30

Annexure 24 : Households without latrines Rural / Urban All / SC / ST No. and % of households

District	Rural						Urban						Total					
	All		SC		ST		All		SC		ST		All		SC		ST	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yadgir	154727	95.7	38834	97.9	19507	97.9	23174	59.8	4045	76.0	2126	80.3	177901	88.8	42879	95.3	21633	95.8
Vijayapura	292468	95.0	62109	96.4	5378	91.8	39308	40.5	8682	58.7	946	46.1	331776	81.9	70791	89.4	6324	79.9
Koppal	187652	88.0	35155	94.5	26414	95.0	23813	51.6	4854	75.6	1727	71.2	211465	81.5	40009	91.7	28141	93.1
Bagalkote	221559	92.8	40807	95.4	14749	95.4	67005	57.5	11720	75.3	2685	74.8	288564	81.2	52527	90.0	17434	91.5
Raichur	237877	90.0	52608	94.5	57184	95.6	47134	49.6	11362	70.8	5040	75.1	285011	79.3	63970	89.2	62224	93.6
Gadag	125067	90.8	22135	94.8	10072	94.7	44867	57.7	6680	73.0	1636	64.2	169934	78.8	28815	88.6	11708	88.8
Bidar	216397	91.2	57401	95.8	38176	95.5	24319	31.9	7148	56.8	2046	45.8	240716	76.8	64549	89.0	40222	90.5
Chamarajanagara	172469	84.6	43572	87.2	22342	93.4	14434	35.7	4154	52.2	3588	62.1	186903	76.5	47726	82.4	25930	87.3
Kalaburagi	297620	95.5	82691	97.1	5538	96.0	48833	31.8	16579	56.6	1533	43.8	346453	74.5	99270	86.7	7071	76.3
Chitradurga	228180	80.9	60645	88.3	48015	90.6	18821	26.1	5164	44.7	3569	44.5	247001	69.7	65809	82.0	51584	84.6
Ballari	256087	87.9	59856	95.0	57944	94.3	69507	36.5	16602	58.5	13346	54.9	325594	67.6	76458	83.6	71290	83.1
Tumakuru	405017	81.7	92368	92.4	38682	89.0	24556	17.5	6773	39.6	2540	32.0	429573	67.5	99141	84.7	41222	80.2
Belagavi	577060	81.5	82277	91.0	49714	93.5	70540	27.6	13208	51.4	5605	52.1	647600	67.2	95485	82.2	55319	86.5
Chikkaballapura	169632	77.0	54536	90.8	28318	87.8	9722	15.7	3693	45.7	1235	30.6	179354	63.5	58229	85.4	29553	81.4
Haveri	182407	71.8	32416	87.5	23013	84.4	21629	30.3	3056	51.1	1581	45.4	204036	62.7	35472	82.5	24594	80.0
Mandya	256523	72.5	41417	82.3	4322	77.4	10237	14.1	2962	31.1	357	22.8	266760	62.5	44379	74.1	4679	65.5
Hassan	249020	73.3	59200	87.9	6419	82.1	9060	10.1	3074	31.5	343	17.2	258080	60.1	62274	80.8	6762	68.9
Ramanagara	144029	72.0	32436	83.5	4124	80.5	6874	11.5	2270	26.7	267	23.3	150903	58.1	34706	73.3	4391	70.0
Kolar	168581	74.5	59139	87.6	14057	86.4	20734	19.8	12770	46.6	832	28.0	189315	57.2	71909	75.8	14889	77.4
Davanagere	191566	70.2	55696	87.9	33258	84.2	25228	19.1	5105	34.4	3119	33.8	216794	53.6	60801	77.7	36377	74.7
Mysuru	293180	73.0	67083	80.9	48975	82.4	16739	5.8	4436	13.5	3204	17.0	309919	45.0	71519	61.8	52179	66.6
Dharwad	121511	76.9	12034	89.0	9046	87.5	38452	18.0	6551	31.1	2794	33.8	159963	43.0	18585	53.7	11840	63.7
Uttara Kannada	112051	49.4	10537	58.3	4034	60.9	18018	19.4	2939	36.1	632	38.9	130069	40.7	13476	51.4	4666	56.6
Chikkamagaluru	98778	45.9	30422	61.7	5614	51.0	6026	10.6	2324	31.5	296	19.3	104804	38.5	32746	57.8	5910	47.1
Shivamogga	98232	38.2	28130	56.0	6173	46.2	17778	12.3	5183	28.8	810	17.7	116010	28.8	33313	48.8	6983	38.9
Bengaluru Rural	39755	24.5	12727	32.5	2909	28.6	5401	8.7	2272	34.4	426	17.2	45156	20.1	14999	32.7	3335	26.3
Kodagu	25088	21.2	5175	32.8	7454	49.9	589	3.0	212	10.4	29	5.8	25677	18.6	5387	30.3	7483	48.5
Udupi	28639	16.4	3788	33.8	3058	33.9	2866	4.0	510	13.8	277	11.9	31505	12.8	4298	28.8	3335	29.4
Dakshina Kannada	26228	11.9	7368	34.3	2682	19.2	4994	2.4	1011	11.2	231	6.1	31222	7.3	8379	27.5	2913	16.4
Bengaluru Urban	52262	25.2	20136	46.1	2736	33.2	70195	3.2	28014	11.8	5378	7.4	122457	5.2	48150	17.1	8114	10.0
All Districts	**5629662**	**71.6**	**1262698**	**83.6**	**599907**	**84.4**	**800853**	**15.1**	**203353**	**32.3**	**68198**	**30.2**	**6430515**	**48.8**	**1466051**	**68.5**	**668105**	**71.3**

Annexure 25: Open defecation by HHs that do not have latrine within premises
Rural / Urban, All / SC / ST No. and % of such HHs – 2011

District	Rural						Urban						Total					
	All		SC		ST		All		SC		ST		All		SC		ST	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Mandya	252709	98.5	40847	98.6	4229	97.8	8414	82.2	2235	75.5	325	91.0	261123	97.9	43082	97.1	4554	97.3
Tumakuru	398830	98.5	91017	98.5	37985	98.2	21578	87.9	6213	91.7	2274	89.5	420408	97.9	97230	98.1	40259	97.7
Chamarajanagara	169083	98.0	42889	98.4	21945	98.2	12883	89.3	3833	92.3	3243	90.4	181966	97.4	46722	97.9	25188	97.1
Chikkamagaluru	96522	97.7	29894	98.3	5492	97.8	5412	89.8	2124	91.4	257	86.8	101934	97.3	32018	97.8	5749	97.3
Mysuru	287641	98.1	65901	98.2	48237	98.5	13101	78.3	3120	70.3	2713	84.7	300742	97.0	69021	96.5	50950	97.6
Ramanagara	140247	97.4	31576	97.3	4016	97.4	6063	88.2	2177	95.9	238	89.1	146310	97.0	33753	97.3	4254	96.9
Hassan	241970	97.2	57766	97.6	6132	95.5	7783	85.9	2878	93.6	318	92.7	249753	96.8	60644	97.4	6450	95.4
Chitradurga	221610	97.1	58896	97.1	46975	97.8	16818	89.4	4661	90.3	3346	93.8	238428	96.5	63557	96.6	50321	97.6
Chikkaballapura	163675	96.5	52865	96.9	27358	96.6	8627	88.7	3282	88.9	1096	88.7	172302	96.1	56147	96.4	28454	96.3
Bidar	209364	96.7	55412	96.5	36830	96.5	21747	89.4	6539	91.5	1894	92.6	231111	96.0	61951	96.0	38724	96.3
Udupi	27900	97.4	3701	97.7	2963	96.9	2305	80.4	418	82.0	231	83.4	30205	95.9	4119	95.8	3194	95.8
Haveri	177977	97.6	31853	98.3	22528	97.9	17245	79.7	2521	82.5	1292	81.7	195222	95.7	34374	96.9	23820	96.9
Davanagere	186340	97.3	54342	97.6	32552	97.9	18785	74.5	3791	74.3	2472	79.3	205125	94.6	58133	95.6	35024	96.3
Kodagu	23901	95.3	4916	95.0	7176	96.3	365	62.0	119	56.1	23	79.3	24266	94.5	5035	93.5	7199	96.2
Uttara Kannada	109490	97.7	10243	97.2	3929	97.4	13233	73.4	2108	71.7	425	67.2	122723	94.4	12351	91.7	4354	93.3
Dakshina Kannada	25359	96.7	7175	97.4	2601	97.0	3975	79.6	834	82.5	192	83.1	29334	94.0	8009	95.6	2793	95.9
Bengaluru Rural	38227	96.2	12263	96.4	2792	96.0	3950	73.1	1622	71.4	356	83.6	42177	93.4	13885	92.6	3148	94.4
Shivamogga	95575	97.3	27305	97.1	6016	97.5	12257	68.9	3665	70.7	648	80.0	107832	93.0	30970	93.0	6664	95.4
Kalaburagi	281197	94.5	79241	95.8	5174	93.4	39830	81.6	13827	83.4	1288	84.0	321027	92.7	93068	93.8	6462	91.4
Kolar	164425	97.5	57856	97.8	13836	98.4	10605	51.1	5501	43.1	322	38.7	175030	92.5	63357	88.1	14158	95.1
Yadgir	144488	93.4	36615	94.3	18473	94.7	19018	82.1	3508	86.7	1753	82.5	163506	91.9	40123	93.6	20226	93.5
Dharwad	119103	98.0	11830	98.3	8783	97.1	27836	72.4	4435	67.7	2321	83.1	146939	91.9	16265	87.5	11104	93.8
Vijayapura	267468	91.5	58135	93.6	4814	89.5	29900	76.1	7076	81.5	697	73.7	297368	89.6	65211	92.1	5511	87.1
Raichur	219926	92.5	48557	92.3	53750	94.0	34512	73.2	8659	76.2	4023	79.8	254438	89.3	57216	89.4	57773	92.8
Belagavi	534063	92.5	75567	91.8	47669	95.9	38548	54.6	7396	56.0	3284	58.6	572611	88.4	82963	86.9	50953	92.1
Bagalkote	205148	92.6	37855	92.8	13743	93.2	47798	71.3	8993	76.7	2115	78.8	252946	87.7	46848	89.2	15858	91.0
Gadag	117266	93.8	21446	96.9	9494	94.3	31279	69.7	4682	70.1	1216	74.3	148545	87.4	26128	90.7	10710	91.5
Ballari	226523	88.5	54038	90.3	52766	91.1	45421	65.3	11237	67.7	9255	69.3	271944	83.5	65275	85.4	62021	87.0
Koppal	162204	86.4	29659	84.4	23592	89.3	13383	56.2	2916	60.1	992	57.4	175587	83.0	32575	81.4	24584	87.4
Bengaluru Urban	48463	92.7	19120	95.0	2556	93.4	36933	52.6	12809	45.7	3385	62.9	85396	69.7	31929	66.3	5941	73.2
All Districts	**5356694**	**95.2**	**1208780**	**95.7**	**574406**	**95.7**	**569604**	**71.1**	**143179**	**70.4**	**51994**	**76.2**	**5926298**	**92.2**	**1351959**	**92.2**	**626400**	**93.8**

Annexure 26 : Drainage connectivity for waste water outlet – All HHs Rural / Urban, Open / No Drainage, No. and % 2011

District	Rural				Urban				Total			
	Open drainage		No Drainage		Open drainage		No Drainage		Open drainage		No Drainage	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Udupi	30987	17.8	135400	77.6	17273	24.1	44506	62.0	48260	19.6	179906	73.0
Vijayapura	54726	17.8	246070	79.9	20499	21.1	27942	28.8	75225	18.6	274012	67.6
Uttara Kannada	45143	19.9	169229	74.6	37539	40.3	39232	42.1	82682	25.8	208461	65.2
Yadgir	37868	23.4	120116	74.3	24021	62.0	10115	26.1	61889	30.9	130231	65.0
Raichur	45662	17.3	208793	79.0	46883	49.3	20053	21.1	92545	25.8	228846	63.7
Bagalkote	40781	17.1	188540	79.0	53185	45.6	31926	27.4	93966	26.4	220466	62.0
Koppal	60748	28.5	143465	67.3	33567	72.7	8821	19.1	94315	36.4	152286	58.7
Kalaburagi	73855	23.7	229546	73.7	50368	32.8	37778	24.6	124223	26.7	267324	57.5
Bidar	71112	30.0	156381	65.9	35497	46.6	21600	28.4	106609	34.0	177981	56.8
Tumakuru	164142	33.1	317315	64.0	73956	52.6	24861	17.7	238098	37.4	342176	53.8
Belagavi	205948	29.1	467767	66.1	113636	44.4	46583	18.2	319584	33.2	514350	53.4
Chitradurga	98697	35.0	173952	61.7	39405	54.6	11264	15.6	138102	39.0	185216	52.3
Dakshina Kannada	66270	30.0	129635	58.7	54073	26.4	88225	43.1	120343	28.3	217860	51.2
Hassan	122978	36.2	206064	60.6	40042	44.8	10885	12.2	163020	38.0	216949	50.5
Gadag	41460	30.1	84302	61.2	50291	64.6	16243	20.9	91751	42.6	100545	46.6
Chikkamagaluru	89680	41.6	115213	53.5	41897	73.7	4625	8.1	131577	48.3	119838	44.0
Ballari	100822	34.6	175706	60.3	71052	37.3	35064	18.4	171874	35.7	210770	43.8
Chamarajanagara	90272	44.3	96758	47.5	26598	65.8	5738	14.2	116870	47.9	102496	42.0
Chikkaballapura	108724	49.4	102561	46.6	35062	56.5	7347	11.8	143786	50.9	109908	38.9
Kolar	103946	45.9	107887	47.7	61563	58.8	12030	11.5	165509	50.0	119917	36.2
Kodagu	50524	42.6	47980	40.5	9235	46.7	1704	8.6	59759	43.2	49684	35.9
Mandya	189725	53.6	143504	40.5	35737	49.3	5435	7.5	225462	52.9	148939	34.9
Haveri	148967	58.6	95781	37.7	49800	69.9	9270	13.0	198767	61.1	105051	32.3
Dharwad	51855	32.8	92848	58.8	50420	23.6	26651	12.4	102275	27.5	119499	32.1
Ramanagara	108648	54.3	77734	38.8	33197	55.7	5306	8.9	141845	54.6	83040	32.0
Shivamogga	131377	51.1	114169	44.4	82965	57.2	14165	9.8	214342	53.3	128334	31.9
Davanagere	156233	57.2	102079	37.4	49071	37.2	9742	7.4	205304	50.7	111821	27.6
Mysuru	207711	51.7	171603	42.7	49990	17.4	13321	4.6	257701	37.4	184924	26.9
Bengaluru Rural	97645	60.1	50300	31.0	46296	74.3	5109	8.2	143941	64.0	55409	24.7
Bengaluru Urban	115251	55.5	48091	23.2	317890	14.7	63736	2.9	433141	18.2	111827	4.7
All Districts	**2911757**	**37.0**	**4518789**	**57.5**	**1651008**	**31.1**	**659277**	**12.4**	**4562765**	**34.6**	**5178066**	**39.3**

Annexure 27 : Drainage connectivity for waste water outlet – SC HHs Rural / Urban, Open / No Drainage, No. and % 2011

District	Rural				Urban				Total			
	Open drainage		No Drainage		Open drainage		No Drainage		Open drainage		No Drainage	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Vijayapura	8369	13.0	55119	85.6	2516	17.0	7203	48.7	10885	13.7	62322	78.7
Udupi	1882	16.8	8826	78.6	848	23.0	2463	66.8	2730	18.3	11289	75.7
Yadgir	7663	19.3	31511	79.5	2725	51.2	2120	39.8	10388	23.1	33631	74.8
Kalaburagi	12973	15.2	71205	83.6	9932	33.9	10607	36.2	22905	20.0	81812	71.5
Bidar	13156	22.0	45469	75.9	4853	38.6	5920	47.0	18009	24.8	51389	70.9
Bagalkote	6691	15.6	34970	81.8	7025	45.1	6053	38.9	13716	23.5	41023	70.3
Raichur	8858	15.9	45884	82.4	8025	50.0	4520	28.2	16883	23.5	50404	70.3
Koppal	10072	27.1	26343	70.8	4243	66.1	1812	28.2	14315	32.8	28155	64.5
Uttara Kannada	4276	23.7	13039	72.2	3900	48.0	3188	39.2	8176	31.2	16227	61.9
Dakshina Kannada	5905	27.5	14283	66.6	2883	32.0	4023	44.7	8788	28.9	18306	60.1
Belagavi	24484	27.1	62797	69.4	12696	49.4	6705	26.1	37180	32.0	69502	59.8
Chitradurga	24186	35.2	43035	62.6	6243	54.1	2476	21.5	30429	37.9	45511	56.7
Gadag	6676	28.6	15760	67.5	5855	64.0	2373	25.9	12531	38.5	18133	55.8
Hassan	25054	37.2	40796	60.6	5580	57.2	1541	15.8	30634	39.7	42337	54.9
Tumakuru	39094	39.1	58791	58.8	10306	60.2	3718	21.7	49400	42.2	62509	53.4
Ballari	21296	33.8	39916	63.3	12512	44.1	7539	26.6	33808	37.0	47455	51.9
Chikkamagaluru	21210	43.0	26655	54.1	5869	79.5	768	10.4	27079	47.8	27423	48.4
Chikkaballapura	28405	47.3	30187	50.2	5357	66.2	1246	15.4	33762	49.5	31433	46.1
Kolar	29970	44.4	34912	51.7	17693	64.6	4822	17.6	47663	50.2	39734	41.9
Chamarajanagara	24475	49.0	22389	44.8	5536	69.6	1070	13.5	30011	51.8	23459	40.5
Kodagu	7639	48.5	6555	41.6	1011	49.4	312	15.2	8650	48.6	6867	38.6
Haveri	21203	57.3	14936	40.3	4015	67.2	1219	20.4	25218	58.6	16155	37.6
Davanagere	34523	54.5	27105	42.8	6762	45.5	1456	9.8	41285	52.8	28561	36.5
Shivamogga	27653	55.1	21441	42.7	10998	61.2	2244	12.5	38651	56.7	23685	34.7
Mysuru	44352	53.5	35004	42.2	9249	28.2	2458	7.5	53601	46.3	37462	32.4
Ramanagara	22786	58.6	14211	36.6	4962	58.3	893	10.5	27748	58.6	15104	31.9
Dharwad	5003	37.0	7909	58.5	6379	30.2	3080	14.6	11382	32.9	10989	31.8
Mandya	31285	62.1	17217	34.2	5953	62.4	912	9.6	37238	62.2	18129	30.3
Bengaluru Rural	24511	62.5	11815	30.1	4815	72.8	1017	15.4	29326	64.0	12832	28.0
Bengaluru Urban	25678	58.8	12241	28.0	46520	19.6	16655	7.0	72198	25.7	28896	10.3
All Districts	**569328**	**37.7**	**890321**	**59.0**	**235261**	**37.3**	**110413**	**17.5**	**804589**	**37.6**	**1000734**	**46.8**

Annexure 28 : Drainage connectivity for waste water outlet – ST HHs Rural / Urban, Open / No Drainage, No. and % - 2011

District	Rural				Urban				Total			
	Open drainage		No Drainage		Open drainage		No Drainage		Open drainage		No Drainage	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Raichur	8720	14.6	49999	83.6	3393	50.6	2362	35.2	12113	18.2	52361	78.7
Udupi	1402	15.5	7316	81.0	742	32.0	1341	57.8	2144	18.9	8657	76.2
Bagalkote	1959	12.7	13137	85.0	1424	39.7	1374	38.3	3383	17.8	14511	76.2
Yadgir	3710	18.6	15988	80.2	1447	54.7	1017	38.4	5157	22.8	17005	75.3
Koppal	6488	23.3	20573	74.0	1675	69.0	627	25.8	8163	27.0	21200	70.1
Vijayapura	945	16.1	4737	80.8	411	20.0	628	30.6	1356	17.1	5365	67.8
Belagavi	11991	22.6	39766	74.8	5362	49.9	3050	28.4	17353	27.1	42816	67.0
Bidar	11124	27.8	27635	69.1	2014	45.1	1570	35.1	13138	29.6	29205	65.7
Uttara Kannada	1818	27.4	4551	68.7	710	43.7	676	41.6	2528	30.6	5227	63.3
Chitradurga	16377	30.9	35472	66.9	4830	60.2	1621	20.2	21207	34.8	37093	60.8
Tumakuru	13460	31.0	29040	66.8	4234	53.3	1749	22.0	17694	34.4	30789	59.9
Kalaburagi	1246	21.6	4349	75.4	992	28.4	1197	34.2	2238	24.2	5546	59.9
Gadag	2896	27.2	7027	66.1	1618	63.5	604	23.7	4514	34.2	7631	57.9
Dakshina Kannada	3995	28.6	8675	62.0	1134	29.7	1584	41.5	5129	28.8	10259	57.6
Ballari	16836	27.4	42378	69.0	9655	39.7	6511	26.8	26491	30.9	48889	57.0
Chikkamagaluru	3850	35.0	6722	61.1	1071	70.0	207	13.5	4921	39.3	6929	55.3
Hassan	2854	36.5	4834	61.8	720	36.1	377	18.9	3574	36.4	5211	53.1
Kodagu	5539	37.1	8022	53.7	265	52.8	59	11.8	5804	37.6	8081	52.4
Kolar	6549	40.3	9126	56.1	1646	55.3	396	13.3	8195	42.6	9522	49.5
Chikkaballapura	15031	46.6	16291	50.5	2587	64.0	691	17.1	17618	48.5	16982	46.8
Dharwad	3242	31.4	6475	62.6	2035	24.6	1995	24.2	5277	28.4	8470	45.5
Chamarajanagara	10442	43.6	12564	52.5	4307	74.6	738	12.8	14749	49.6	13302	44.8
Ramanagara	2442	47.6	2370	46.2	568	49.6	186	16.2	3010	48.0	2556	40.8
Haveri	15738	57.8	10913	40.0	2448	70.2	482	13.8	18186	59.2	11395	37.1
Davanagere	21066	53.4	16929	42.9	3831	41.5	1100	11.9	24897	51.1	18029	37.0
Mysuru	30976	52.1	26377	44.4	5874	31.1	1471	7.8	36850	47.1	27848	35.6
Mandya	2905	52.1	2261	40.5	720	46.0	199	12.7	3625	50.7	2460	34.4
Shivamogga	7257	54.3	5579	41.7	2686	58.8	511	11.2	9943	55.4	6090	33.9
Bengaluru Rural	6143	60.3	3515	34.5	1527	61.6	381	15.4	7670	60.6	3896	30.8
Bengaluru Urban	4456	54.1	2287	27.8	13368	18.4	4101	5.6	17824	22.0	6388	7.9
All Districts	**241457**	**34.0**	**444908**	**62.6**	**83294**	**36.9**	**38805**	**17.2**	**324751**	**34.7**	**483713**	**51.6**

Annexure 29 : Solid Waste Management in ULBs

District	Household level coverage of solid waste management services				Efficiency of collection of municipal solid waste				Extent of segregation of municipal solid waste				Extent of municipal solid waste recovered			
	CC	CMC	TMC	TP	CC	CMC	TMC	TP	CC	CMC	TMC	TP	CC	CMC	TMC	TP
Bagalkote	0	84	92	30	0	81	93	33	0	36	43	13	0	40	46	21
Bengaluru Rural	0	78	58	0	0	70	68	0	0	23	8	0	0	15	13	0
Belagavi	95	85	57	21	100	85	64	35	35	48	12	7	53	38	13	12
Ballari	80	55	65	50	90	85	67	77	15	10	43	7	20	10	37	7
Bidar	0	0	73	63	0	0	75	73	0	0	45	25	0	0	35	30
Chamarajanagara	0	52	0	63	0	83	0	85	0	20	0	43	0	5	0	13
Chikkaballapura	0	90	95	0	0	90	88	0	0	50	68	0	0	10	30	0
Chikkamagaluru	0	93	75	88	0	88	80	88	0	33	13	28	0	53	38	42
Chitradurga	0	95	57	90	0	84	50	85	0	5	2	5	0	4	2	5
Dakshina Kannada	90	95	88	80	98	95	90	86	45	60	60	59	40	70	48	41
Davanagere	80	70	43	80	80	70	40	88	0	10	40	52	10	10	3	10
Dharwad	85	0	90	85	92	0	88	89	3	0	30	28	1	0	25	9
Gadag	0	85	85	76	0	90	86	78	0	10	40	18	0	5	28	40
Hassan	0	94	95	95	0	85	90	95	0	52	38	68	0	40	78	40
Haveri	0	85	78	48	0	92	84	45	0	38	42	25	0	18	40	30
Kalaburagi	87	20	56	0	94	70	65	0	35	20	25	0	35	5	11	0
Kodagu	0	98	0	87	0	95	0	92	0	40	0	42	0	40	0	55
Kolar	0	60	65	0	0	83	72	0	0	35	29	0	0	25	3	0
Koppal	0	73	53	26	0	78	65	47	0	43	3	5	0	20	3	2
Mandya	0	76	74	50	0	80	79	50	0	15	23	40	0	15	17	10
Mysuru	100	90	77	75	98	90	89	85	60	50	21	5	60	20	33	5
Raichur	0	85	88	0	0	88	85	0	0	58	30	0	0	25	29	0
Ramanagara	0	65	40	0	0	85	48	0	0	25	3	0	0	34	3	0
Shivamogga	71	81	80	84	80	85	80	90	5	15	20	71	12	6	10	60
Tumakuru	98	79	60	71	95	87	63	82	20	13	56	4	10	15	41	2
Udupi	0	94	70	70	0	94	80	70	0	60	40	5	0	80	23	10
Uttara Kannada	0	87	84	66	0	85	89	68	0	35	26	41	0	13	20	20
Vijayapura	67	0	58	0	77	0	68	0	8	0	16	0	23	0	13	0
Yadgir	0	43	1	0	0	63	48	0	0	7	5	0	0	7	3	0
All districts	85	76	68	53	90	83	74	61	23	30	27	25	26	24	22	21

Annexure 29 (Cont..) : Solid Waste Management in ULBs

District	Extent of scientific disposal of municipal solid waste				Extent of cost recovery in SWM services				Efficiency in collection of SWM charges				Coverage of storm water drainage network			
	CC	CMC	TMC	TP	CC	CMC	TMC	TP	CC	CMC	TMC	TP	CC	CMC	TMC	TP
Bagalkote	0	34	37	12	0	4	4	12	0	24	46	26	0	61	57	34
Bengaluru Rural	0	10	4	0	0	5	0	0	0	58	2	0	0	69	46	0
Belagavi	70	70	8	7	10	10	7	6	70	85	49	11	78	88	52	37
Ballari	5	25	50	10	5	5	28	1	75	50	65	18	60	65	50	63
Bidar	0	0	25	50	0	0	8	50	0	0	25	45	0	0	48	30
Chamarajanagara	0	10	0	25	0	0	0	15	0	0	0	50	0	67	0	45
Chikkaballapura	0	15	57	0	0	30	11	0	0	30	35	0	0	35	45	0
Chikkamagaluru	0	40	13	23	0	6	2	6	0	80	63	57	0	83	55	82
Chitradurga	0	13	2	35	0	12	2	5	0	20	20	10	0	40	48	40
Dakshina Kannada	80	80	58	69	20	85	43	52	40	72	75	56	55	80	60	71
Davanagere	0	0	0	0	0	0	5	3	10	15	23	62	60	70	50	63
Dharwad	0	0	23	12	19	0	6	6	65	0	68	72	89	0	68	51
Gadag	0	60	32	40	0	10	13	12	0	30	59	47	0	70	46	57
Hassan	0	45	83	58	0	37	20	10	0	51	75	75	0	69	63	60
Haveri	0	25	30	0	0	8	12	3	0	40	54	25	0	73	76	28
Kalaburgi	95	20	21	0	2	0	5	0	43	2	50	0	69	30	53	0
Kodagu	0	50	0	33	0	50	0	10	0	90	0	85	0	15	0	58
Kolar	0	40	6	0	0	3	3	0	0	20	28	0	0	69	59	0
Koppal	0	28	5	2	0	8	4	1	0	53	10	5	0	68	48	35
Mandya	0	0	28	10	0	5	8	0	0	40	47	0	0	60	56	65
Mysuru	38	50	18	15	20	10	3	0	73	60	30	60	80	75	58	50
Raichur	0	80	14	0	0	14	6	0	0	53	39	0	0	80	33	0
Ramanagara	0	15	3	0	0	8	1	0	0	63	20	0	0	65	37	0
Shivamogga	100	23	20	44	5	26	10	47	37	23	80	67	9	25	90	68
Tumakuru	40	10	20	0	5	5	20	0	70	30	59	65	76	60	63	85
Udupi	0	80	40	0	0	10	4	0	0	10	57	0	0	40	55	25
Uttara Kannada	0	38	50	25	0	5	18	6	0	66	35	29	0	85	83	65
Vijayapura	0	0	20	0	16	0	2	0	45	0	40	0	42	0	46	15
Yadgir	0	3	0	0	0	7	3	0	0	33	28	0	0	42	40	0
All districts	43	31	22	19	10	12	8	12	53	42	43	35	62	63	54	49

Annexure 30 : HHs without Latrine within premises in slums, based on urban status - 2011

Urban status	Total No. of HHs	No.	%	Alternative source			
				Public latrine		Open	
				No.	%	No.	%
TMC	167493	82148	49.05	17135	20.86	65013	79.14
TP	53539	28670	53.55	6020	21.00	22650	79.00
CMC+OG	45957	20340	44.26	7004	34.43	13336	65.57
CMC	173797	75936	43.69	26712	35.18	49224	64.82
M Corp	67449	23189	34.38	8727	37.63	14462	62.37
TMC+OG	9482	4072	42.94	1706	41.90	2366	58.10
M Corp+OG	210391	32882	15.63	18072	54.96	14810	45.04
TP+OG	169	11	6.51	11	100.00	0	0.00
Total	**728277**	**267248**	**36.70**	**85387**	**31.95**	**181861**	**68.05**

Annexure 31: Waste water outlet connections in slums, based on urban status – 2011

Urban status	Total No. of HHs	Waste water outlet connected to			
		Open drainage		No drainage	
		No.	%	No.	%
TMC+OG	9482	5003	52.76	2724	28.73
TP	53539	36558	68.28	12352	23.07
TMC	167493	108493	64.77	37244	22.24
CMC+OG	45957	27621	60.10	9256	20.14
CMC	173797	109679	63.11	28770	16.55
M Corp	67449	22730	33.70	11015	16.33
M Corp+OG	210391	47015	22.35	15923	7.57
TP+OG	169	18	10.65	2	1.18
Total	728277	357117	49.04	117286	16.10

Annexure 32 : Karnataka's achievement of IHHL under Swacch Bharat Mission (2013-14 to 2015-16)

District	Physical target			Physical achievement			% Achievement (as a proportion of physical target*)							
	2013-14	14-15	15-16	2013-14	14-15	15-16	2013-14	14-15	15-16	2013-14	14-15	15-16	2013-14 to 15-16	
	Total	Total	Total	Total	Total	Total	BPL	BPL	BPL	Total	Total	Total	BPL	Total
Chikkamagaluru	30001	20000	35000	13637	17023	13833	45.5	118.7	42.0	45.5	85.1	39.5	58.8	52.3
Ballari	22000	30000	46312	13998	20096	18663	135.3	123.8	42.1	63.6	67.0	40.3	74.5	53.7
Kalaburagi & Yadgir	32000	47000	58670	22962	34362	20689	122.2	73.1	48.3	71.8	73.1	35.3	68.8	56.7
Bengaluru Urban	18000	18700	4500	9003	9836	5353	59.0	55.5	119.0	50.0	52.6	119.0	64.6	58.7
Bidar	15000	20800	35005	9289	19256	16820	94.1	119.1	52.2	61.9	92.6	48.1	75.6	64.1
Gadag	24000	30550	39884	14246	30086	17964	110.5	100.9	52.8	59.4	98.5	45.0	80.1	66.0
Kodagu	12000	14000	6757	6897	9093	5746	49.4	68.1	80.3	57.5	65.0	85.0	65.8	66.4
Davanagere	30000	30000	40935	24572	29933	15244	131.8	172.6	58.4	81.9	99.8	37.2	108.1	69.1
Chamarajanagara	16000	22000	30000	14403	22045	12554	225.0	105.0	43.3	90.0	100.2	41.8	86.9	72.1
Dharwad	18000	22980	31674	19884	17357	15358	130.5	50.3	69.0	110.5	75.5	48.5	70.7	72.4
Vijayapura	22000	22000	30000	16109	23731	14649	129.5	137.6	58.6	73.2	107.9	48.8	97.2	73.6
Mysuru	30000	35100	55500	29046	37628	30270	242.1	168.0	69.6	96.8	107.2	54.5	124.3	80.4
Chitradurga	20000	34460	42592	14119	37015	27176	163.1	106.5	76.2	70.6	107.4	63.8	98.4	80.7
Shivamogga	20000	25000	33988	12473	30113	21812	137.0	140.8	82.4	62.4	120.5	64.2	112.9	81.5
Kolar	29962	25000	40000	15992	31126	31079	60.0	158.2	96.1	53.4	124.5	77.7	99.5	82.3
Bengaluru Rural	17919	16500	12558	10544	21378	7798	66.5	132.2	64.6	58.8	129.6	62.1	90.4	84.6
Udupi	16218	13600	3109	10669	12532	5074	76.4	92.7	244.5	65.8	92.1	163.2	97.0	85.9
Haveri	22000	20800	30000	13108	27062	23185	134.0	161.3	92.7	59.6	130.1	77.3	122.5	87.0
Tumakuru	30000	40000	59500	34780	45260	33177	263.5	135.3	55.4	115.9	113.2	55.8	104.8	87.4
Raichur	10000	26700	43060	13519	32940	26414	335.4	173.9	90.8	135.2	123.4	61.3	142.1	91.4
Chikkaballapura	20000	30000	42529	17311	36717	33473	153.0	152.7	89.8	86.6	122.4	78.7	118.8	94.6
Ramanagara	16000	33500	40984	18247	40433	30551	80.4	149.7	129.1	114.0	120.7	74.5	127.0	98.6
Hassan	25000	29200	40879	17187	42575	34732	19.2	280.9	194.6	68.7	145.8	85.0	184.2	99.4
Uttara Kannada	15920	20200	22820	9282	31480	21466	123.5	182.3	97.2	58.3	155.8	94.1	133.2	105.6
Bagalkote	12000	21000	29919	10075	26840	29943	100.3	110.9	138.0	84.0	127.8	100.1	121.7	106.3
Mangaluru	5950	0	2800	4477	2433	2595	88.7	-	92.7	75.2	-	92.7	121.7	108.6
Belagavi	30000	45000	99043	38606	60797	108751	170.4	211.6	123.2	128.7	135.1	109.8	149.5	119.6
Mandya	25030	25910	39850	17033	78031	46164	119.1	451.3	151.8	68.1	301.2	115.8	231.7	155.6
Koppal	15000	30000	39610	54051	49741	28383	513.9	392.6	117.6	360.3	165.8	71.7	273.0	156.2
Total	**600000**	**750000**	**1037478**	**505517**	**876919**	**708309**	**124.2**	**145.8**	**82.7**	**84.3**	**116.9**	**68.3**	**111.5**	**87.6**

Annexure 33 : Physical progress and Coverage under Swachh Bharat Mission – Rural , 2013-14 to 15-16

Bottom 15 taluks

District	Taluk	Total IHHL as per BLS-2012 (in Number)	Total IHHL without Toilet as per BLS-2012 (in Number)	Coverage of Households				
				2013-14	2014-15	2015-16	Total HHs covered	IHHL % coverage
Yadgir	Shahpur	62913	57924	30	952	2097	8068	12.82
Kalaburagi	Aland	73012	68110	2	3161	2384	10449	14.31
Raichur	Manvi	114657	105498	70	6637	3131	18997	16.57
Raichur	Devadurga	60100	56950	105	4417	2370	10042	16.71
Kalaburagi	Afzalpur	31487	29368	0	1556	1731	5406	17.17
Raichur	Raichur	62397	56734	11	2559	2695	10928	17.51
Bidar	Basavakalyan	64376	59177	63	3440	2816	11518	17.89
Vijayapura	Sindagi	66040	59351	8	4280	1316	12293	18.61
Bidar	Humnabad	55245	49116	77	1894	2352	10452	18.92
Raichur	Lingsugur	72811	65209	26	4201	2980	14809	20.34
Vijayapura	Indi	70067	62944	20	4657	2686	14486	20.67
Yadgir	Shorapur	63448	54823	54	1593	2930	13202	20.81
Vijayapura	Vijayapura	75315	65999	7	4072	2545	15940	21.16
Bidar	Bidar	56450	48747	25	1492	2839	12059	21.36
Bidar	Aurad	50850	46559	96	2974	3565	10926	21.49

Top 15 taluks

District	Taluk	Total IHHL as per BLS-2012 (in Number)	Total IHHL without Toilet as per BLS-2012 (in Number)	Coverage of Households				
				2013-14	2014-15	2015-16	Total HHs covered	IIHL % coverage
Udupi	Karkal	42862	4050	208	1991	775	41786	97.49
Chikkamagaluru	Sringeri	9167	726	161	111	233	8946	97.59
Kodagu	Virajpet	46729	9435	2521	4539	1336	45690	97.78
Bengaluru Rural	Nelamangala	39927	4875	415	3223	611	39301	98.43
Chikkamagaluru	Narasimharajapura	13716	1633	138	954	385	13560	98.86
Dakshina Kannada	Puttur	50163	1171	311	579	32	49914	99.50
Dakshina Kannada	Mangaluru	86340	1410	608	403	38	85979	99.58
Dakshina Kannada	Bantval	72128	1234	468	543	32	71937	99.74
Dakshina Kannada	Sulya	28106	1462	612	475	330	28061	99.84
Kodagu	Somvarpet	47002	10578	2521	4567	3443	46955	99.90
Bengaluru Rural	Devanhalli	30979	5256	469	3875	1054	31121	100.00
Chikkamagaluru	Koppa	19787	1353	356	814	491	20095	100.00
Kodagu	Madikeri	24589	2554	157	2063	834	25089	100.00
Dakshina Kannada	Beltangadi	56310	1027	504	585	415	56787	100.00
Uttara Kannada	Yellapur	14712	3327	231	1944	1186	14746	100.00

Annexure 34 : Number and % of Occupied Census HHs Dilapidated – All HHs

District	Rural				Urban				Total			
	2001		2011		2001		2011		2001		2011	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Chamarajanagara	13024	5.90	14223	5.41	2205	5.40	1809	3.16	15229	5.83	16032	5.01
Raichur	8442	3.03	18666	5.65	2386	2.33	3435	2.74	10828	2.84	22101	4.85
Vijayapura	13814	4.30	20990	5.29	2821	2.93	2828	2.16	16635	3.98	23818	4.52
Ramanagara	15224	6.83	13669	5.12	2416	4.25	1937	2.28	17640	6.30	15606	4.44
Shivamogga	20171	6.76	18698	5.31	5548	3.45	4687	2.32	25719	5.60	23385	4.22
Chitradurga	14152	4.69	16610	4.75	2048	2.78	1444	1.48	16200	4.32	18054	4.04
Yadgir	5928	3.49	8895	4.28	1235	3.57	1141	2.07	7163	3.50	10036	3.82
Koppal	6812	3.09	11010	4.03	1230	2.44	1688	2.61	8042	2.96	12698	3.76
Davanagere	14878	4.89	15862	4.47	5705	4.18	3718	2.11	20583	4.67	19580	3.69
Hassan	17582	4.06	20950	4.22	2802	3.06	2142	1.61	20384	3.89	23092	3.67
Uttara Kannada	17643	6.31	14423	4.31	3864	3.40	2963	2.11	21507	5.47	17386	3.66
Tumakuru	26176	4.23	28865	4.21	3976	2.61	3459	1.69	30152	3.91	32324	3.63
Bidar	12928	5.49	11837	4.12	1791	2.48	2268	2.22	14719	4.78	14105	3.62
Haveri	10719	4.09	12642	4.01	2448	3.40	2038	2.07	13167	3.95	14680	3.55
Ballari	12654	4.27	15769	4.24	4573	2.69	5785	2.30	17227	3.69	21554	3.46
Chikkamagaluru	14517	5.31	11790	3.78	2412	3.68	1630	2.02	16929	4.99	13420	3.42
Bagalkote	7303	2.60	12416	3.82	4031	3.37	4285	2.58	11334	2.83	16701	3.40
Gadag	4464	2.95	7083	3.93	2304	2.67	2638	2.36	6768	2.85	9721	3.33
Mandya	17517	4.36	15965	3.48	2915	3.67	2273	2.20	20432	4.24	18238	3.24
Mysuru	22136	4.99	21128	3.91	5825	2.20	6176	1.62	27961	3.94	27304	2.96
Chikkaballapura	9330	3.46	10847	3.44	791	1.17	992	1.05	10121	3.00	11839	2.89
Belagavi	24024	3.11	32964	3.42	4853	1.95	4936	1.39	28877	2.83	37900	2.87
Kodagu	8030	4.97	5398	2.98	533	2.08	634	1.99	8563	4.57	6032	2.83
Kolar	8339	3.02	11617	3.56	1932	1.77	1636	1.08	10271	2.67	13253	2.77
Kalaburagi	9499	2.84	11672	2.91	3824	2.54	2269	1.14	13323	2.75	13941	2.32
Udupi	16936	6.75	7282	2.70	1621	2.76	1487	1.29	18557	6.00	8769	2.28
Bengaluru Rural	6564	3.69	5994	2.59	1039	1.85	1076	1.13	7603	3.25	7070	2.17
Dharwad	5989	3.63	6149	3.08	4500	2.13	4253	1.50	10489	2.79	10402	2.15
Dakshina Kannada	14880	4.26	8211	2.47	4514	2.11	3296	1.04	19394	3.45	11507	1.77
Bengaluru Urban	7526	3.34	5089	1.69	32705	1.98	23686	0.80	40231	2.14	28775	0.88
All Districts	**389202**	**4.32**	**418725**	**3.94**	**120848**	**2.50**	**104620**	**1.42**	**508049**	**3.67**	**521334**	**2.90**

Annexure 35 : % of Occupied Census HHs Dilapidated Taluks – 2011, % of total HHs

Top 15 Taluks				Bottom 15 Taluks			
Taluks	Rural	Urban	Total	Taluks	Rural	Urban	Total
Sindhnur	9.5	6.1	8.8	Sandur	3.3	1.2	2.6
Shikaripur	9.0	6.9	8.6	Hosakote	3.0	0.7	2.5
Heggadadevankote	8.8	5.3	8.5	Udupi	3.0	2.0	2.5
Indi	8.8	4.8	8.5	Bagalkote	3.4	1.0	2.4
Yelandur	8.3	6.4	8.1	Hukeri	2.6	1.4	2.4
Sorab	8.2	3.7	8.0	Sringeri	2.5	1.0	2.3
Alur	8.2	3.6	7.8	Kalaburagi	4.1	1.2	2.2
Athni	7.8	4.9	7.6	Sedam	2.1	2.2	2.1
Raybag	8.2	2.2	7.6	Bengaluru North	2.2	1.1	2.0
Nargund	6.7	8.8	7.5	Mysuru	2.6	1.8	2.0
Yellapur	8.2	5.0	7.4	Anekal	2.4	0.7	1.8
Sakleshpur	8.0	3.2	7.2	Belagavi	2.4	1.5	1.8
Gundlupet	7.6	4.0	7.1	Mangaluru	3.1	1.4	1.8
Hosanagara	7.2	4.5	7.1	Chincholi	1.6	0.5	1.5
Manvi	7.4	4.7	7.1	Chitapur	1.5	1.0	1.3

Annexure 36 : % of Census HHs Dilapidated and wall/roof/floor of certain characteristics– All HHs - 2011

District	Dilapidated			Roof of Grass/ Thatch/ Bamboo/ Wood/Mud etc.			Wall of Grass/ Thatch/ Bamboo/ Wood/Mud etc.			Wall of Mud/Unburnt brick			Wall of Stone not packed with mortar			Mud floor		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Chamarajanagara	7.0	4.5	6.6	8.3	4.2	7.6	4.7	2.6	4.4	38.7	27.8	36.9	8.0	9.1	8.2	26.0	6.4	22.7
Raichur	7.1	3.6	6.2	46.6	13.9	38.0	19.1	10.6	16.8	17.4	11.0	15.7	21.4	13.7	19.4	37.8	10.2	30.5
Ramanagara	6.8	3.2	6.0	11.0	5.2	9.7	4.1	1.4	3.4	32.0	16.7	28.5	4.7	8.5	5.6	26.9	6.4	22.2
Vijayapura	6.8	2.9	5.9	54.4	14.9	44.9	10.5	2.5	8.5	13.5	12.0	13.1	32.5	19.9	29.5	32.5	5.4	26.0
Shivamogga	7.3	3.2	5.8	3.1	1.2	2.4	5.7	1.4	4.1	46.4	22.5	37.8	6.4	8.3	7.0	48.3	7.8	33.7
Hassan	6.2	2.4	5.4	1.5	1.1	1.4	1.8	0.7	1.6	56.7	19.0	48.9	2.8	4.7	3.2	25.7	3.4	21.0
Uttara Kannada	6.4	3.2	5.4	3.8	1.1	3.0	5.1	2.1	4.2	36.7	17.9	31.2	9.4	12.4	10.3	41.4	11.0	32.6
Chitradurga	5.9	2.0	5.1	18.6	6.5	16.1	7.1	4.8	6.6	24.2	15.6	22.5	17.7	11.2	16.4	39.8	8.1	33.4
Tumakuru	5.8	2.5	5.1	12.8	2.8	10.6	3.7	1.2	3.1	23.3	15.0	21.5	10.4	4.4	9.1	20.4	4.0	16.8
Yadgir	5.5	2.9	5.0	48.5	20.7	43.2	7.9	3.2	7.0	9.1	7.3	8.8	34.3	25.9	32.6	32.2	10.8	28.1
Chikkamagaluru	5.5	2.9	4.9	3.1	0.8	2.6	4.1	1.2	3.5	46.0	23.1	41.2	4.1	4.4	4.2	32.3	8.0	27.2
Koppal	5.2	3.7	4.9	42.3	14.9	37.4	7.9	10.7	8.4	20.3	12.2	18.9	23.8	12.6	21.8	31.6	8.6	27.5
Davanagere	5.8	2.8	4.8	7.8	2.8	6.2	4.5	3.8	4.3	33.6	19.7	29.1	13.1	6.8	11.0	41.5	7.2	30.3
Bagalkote	5.2	3.7	4.7	52.8	25.8	44.0	13.5	6.2	11.1	10.8	9.7	10.5	27.0	26.5	26.9	32.9	10.9	25.7
Ballari	5.4	3.0	4.5	30.6	13.1	23.7	8.2	5.1	7.0	13.3	10.7	12.3	19.9	13.2	17.2	23.3	6.0	16.5
Bidar	5.0	3.0	4.5	4.9	2.9	4.4	4.2	1.1	3.4	16.9	15.0	16.4	28.6	21.9	27.0	59.4	17.0	49.1
Gadag	5.1	3.4	4.5	46.0	29.5	40.1	9.3	7.3	8.6	27.1	24.6	26.2	24.0	14.4	20.5	39.3	12.2	29.5
Haveri	5.0	2.9	4.5	17.4	7.9	15.3	5.9	2.4	5.1	45.5	28.4	41.8	17.0	12.2	15.9	57.7	15.6	48.5
Kodagu	4.6	3.2	4.4	2.0	1.0	1.8	2.1	1.1	2.0	43.8	28.0	41.6	7.2	5.8	7.0	28.7	5.5	25.4
Mandya	4.5	3.1	4.3	4.6	5.2	4.7	2.3	1.7	2.2	33.7	15.5	30.6	10.7	6.5	10.0	29.8	6.4	25.9
Chikkaballapura	4.9	1.6	4.2	11.5	5.0	10.1	1.6	0.5	1.4	16.9	8.6	15.1	7.9	6.6	7.6	24.4	4.4	20.0
Kolar	5.1	1.6	4.0	5.6	1.2	4.2	1.3	0.4	1.0	25.8	10.5	20.9	7.4	9.0	7.9	30.1	3.9	21.8
Mysuru	5.3	2.2	4.0	3.2	1.5	2.5	2.5	0.7	1.7	44.0	13.3	31.2	5.9	6.0	6.0	31.7	3.4	19.9
Belagavi	4.7	1.9	3.9	13.0	4.1	10.6	8.2	2.1	6.6	29.9	22.3	27.9	20.5	9.5	17.6	50.0	11.3	39.7
Udupi	4.2	2.1	3.6	1.0	0.7	0.9	1.2	1.0	1.1	22.6	11.9	19.4	9.3	9.1	9.3	7.1	2.3	5.7
Bengaluru Rural	3.7	1.7	3.1	6.8	3.8	6.0	1.3	0.7	1.1	25.2	10.1	21.0	4.6	5.2	4.8	17.3	3.1	13.4
Kalaburagi	3.7	1.5	3.0	17.6	2.7	12.7	4.0	0.8	2.9	7.3	4.2	6.3	41.8	20.1	34.6	22.2	3.3	16.0
Dharwad	3.9	2.0	2.8	30.1	5.9	16.2	7.9	2.3	4.7	52.8	21.3	34.7	6.1	7.5	6.9	57.3	8.0	28.9
Dakshina Kannada	3.7	1.6	2.7	1.5	0.7	1.1	1.2	0.5	0.9	40.4	15.9	28.6	11.4	9.2	10.3	21.8	3.5	13.0
Bengaluru Urban	2.5	1.1	1.2	2.0	1.2	1.3	1.0	0.4	0.4	12.6	3.7	4.4	8.5	5.3	5.6	6.8	1.4	1.9
All Districts	**5.3**	**1.9**	**3.9**	**16.3**	**4.1**	**11.4**	**5.5**	**1.6**	**4.0**	**28.9**	**10.9**	**21.6**	**15.3**	**8.6**	**12.6**	**33.3**	**4.7**	**21.8**

Annexure 37 : % of Census HHs Dilapidated and wall/roof/floor of certain characteristics– SC HHs - 2011

Districts	Dilapidated HHs			Roof of Grass/ Thatch/ Bamboo/ Wood/Mud etc.			Wall of Grass/ Thatch/ Bamboo/ Wood/Mud etc.			Wall of Mud/Unburnt brick			Wall of Stone not packed with mortar			Mud floor		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Dakshina Kannada	10.3	5.9	9.0	4.3	1.5	3.5	3.3	1.5	2.8	56.2	28.4	48.0	12.5	11.8	12.3	53.9	15.3	42.5
Shivamogga	10.1	5.6	9.0	4.8	1.5	3.9	8.5	2.5	6.9	44.8	31.5	41.3	4.5	7.9	5.4	67.7	16.0	54.0
Hassan	9.4	4.5	8.8	2.9	1.3	2.7	3.2	1.1	2.9	59.6	31.0	56.0	2.5	3.0	2.6	46.2	9.5	41.5
Chikkamagaluru	9.0	7.1	8.7	4.5	1.8	4.1	6.0	3.3	5.6	49.5	34.9	47.6	3.5	3.6	3.5	51.9	21.3	47.9
Udupi	8.5	7.7	8.3	2.5	3.5	2.7	2.9	5.3	3.5	32.1	20.6	29.3	10.6	10.6	10.6	18.6	10.1	16.5
Ramanagara	8.4	5.1	7.8	11.8	9.7	11.4	5.7	2.1	5.0	31.1	23.4	29.7	4.5	6.2	4.8	35.3	11.3	31.0
Davanagere	8.2	5.0	7.6	6.4	3.3	5.8	6.0	5.5	5.9	36.7	25.3	34.6	12.6	7.6	11.6	63.4	15.1	54.2
Raichur	7.8	5.8	7.4	37.7	14.0	32.4	17.4	14.0	16.7	18.2	12.2	16.9	22.3	12.5	20.1	46.2	16.5	39.5
Kodagu	6.7	10.4	7.2	2.0	1.7	2.0	2.4	4.0	2.6	51.7	46.7	51.2	6.6	3.6	6.3	47.1	16.6	43.6
Uttara Kannada	7.7	5.6	7.1	2.9	1.0	2.3	4.1	2.9	3.7	29.3	25.1	28.0	11.1	13.6	11.8	48.4	20.1	39.6
Chitradurga	7.5	3.8	7.0	17.0	11.3	16.1	9.9	9.8	9.9	24.6	16.9	23.5	18.6	12.0	17.6	58.1	17.1	52.2
Mandya	6.8	7.1	6.9	7.6	12.6	8.4	4.0	6.3	4.4	32.6	18.6	30.3	10.1	6.0	9.4	42.7	17.4	38.7
Tumakuru	6.9	6.1	6.8	9.9	5.5	9.3	4.8	3.4	4.6	22.0	22.4	22.0	10.8	4.1	9.8	32.0	12.8	29.1
Chikkaballapura	6.8	4.2	6.5	13.1	6.4	12.3	2.5	1.0	2.4	21.1	12.6	20.1	8.5	7.1	8.4	37.4	12.1	34.4
Ballari	6.3	6.4	6.3	20.2	18.6	19.7	9.1	9.7	9.3	12.0	14.1	12.7	18.5	14.1	17.1	31.6	13.2	25.9
Yadgir	6.2	6.8	6.3	40.7	19.7	38.2	7.3	6.7	7.3	9.7	9.0	9.6	34.0	25.4	32.9	40.5	21.5	38.3
Bidar	6.3	5.4	6.1	3.1	1.6	2.9	5.9	2.4	5.3	17.7	12.6	16.8	27.6	24.9	27.1	70.3	26.6	62.7
Bengaluru Rural	5.7	7.1	5.9	4.4	4.5	4.4	1.9	1.7	1.9	31.8	22.7	30.4	4.2	6.1	4.5	29.7	10.9	27.0
Mysuru	6.2	5.1	5.9	3.8	3.6	3.7	3.0	1.9	2.7	43.8	23.6	38.1	6.2	6.8	6.4	40.5	8.9	31.5
Vijayapura	6.1	4.7	5.8	39.9	13.9	35.0	8.0	4.2	7.3	12.5	12.7	12.5	32.8	20.5	30.5	34.5	10.2	30.0
Chamarajanagara	5.9	4.7	5.7	6.0	4.2	5.8	3.9	3.1	3.8	35.7	25.1	34.2	8.0	7.7	8.0	26.2	7.8	23.7
Kolar	7.1	2.0	5.7	7.6	1.3	5.8	2.0	0.7	1.7	31.0	13.7	26.0	7.5	9.2	8.0	41.3	7.4	31.5
Koppal	5.6	5.6	5.6	24.5	16.3	23.3	7.7	13.5	8.5	16.6	13.0	16.1	23.3	11.9	21.7	38.0	18.8	35.2
Bagalkote	5.2	5.0	5.2	36.8	15.8	31.2	12.7	9.0	11.7	8.9	8.6	8.8	25.5	25.7	25.6	35.9	17.0	30.9
Gadag	5.2	5.0	5.2	20.9	20.5	20.8	8.5	9.6	8.8	22.5	23.9	22.9	27.2	13.5	23.3	50.2	19.2	41.5
Haveri	5.2	4.8	5.1	4.8	3.7	4.6	5.4	3.5	5.1	42.8	29.8	41.0	18.3	9.7	17.1	69.0	23.0	62.6
Belagavi	4.7	3.2	4.4	8.5	3.8	7.5	7.1	3.4	6.3	25.6	21.7	24.7	21.7	11.8	19.6	55.3	19.1	47.3
Kalaburagi	4.1	2.5	3.7	10.4	1.9	8.2	3.6	0.9	3.0	7.2	5.9	6.8	43.5	28.6	39.7	27.9	5.0	22.0
Bengaluru Urban	4.3	3.2	3.3	2.3	2.1	2.1	1.5	1.1	1.1	19.6	9.8	11.3	8.8	7.6	7.8	13.9	4.5	6.0
Dharwad	3.1	3.4	3.3	11.8	3.4	6.7	4.4	3.0	3.5	47.6	25.6	34.2	6.4	9.3	8.2	63.2	10.7	31.2
All Districts	**6.7**	**4.2**	**5.9**	**12.7**	**5.1**	**10.4**	**5.9**	**3.2**	**5.1**	**28.0**	**15.7**	**24.4**	**16.0**	**10.6**	**14.4**	**43.5**	**10.2**	**33.7**

Annexure 38 : % of Census HHs Dilapidated and wall/roof/floor of certain characteristics– ST HHs - 2011

Districts	Dilapidated HHs			Roof of Grass/ Thatch/ Bamboo/ Wood/Mud etc.			Wall of Grass/ Thatch/ Bamboo/ Wood/Mud etc.			Wall of Mud/Unburnt brick			Wall of Stone not packed with mortar			Mud floor		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Kodagu	10.6	3.4	10.4	8.1	1.2	7.8	7.8	1.0	7.6	54.7	32.7	54.0	5.8	7.0	5.8	64.5	9.8	62.7
Mandya	11.1	5.9	10.0	11.0	10.0	10.8	7.8	5.1	7.2	32.7	20.0	29.9	9.1	6.4	8.5	39.2	10.9	33.0
Uttara Kannada	11.1	5.7	10.0	6.2	1.6	5.3	7.2	4.7	6.7	46.0	20.8	41.0	5.6	16.4	7.8	64.6	19.5	55.7
Ramanagara	10.9	3.9	9.6	18.4	6.2	16.1	8.1	3.6	7.3	32.5	16.8	29.6	5.2	4.8	5.2	42.4	13.1	37.0
Chamarajanagara	10.3	5.9	9.4	11.6	7.0	10.7	6.3	3.3	5.7	41.3	40.0	41.0	5.8	7.3	6.1	29.3	9.6	25.5
Raichur	8.5	5.6	8.2	51.1	26.8	48.7	22.8	20.2	22.6	19.9	16.2	19.5	19.8	17.3	19.5	51.0	25.2	48.4
Mysuru	9.2	4.4	8.0	6.3	2.3	5.3	4.4	1.0	3.6	46.9	22.7	41.1	6.6	6.4	6.6	39.4	7.4	31.7
Vijayapura	8.4	6.6	7.9	51.6	11.8	41.3	9.1	3.0	7.5	13.6	21.4	15.6	34.6	16.9	30.0	30.7	9.7	25.3
Shivamogga	8.5	4.3	7.4	4.0	1.8	3.4	7.2	2.1	5.9	44.9	25.3	39.9	4.9	8.6	5.9	59.3	11.6	47.1
Yadgir	7.4	4.6	7.1	52.7	27.4	49.7	13.3	8.3	12.7	9.6	10.4	9.7	34.5	29.4	33.9	40.3	18.1	37.7
Chikkamagaluru	7.3	4.8	7.0	4.0	0.8	3.6	5.0	1.4	4.6	47.5	27.7	45.1	4.8	4.5	4.8	44.6	12.8	40.7
Hassan	7.8	3.6	6.9	2.2	2.0	2.2	3.7	1.7	3.3	56.1	21.3	49.0	3.2	3.4	3.3	36.4	5.9	30.2
Davanagere	6.9	5.6	6.7	9.3	4.3	8.3	6.0	5.0	5.8	33.4	24.3	31.7	15.8	8.2	14.4	51.6	15.2	44.7
Udupi	6.9	4.7	6.5	1.9	1.7	1.9	2.2	2.1	2.1	38.3	27.1	36.0	11.5	15.5	12.3	16.9	8.3	15.1
Ballari	7.0	4.2	6.2	33.5	18.4	29.2	11.0	9.2	10.5	13.1	14.5	13.5	20.2	13.5	18.3	30.6	10.9	25.0
Chitradurga	6.7	2.7	6.2	23.4	11.8	21.9	8.7	7.2	8.5	19.4	18.2	19.2	19.1	11.1	18.0	45.3	12.8	41.0
Koppal	6.0	5.8	6.0	41.8	17.4	39.8	10.5	18.6	11.2	20.5	16.5	20.1	23.1	10.7	22.1	40.1	14.9	38.1
Tumakuru	6.3	4.4	6.0	15.3	5.1	13.7	4.7	1.8	4.3	19.2	16.1	18.7	10.5	4.8	9.6	20.9	5.1	18.4
Chikkaballapura	6.3	2.3	5.8	14.5	5.1	13.4	2.1	0.7	2.0	18.2	10.9	17.4	8.3	5.3	8.0	29.1	7.7	26.7
Bagalkote	5.4	6.4	5.6	54.6	28.9	49.8	11.2	11.2	11.2	14.0	11.0	13.4	29.5	28.3	29.2	38.4	16.8	34.3
Haveri	5.9	3.5	5.6	14.5	6.6	13.6	7.2	6.3	7.1	45.4	24.2	43.0	17.5	11.2	16.8	64.8	19.3	59.6
Kolar	6.0	2.1	5.4	8.1	1.1	7.0	1.3	0.6	1.2	30.4	10.8	27.4	6.4	8.5	6.8	37.4	5.9	32.5
Belagavi	5.4	5.1	5.3	8.9	3.4	8.0	6.6	2.5	5.9	34.8	25.6	33.2	28.4	13.9	25.9	64.8	18.3	57.0
Bidar	5.4	2.6	5.1	3.7	2.5	3.5	4.5	0.9	4.1	19.0	14.3	18.5	30.4	22.9	29.7	67.7	23.1	63.2
Dakshina Kannada	5.3	4.2	5.1	2.8	2.0	2.6	2.1	1.5	1.9	50.4	19.7	43.8	12.7	12.2	12.6	35.8	10.4	30.4
Bengaluru Rural	5.2	3.6	4.9	7.0	5.3	6.7	1.2	1.4	1.2	27.0	12.5	24.1	4.4	7.7	5.0	23.4	6.4	20.1
Gadag	4.9	4.8	4.9	40.3	22.7	36.9	9.8	9.8	9.8	25.1	28.2	25.7	26.9	11.0	23.8	48.2	13.6	41.5
Dharwad	5.1	4.0	4.6	22.4	3.9	14.2	8.6	2.8	6.0	53.2	26.9	41.5	6.0	9.0	7.3	65.3	16.1	43.5
Kalaburagi	5.5	1.9	4.1	15.6	3.1	10.9	5.4	1.0	3.7	6.2	5.5	6.0	43.9	26.6	37.4	24.5	2.7	16.3
Bengaluru Urban	4.2	2.8	2.9	3.7	2.0	2.1	2.0	0.9	1.0	15.7	6.2	7.2	9.7	7.7	7.9	12.9	3.7	4.6
All Districts	**7.0**	**3.9**	**6.3**	**20.2**	**6.8**	**16.9**	**8.0**	**3.8**	**7.0**	**28.5**	**15.5**	**25.4**	**16.8**	**10.4**	**15.3**	**43.9**	**9.6**	**35.6**

Annexure 39 : HH characteristics in Slum HHs - percentage

Districts	Pucca House		Electricity Connection		Piped Water connection	
	With Patta/ PC	without Patta/PC	With Patta/ PC	without Patta/PC	With Patta/ PC	without Patta/PC
Bagalkote	33.3	30.0	82.1	74.9	19.7	13.4
Bengaluru Rural	32.8	26.5	78.9	82.3	6.1	5.1
Bengaluru Urban	45.0	40.6	87.5	89.7	42.9	37.7
Belagavi	36.4	31.5	85.8	81.0	34.9	37.5
Ballari	48.1	34.3	87.4	90.1	33.7	34.2
Bidar	36.3	32.2	82.4	86.0	19.9	20.3
Vijayapura	30.2	23.3	87.6	84.1	27.6	25.6
Chamarajnagara	49.2	44.6	87.1	78.6	47.0	30.5
Chikkaballapura	61.2	49.5	91.2	93.3	23.0	21.1
ChiKkamagaluru	41.4	33.8	92.5	90.6	23.5	16.9
Chitradurga	60.8	50.1	88.9	88.0	28.9	21.2
Dakshina Kannada	52.6	49.4	89.8	87.4	38.9	34.7
Davangere	37.4	33.9	91.0	88.8	24.9	20.0
Dharwad	35.8	23.8	81.8	75.7	22.5	12.8
Gadag	30.6	23.0	85.3	80.8	21.6	16.9
Kalaburagi	39.9	34.7	76.2	81.8	28.0	25.0
Hassan	59.2	45.2	94.1	93.0	40.7	28.9
Haveri	46.4	25.9	90.9	83.4	28.2	21.7
Kodagu	50.8	38.7	92.3	92.3	31.6	31.3
Kolar	72.5	44.9	91.3	86.8	13.9	9.8
Koppal	38.6	24.5	84.0	83.4	19.2	12.9
Mandya	51.4	39.6	87.9	83.7	28.3	32.4
Mysuru	40.6	23.3	85.5	88.6	44.9	54.0
Raichur	37.4	28.4	71.5	71.0	22.7	18.3
Ramanagara	46.7	27.0	88.8	88.5	39.2	30.0
Shivamogga	49.5	39.5	93.1	91.8	34.8	25.6
Tumakuru	32.2	29.6	88.8	88.6	29.2	25.9
Udupi	43.0	12.2	92.2	30.4	29.8	10.6
Uttara Kannada	45.6	23.8	92.9	91.0	22.6	31.2
Yadgir	39.4	25.9	82.7	83.6	31.0	25.7
All Districts	**43.9**	**36.4**	**86.5**	**86.9**	**31.6**	**28.0**

Annexure 39 (Cont..) : HH characteristics in Slum HHs % percentage

Districts	Having Toilet Facility		Having Bathroom Facility		LPG Gas Connection for cooking	
	With Patta/PC	without Patta/PC	With Patta/PC	without Patta/PC	With Patta/PC	without Patta/PC
Bagalkote	11.3	6.3	69.5	56.4	10.8	8.5
Bengaluru Rural	33.9	32.2	40.1	45.1	13.4	12.3
Bengaluru Urban	49	47.1	75.2	77.5	39.3	38.8
Belagavi	30.7	28.2	78.9	80.1	31.5	27.5
Ballari	30.6	35.1	66.2	66.8	20.7	23.4
Bidar	28.3	27.7	67.2	69.6	13.3	11.5
Vijayapura	13.9	17	78.1	76.9	16.1	14.2
Chamarajnagara	14.3	31.1	58.5	60.5	16.8	20.2
Chickkaballapura	47.3	42.8	62.2	61.3	27.4	23.7
Chikkamagaluru	45.3	41.3	77.8	77.7	48.8	47.2
Chitradurga	42.3	35.7	67	67.2	40	35.9
Dakshina Kannada	62.4	46	81	78.3	32.6	27.4
Davangere	31.2	27.5	70.5	78	26.2	20.8
Dharwad	10.7	8.6	62.2	65.1	8.9	10.1
Gadag	16.8	15.6	76.2	76.3	19.3	17
Kalaburagi	24	17.6	70.5	68.5	14.3	11.7
Hassan	47.4	50.2	89.4	91.5	36.8	31.6
Haveri	36.3	28	78.5	78.5	18.2	16
Kodagu	57.2	46.7	79.6	79.4	63.1	53.1
Kolar	40.6	37.1	64.2	70.7	27.2	19.9
Koppal	25.2	21.8	59.6	55.1	14.2	13.5
Mandya	43	44.2	75.2	74.5	18.6	16.5
Mysuru	36	56.9	70.1	82.8	25.3	33.7
Raichur	19.3	17.6	64.6	63.3	10.6	12.6
Ramanagara	44.6	43.1	64.6	69.2	12.4	9
Shivamogga	77.7	69.1	86.7	88.7	42.7	38.6
Tumkuu	33.5	37.5	65.7	73.8	27.8	25.9
Udupi	80.5	26.1	62.9	24.8	34.7	12.1
Uttara Kannada	38.9	33.8	76.9	83.5	27.3	24.5
Yadgir	15	16.2	75	84.2	16	19.8
Karnataka State	**37.4**	**37.5**	**72.1**	**74.3**	**27.3**	**27.5**

Annexure 40 : Main source of lighting – All HHs - % of HHs, 2011 Districts

District	Electricity			Kerosene			Solar			Other Oils			Any other			No lighting		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Yadgir	75.09	89.87	77.95	23.44	9.20	20.69	0.29	0.17	0.27	0.23	0.25	0.24	0.06	0.05	0.05	0.90	0.46	0.81
Vijayapura	77.01	92.09	80.63	21.77	6.87	18.20	0.29	0.12	0.25	0.23	0.12	0.20	0.09	0.05	0.08	0.62	0.75	0.65
Kodagu	79.95	96.90	82.38	18.13	2.78	15.93	0.93	0.09	0.81	0.17	0.03	0.15	0.13	0.03	0.11	0.69	0.18	0.62
Belagavi	79.81	95.28	83.92	18.93	4.04	14.98	0.22	0.11	0.19	0.18	0.08	0.15	0.07	0.07	0.07	0.78	0.42	0.69
Bagalkote	82.03	90.49	84.81	16.77	8.44	14.03	0.19	0.16	0.18	0.31	0.32	0.31	0.04	0.05	0.04	0.66	0.55	0.63
Koppal	84.96	90.97	86.03	13.83	8.10	12.81	0.16	0.12	0.15	0.22	0.11	0.20	0.09	0.06	0.08	0.74	0.64	0.72
Bidar	84.79	92.15	86.58	13.79	6.78	12.09	0.18	0.16	0.17	0.20	0.12	0.18	0.11	0.30	0.16	0.93	0.48	0.82
Chitradurga	85.24	92.70	86.76	13.14	6.30	11.74	0.63	0.26	0.56	0.18	0.07	0.15	0.05	0.03	0.05	0.76	0.64	0.74
Chamarajanagara	85.64	93.10	86.88	13.46	5.97	12.22	0.28	0.11	0.25	0.10	0.07	0.09	0.08	0.07	0.07	0.44	0.69	0.48
Kalaburagi	83.33	94.44	87.00	15.57	4.95	12.06	0.20	0.12	0.17	0.22	0.07	0.17	0.05	0.04	0.05	0.63	0.39	0.55
Raichur	85.99	91.82	87.54	12.56	7.17	11.13	0.36	0.17	0.31	0.22	0.15	0.20	0.07	0.05	0.07	0.79	0.65	0.75
Chikkamagaluru	85.33	96.36	87.63	13.37	3.07	11.22	0.47	0.11	0.40	0.24	0.24	0.24	0.06	0.05	0.06	0.53	0.18	0.46
Tumakuru	86.33	95.83	88.43	12.82	3.68	10.80	0.12	0.09	0.11	0.20	0.06	0.17	0.06	0.09	0.07	0.47	0.25	0.42
Shivamogga	87.33	96.05	90.47	11.77	3.47	8.77	0.21	0.15	0.19	0.22	0.12	0.18	0.06	0.04	0.05	0.42	0.16	0.33
Dakshina Kannada	84.67	97.48	90.83	14.13	2.25	8.42	0.72	0.06	0.40	0.13	0.04	0.09	0.06	0.06	0.06	0.29	0.11	0.20
Uttara Kannada	88.90	95.77	90.90	10.21	3.87	8.36	0.50	0.12	0.39	0.11	0.08	0.10	0.07	0.02	0.06	0.21	0.14	0.19
Haveri	90.23	93.43	90.93	9.12	6.03	8.45	0.11	0.14	0.12	0.11	0.10	0.11	0.03	0.05	0.03	0.40	0.25	0.37
Chikkaballapura	89.61	96.50	91.12	9.43	3.06	8.03	0.14	0.15	0.14	0.19	0.07	0.16	0.05	0.05	0.05	0.59	0.18	0.50
Udupi	89.23	96.23	91.27	9.92	3.23	7.97	0.48	0.13	0.38	0.13	0.23	0.16	0.05	0.04	0.05	0.18	0.14	0.17
Ballari	89.04	95.07	91.42	9.90	4.33	7.70	0.15	0.08	0.12	0.12	0.10	0.11	0.24	0.05	0.16	0.55	0.37	0.48
Mandya	90.81	95.87	91.67	8.70	3.71	7.85	0.10	0.07	0.10	0.09	0.06	0.08	0.03	0.08	0.04	0.28	0.21	0.27
Gadag	92.02	91.59	91.87	7.30	7.94	7.53	0.18	0.16	0.17	0.15	0.12	0.14	0.05	0.02	0.04	0.30	0.18	0.26
Ramaagara	90.55	96.74	91.97	8.70	2.88	7.37	0.20	0.09	0.17	0.14	0.06	0.12	0.03	0.04	0.04	0.38	0.18	0.34
Davanagere	90.11	96.09	92.05	9.03	3.53	7.24	0.16	0.10	0.14	0.17	0.06	0.13	0.04	0.02	0.04	0.49	0.20	0.40
Mysuru	89.75	97.77	93.09	9.50	1.95	6.35	0.15	0.06	0.11	0.12	0.04	0.09	0.05	0.05	0.05	0.43	0.12	0.30
Hassan	92.16	97.82	93.34	7.25	1.96	6.15	0.10	0.05	0.09	0.11	0.05	0.10	0.03	0.01	0.02	0.35	0.12	0.30
Kolar	92.37	95.96	93.51	6.87	3.46	5.79	0.15	0.16	0.16	0.14	0.06	0.11	0.10	0.04	0.08	0.38	0.30	0.35
Dharwad	90.82	95.52	93.52	8.58	4.05	5.97	0.14	0.09	0.11	0.17	0.08	0.12	0.04	0.05	0.05	0.26	0.21	0.23
Bengaluru Rural	94.79	96.73	95.33	4.66	2.89	4.17	0.09	0.07	0.08	0.16	0.08	0.13	0.05	0.05	0.05	0.25	0.18	0.23
Bengaluru Urban	95.76	98.27	98.05	3.52	1.30	1.49	0.11	0.11	0.11	0.19	0.08	0.09	0.07	0.08	0.08	0.35	0.16	0.18
All Districts	**86.72**	**96.42**	**90.63**	**12.28**	**3.07**	**8.56**	**0.24**	**0.11**	**0.19**	**0.17**	**0.09**	**0.14**	**0.07**	**0.07**	**0.07**	**0.52**	**0.24**	**0.41**

Annexure 41 : Main source of lighting – All HHs - % of HHs, 2011 Taluks

Lowest 15 taluks (based on electricity as source)

Taluk	Electricity			Kerosene			Solar			Other Oils			Any other			No lighting		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Indi	67.58	86.75	69.35	30.82	10.16	28.91	0.18	0.18	0.18	0.24	0.16	0.24	0.23	0.08	0.22	0.94	2.67	1.10
Athni	71.30	93.96	73.37	27.89	4.89	25.80	0.27	0.16	0.26	0.13	0.14	0.13	0.04	0.00	0.03	0.36	0.83	0.41
Raybag	72.07	89.63	73.95	25.62	8.51	23.78	0.29	0.12	0.27	0.38	0.20	0.36	0.24	0.09	0.22	1.40	1.45	1.40
Shorapur	72.28	87.72	74.16	26.56	11.44	24.71	0.21	0.26	0.21	0.18	0.20	0.18	0.06	0.07	0.06	0.72	0.31	0.67
Gokak	71.15	89.26	75.45	27.37	9.83	23.21	0.22	0.15	0.21	0.20	0.10	0.18	0.06	0.06	0.06	1.00	0.60	0.90
Beltangadi	76.44	91.62	77.31	21.30	7.80	20.52	1.68	0.29	1.60	0.17	0.22	0.17	0.07	0.03	0.06	0.35	0.03	0.33
Jevargi	76.76	90.81	78.06	22.17	9.05	20.96	0.15	0.02	0.14	0.29	0.02	0.27	0.05	0.06	0.05	0.58	0.04	0.53
Sindgi	77.78	87.65	78.72	21.20	12.04	20.33	0.26	0.13	0.25	0.15	0.04	0.14	0.08	0.04	0.08	0.52	0.09	0.48
Shahpur	76.94	91.37	79.80	21.46	7.93	18.78	0.38	0.07	0.32	0.25	0.16	0.23	0.04	0.06	0.05	0.93	0.41	0.83
Challakere	78.44	87.61	79.88	19.19	11.01	17.91	1.12	0.67	1.05	0.23	0.15	0.22	0.10	0.02	0.09	0.91	0.54	0.86
Sulya	77.94	95.11	80.10	19.54	4.11	17.60	1.93	0.33	1.73	0.18	0.08	0.17	0.17	0.05	0.16	0.23	0.33	0.24
Jamkhandi	75.01	88.38	80.14	22.83	10.71	18.17	0.36	0.10	0.26	0.64	0.18	0.46	0.06	0.06	0.06	1.11	0.56	0.90
Yadgir	76.71	89.88	80.17	21.55	8.99	18.26	0.30	0.19	0.27	0.28	0.34	0.30	0.07	0.03	0.06	1.09	0.56	0.95
Supa	80.32	-	80.32	14.55	-	14.55	4.41	-	4.41	0.27	-	0.27	0.09	-	0.09	0.36	-	0.36
Virajpet	78.61	94.76	80.54	19.53	4.53	17.74	1.00	0.18	0.90	0.16	0.03	0.15	0.10	0.07	0.09	0.60	0.43	0.58

Annexure 41 : Main source of lighting – All HHs - % of HHs, 2011 Taluks

Highest 15 taluks (based on electricity as source)

Taluk	Electricity			Kerosene			Solar			Other Oils			Any other			No lighting		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Ballari	91.38	97.20	94.61	7.04	2.46	4.50	0.13	0.08	0.10	0.10	0.09	0.10	0.78	0.05	0.37	0.57	0.12	0.32
Harihar	93.94	95.80	94.62	5.26	3.97	4.79	0.22	0.10	0.17	0.09	0.03	0.07	0.04	0.03	0.04	0.46	0.08	0.32
Gadag	94.38	94.91	94.66	5.15	4.71	4.92	0.13	0.12	0.12	0.10	0.09	0.09	0.06	0.01	0.03	0.18	0.16	0.17
Davanagere	90.52	97.10	94.72	8.57	2.53	4.72	0.24	0.11	0.16	0.20	0.06	0.11	0.05	0.02	0.03	0.41	0.19	0.27
Alur	94.53	99.23	94.88	4.59	0.64	4.29	0.11	0.13	0.11	0.10	0.00	0.09	0.06	0.00	0.06	0.61	0.00	0.57
Kolar	93.70	97.75	95.18	5.29	1.92	4.06	0.17	0.19	0.18	0.18	0.02	0.12	0.29	0.09	0.22	0.36	0.02	0.24
Belagavi	90.70	97.51	95.36	8.09	2.01	3.92	0.15	0.09	0.11	0.08	0.05	0.06	0.06	0.08	0.08	0.92	0.26	0.47
Hassan	93.60	98.77	95.90	5.83	1.12	3.74	0.12	0.03	0.08	0.13	0.03	0.08	0.01	0.01	0.01	0.31	0.04	0.19
Nelamangala	95.64	97.98	96.17	3.92	1.68	3.41	0.05	0.00	0.04	0.17	0.04	0.14	0.06	0.03	0.06	0.16	0.28	0.19
Bengaluru North	96.20	97.61	96.45	3.15	2.21	2.98	0.10	0.02	0.08	0.26	0.07	0.22	0.05	0.08	0.06	0.24	0.01	0.20
Bengaluru East	96.46	-	96.46	2.87	-	2.87	0.10	-	0.10	0.05	-	0.05	0.05	-	0.05	0.47	-	0.47
Hosakote	96.31	97.75	96.63	3.16	2.05	2.92	0.13	0.05	0.11	0.09	0.04	0.08	0.04	0.07	0.05	0.27	0.05	0.22
Anekal	96.00	98.21	96.70	3.31	1.25	2.66	0.13	0.12	0.13	0.16	0.17	0.17	0.09	0.22	0.13	0.30	0.04	0.22
Mangaluru	92.45	97.85	96.73	7.08	1.90	2.98	0.07	0.05	0.05	.10	0.03	0.05	0.04	0.07	0.06	0.27	0.10	0.13
Mysuru	93.08	98.54	97.43	5.96	1.20	2.16	0.05	0.07	0.06	0.08	0.03	0.04	0.03	0.05	0.04	0.81	0.11	0.25

Annexure 42 : Main source of lighting – SC HHs - % of SC HHs, 2011 Districts

District	Electricity			Kerosene			Solar			Other Oil			Any other			No lighting		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Dakshina Kannada	58.8	87.4	67.2	40.1	11.7	31.7	0.2	0.0	0.2	0.2	0.0	0.1	0.1	0.2	0.1	0.6	0.7	0.6
Kodagu	72.0	90.2	74.0	26.0	9.3	24.1	0.3	0.0	0.2	0.2	0.1	0.2	0.1	0.0	0.1	1.5	0.2	1.4
Yadgir	73.7	81.5	74.6	24.6	16.7	23.6	0.4	0.1	0.4	0.3	0.8	0.3	0.1	0.1	0.1	1.0	0.9	1.0
Chikkamagaluru	73.9	89.9	76.0	24.5	8.9	22.5	0.2	0.1	0.1	0.3	0.3	0.3	0.1	0.1	0.1	1.0	0.6	1.0
Udupi	74.5	85.5	77.2	24.3	13.1	21.5	0.3	0.2	0.3	0.4	0.8	0.5	0.1	0.0	0.1	0.4	0.4	0.4
Chitradurga	78.5	83.7	79.3	18.8	14.4	18.1	1.1	0.6	1.1	0.2	0.1	0.2	0.1	0.1	0.1	1.3	1.0	1.3
Tumakuru	78.6	85.8	79.7	20.1	12.6	19.0	0.1	0.2	0.2	0.3	0.1	0.3	0.1	0.4	0.1	0.7	0.8	0.8
Belagavi	77.5	89.5	80.2	21.0	9.1	18.4	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	1.0	0.9	1.0
Bidar	80.5	84.1	81.1	17.5	14.0	16.9	0.2	0.2	0.2	0.3	0.3	0.3	0.1	0.5	0.2	1.3	0.9	1.3
Vijayapura	80.6	85.0	81.5	18.3	13.0	17.3	0.2	0.3	0.2	0.2	0.2	0.2	0.0	0.2	0.1	0.6	1.3	0.7
Bagalkote	81.9	81.0	81.6	16.8	17.0	16.8	0.2	0.2	0.2	0.3	1.0	0.5	0.1	0.1	0.1	0.8	0.8	0.8
Koppal	82.2	80.7	82.0	16.0	16.5	16.0	0.2	0.2	0.2	0.4	0.1	0.3	0.1	0.0	0.1	1.2	2.5	1.4
Kalaburagi	81.3	88.1	83.0	17.3	10.5	15.6	0.3	0.2	0.2	0.3	0.1	0.2	0.0	0.0	0.0	0.8	1.0	0.8
Shivamogga	80.7	91.3	83.5	17.9	7.8	15.3	0.2	0.2	0.2	0.4	0.2	0.3	0.1	0.1	0.1	0.7	0.4	0.7
Chikkaballapura	83.9	90.0	84.6	14.4	9.1	13.8	0.1	0.1	0.1	0.4	0.2	0.3	0.1	0.2	0.1	1.1	0.5	1.0
Raichur	83.8	87.2	84.6	14.4	11.0	13.6	0.6	0.2	0.5	0.2	0.4	0.2	0.1	0.1	0.1	0.9	1.1	1.0
Mandya	84.7	86.8	85.1	14.5	11.8	14.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.1	0.5	0.6	0.5
Davanagere	83.8	91.2	85.2	15.0	8.1	13.7	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.8	0.4	0.8
Uttara Kannada	82.9	91.5	85.5	16.2	8.1	13.7	0.2	0.1	0.2	0.1	0.1	0.1	0.3	0.0	0.2	0.3	0.2	0.2
Haveri	85.9	84.9	85.8	13.2	14.2	13.3	0.1	0.2	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.6	0.5	0.6
Ramanagara	84.6	92.2	85.9	14.1	7.3	12.9	0.2	0.1	0.2	0.3	0.1	0.3	0.1	0.0	0.1	0.7	0.2	0.6
Hassan	85.4	93.3	86.4	13.6	6.2	12.7	0.1	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.6	0.4	0.6
Chamarajanagara	86.3	89.5	86.8	12.8	9.3	12.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.6	1.0	0.6
Gadag	89.0	83.5	87.5	10.0	15.8	11.7	0.2	0.4	0.2	0.3	0.1	0.3	0.1	0.0	0.1	0.4	0.1	0.3
Ballari	86.4	91.2	87.9	12.3	7.8	10.9	0.2	0.1	0.2	0.2	0.2	0.2	0.5	0.0	0.3	0.5	0.6	0.5
Mysuru	86.3	94.0	88.5	12.6	5.4	10.6	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.7	0.4	0.6
Kolar	89.6	91.8	90.2	9.3	7.0	8.6	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.0	0.1	0.6	0.9	0.7
Bengaluru Rural	90.7	88.0	90.3	8.3	11.1	8.7	0.1	0.1	0.1	0.4	0.2	0.3	0.1	0.2	0.1	0.5	0.4	0.5
Dharwad	89.4	91.3	90.5	9.8	8.0	8.7	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.3	0.3	0.3
Bengaluru Urban	92.4	95.7	95.2	6.5	3.2	3.7	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.6	0.6	0.6
All Districts	**82.4**	**91.4**	**85.1**	**16.2**	**7.5**	**13.6**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.1**	**0.1**	**0.1**	**0.8**	**0.7**	**0.8**

Annexure 43: Main source of lighting – ST HHs % of ST HHs, 2011

District	Electricity			Kerosene			Solar			Other Oil			Other sources			No lighting		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Kodagu	50.1	96.8	51.6	45.7	2.8	44.3	2.5	0.0	2.4	0.3	0.0	0.3	0.3	0.4	0.3	1.2	0.0	1.1
Yadgir	66.4	82.0	68.2	32.1	16.7	30.3	0.3	0.2	0.2	0.2	0.3	0.2	0.1	0.0	0.0	1.0	0.7	0.9
Belagavi	68.7	85.9	71.6	29.5	11.4	26.5	0.2	0.3	0.2	0.2	0.4	0.2	0.1	0.1	0.1	1.3	1.9	1.4
Udupi	73.8	89.2	76.9	23.4	9.5	20.6	2.3	0.3	1.9	0.1	0.7	0.3	0.1	0.3	0.1	0.2	0.0	0.1
Dakshina Kannada	73.0	92.3	77.2	24.3	6.7	20.5	1.8	0.1	1.5	0.2	0.1	0.2	0.1	0.2	0.1	0.5	0.6	0.5
Chikkamagaluru	75.1	94.1	77.4	21.3	5.0	19.3	2.4	0.1	2.1	0.5	0.5	0.5	0.1	0.1	0.1	0.7	0.3	0.6
Bagalkote	78.8	81.7	79.4	20.2	16.4	19.5	0.1	0.2	0.1	0.3	0.3	0.3	0.0	0.1	0.0	0.6	1.3	0.7
Kalaburagi	75.4	88.0	80.1	22.9	11.4	18.5	0.3	0.2	0.2	0.3	0.1	0.2	0.3	0.0	0.2	0.8	0.4	0.7
Chamarajanagara	78.0	89.1	80.2	19.9	9.4	17.8	1.6	0.1	1.3	0.1	0.1	0.1	0.0	0.1	0.0	0.4	1.2	0.5
Raichur	80.7	79.7	80.6	17.5	18.4	17.6	0.3	0.3	0.3	0.4	0.2	0.3	0.1	0.0	0.1	1.1	1.5	1.1
Vijayapura	78.1	89.3	81.0	20.8	8.9	17.7	0.4	0.1	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.5	1.4	0.7
Koppal	80.8	84.4	81.1	17.8	14.9	17.6	0.2	0.0	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.9	0.4	0.9
Ramanagara	80.2	92.1	82.4	18.4	7.2	16.4	0.6	0.3	0.6	0.0	0.2	0.1	0.1	0.0	0.0	0.6	0.1	0.5
Bidar	82.2	89.5	82.9	16.4	9.7	15.7	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.9	0.2	0.8
Chitradurga	82.3	87.9	83.1	16.1	10.5	15.3	0.4	0.4	0.4	0.3	0.1	0.3	0.1	0.0	0.1	0.8	1.0	0.8
Mandya	81.3	91.6	83.5	17.8	7.1	15.4	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.1	0.0	0.7	0.9	0.7
Tumakuru	81.9	92.9	83.6	17.2	5.9	15.5	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.0	0.1	0.5	1.0	0.6
Uttara Kannada	81.9	92.1	83.9	17.0	6.8	15.0	0.3	0.4	0.3	0.4	0.0	0.3	0.1	0.1	0.1	0.3	0.6	0.4
Shivamogga	82.8	93.3	85.5	16.0	6.0	13.5	0.1	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.7	0.2	0.6
Ballari	84.5	90.9	86.3	14.1	7.7	12.3	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.9	1.0	0.9
Mysuru	84.0	95.2	86.7	15.0	4.4	12.5	0.4	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.2	0.4
Haveri	87.9	89.9	88.1	11.3	9.4	11.1	0.1	0.2	0.1	0.1	0.2	0.1	0.0	0.2	0.0	0.5	0.2	0.5
Chikkaballapura	87.5	94.1	88.2	11.4	5.4	10.7	0.2	0.3	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.8	0.1	0.7
Davanagere	87.7	91.5	88.4	11.2	7.8	10.5	0.1	0.1	0.1	0.3	0.2	0.3	0.1	0.0	0.1	0.7	0.4	0.6
Dharwad	87.7	89.6	88.6	11.3	9.7	10.6	0.1	0.1	0.1	0.3	0.1	0.2	0.1	0.1	0.1	0.5	0.4	0.5
Hassan	87.8	94.9	89.2	10.6	4.7	9.4	0.1	0.0	0.1	0.5	0.1	0.4	0.0	0.0	0.0	1.0	0.4	0.9
Gadag	90.7	87.6	90.1	8.6	11.3	9.1	0.2	0.5	0.3	0.2	0.2	0.2	0.1	0.0	0.1	0.3	0.3	0.3
Kolar	91.3	94.1	91.7	8.1	5.0	7.6	0.1	0.6	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.4	0.3	0.4
Bengaluru Rural	93.0	92.9	93.0	6.2	5.2	6.0	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.3	1.2	0.5
Bengaluru Urban	91.2	95.2	94.8	7.7	3.8	4.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.6	0.5	0.5
All Districts	**81.0**	**91.8**	**83.6**	**17.5**	**7.1**	**15.0**	**0.4**	**0.2**	**0.4**	**0.2**	**0.2**	**0.2**	**0.1**	**0.1**	**0.1**	**0.7**	**0.7**	**0.7**

Annexure 44 : Main source of lighting – SC HHs % of HHs, 2011 Taluks

Lowest 15 taluks (based on electricity as source)

Taluks	Electricity			Kerosene			Solar			Other Oil			Any other			No lighting		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Beltangadi	51.4	80.5	52.8	47.0	19.5	45.6	0.5	0.0	0.4	0.2	0.0	0.1	0.1	0.0	0.1	0.9	0.0	0.8
Puttur	50.7	76.8	54.4	48.5	22.4	44.8	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.6	0.8	0.6
Sulya	57.9	78.7	59.8	41.3	18.3	39.2	0.3	0.0	0.3	0.3	0.3	0.3	0.0	0.5	0.0	0.2	2.3	0.3
Madikeri	56.3	95.4	64.3	40.5	4.5	33.1	0.5	0.0	0.4	0.3	0.0	0.2	0.2	0.0	0.2	2.2	0.1	1.8
Karkal	64.1	80.1	65.9	35.0	15.8	32.8	0.3	0.2	0.3	0.3	3.8	0.7	0.1	0.0	0.1	0.3	0.0	0.2
Hosanagara	66.5	95.7	67.9	31.7	1.7	30.2	0.0	0.0	0.0	0.3	0.0	0.3	0.0	2.6	0.2	1.5	0.0	1.4
Shorapur	70.1	78.9	70.7	28.8	20.5	28.2	0.3	0.1	0.3	0.1	0.0	0.1	0.1	0.0	0.1	0.6	0.5	0.6
Sira	70.3	74.0	70.8	28.1	24.1	27.6	0.2	0.1	0.2	0.3	0.1	0.2	0.2	0.0	0.2	1.0	1.7	1.1
Sringeri	69.2	92.2	71.0	28.6	7.8	27.0	1.1	0.0	1.0	0.2	0.0	0.2	0.0	0.0	0.0	0.9	0.0	0.9
Challakere	71.0	74.2	71.4	25.4	22.1	25.0	2.2	1.8	2.1	0.2	0.3	0.2	0.1	0.0	0.1	1.2	1.5	1.2
Raybag	71.4	80.8	72.2	26.4	14.7	25.3	0.3	0.0	0.2	0.3	0.2	0.3	0.1	0.1	0.1	1.5	4.2	1.8
Mudigere	73.2	74.2	73.3	25.9	25.3	25.9	0.1	0.0	0.1	0.4	0.3	0.4	0.0	0.0	0.0	0.3	0.3	0.3
Koppa	73.5	93.9	73.9	25.0	4.9	24.7	0.4	0.0	0.4	0.1	1.2	0.2	0.3	0.0	0.3	0.5	0.0	0.5
Jevargi	73.0	84.9	74.0	25.7	14.8	24.8	0.2	0.0	0.2	0.3	0.1	0.3	0.1	0.1	0.1	0.7	0.1	0.7
Pavagada	73.3	84.3	74.0	25.3	14.1	24.5	0.3	1.1	0.4	0.2	0.0	0.2	0.0	0.2	0.0	0.9	0.3	0.9

Annexure 44 : Main source of lighting – SC HHs % of HHs, 2011 Taluks

Highest 15 taluks (based on electricity as source)

Taluks	Electricity			Kerosene			Solar			Other Oil			Any other			No lighting		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Malur	90.0	95.9	90.7	8.8	3.7	8.2	0.1	0.3	0.1	0.2	0.0	0.2	0.1	0.0	0.1	0.8	0.1	0.7
Hunsur	91.3	88.5	90.8	8.3	10.9	8.7	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.3	0.5	0.3
Ballari	87.2	95.0	90.9	9.8	4.4	7.2	0.2	0.1	0.2	0.2	0.1	0.1	2.0	0.1	1.1	0.6	0.3	0.5
Sandur	90.2	93.4	90.9	8.4	6.0	7.9	0.4	0.1	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.9	0.4	0.8
Srinivaspur	91.5	85.3	91.0	8.0	14.6	8.5	0.1	0.0	0.1	0.2	0.1	0.2	0.1	0.0	0.1	0.2	0.0	0.2
Haliyal	90.8	91.7	91.1	8.6	8.1	8.4	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.0	0.2
Belagavi	87.3	93.1	91.5	11.5	5.5	7.2	0.0	0.2	0.1	0.0	0.1	0.1	0.0	0.4	0.3	1.1	0.7	0.8
Bengaluru North	91.9	93.2	92.1	6.6	6.4	6.6	0.1	0.0	0.1	0.5	0.2	0.5	0.0	0.1	0.0	0.7	0.0	0.6
Kolar	91.1	96.6	92.1	7.4	3.1	6.6	0.1	0.2	0.1	0.4	0.1	0.4	0.2	0.0	0.2	0.7	0.1	0.6
Nelamangala	92.5	92.0	92.4	6.7	7.3	6.8	0.0	0.0	0.0	0.4	0.1	0.4	0.0	0.2	0.0	0.3	0.4	0.4
Bhatkal	93.5	89.7	93.2	6.2	10.3	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
Bengaluru East	93.7		93.7	5.6		5.6	0.1		0.1	0.0		0.0	0.1		0.1	0.5		0.5
Hosakote	93.8	94.4	93.8	5.3	5.4	5.3	0.2	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.5	0.1	0.5
Mysuru	89.7	96.2	94.3	8.2	3.1	4.6	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	1.8	0.4	0.8
Anekal	93.8	97.2	94.4	5.4	2.2	4.8	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.5	0.1	0.4

Annexure 45 : Main source of lighting – ST HHs % of HHs, 2011 Taluks

Lowest 15 taluks (based on electricity as source)

Taluks	Electricity			Kerosene			Solar			Other Oil			Any other			No lighting		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Virajpet	48.7	93.6	49.4	46.6	5.8	45.9	3.0	0.0	3.0	0.1	0.0	0.1	0.3	0.6	0.3	1.3	0.0	1.2
Madikeri	47.8	98.9	52.3	47.9	0.5	43.6	2.3	0.0	2.1	0.7	0.0	0.6	0.4	0.5	0.4	1.0	0.0	0.9
Sringeri	53.0	91.7	54.7	34.1	5.6	32.9	12.8	0.0	12.2	0.1	2.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Ankola	52.7	94.4	57.5	42.6	5.6	38.3	3.2	0.0	2.9	0.7	0.0	0.6	0.0	0.0	0.0	0.7	0.0	0.6
Athani	56.3	89.6	57.7	42.7	4.3	41.1	0.3	1.2	0.3	0.2	0.0	0.2	0.1	0.0	0.1	0.5	4.9	0.6
Somvarpet	56.9	97.9	59.0	40.9	2.1	39.0	0.8	0.0	0.7	0.4	0.0	0.4	0.1	0.0	0.1	0.9	0.0	0.9
Hosanagara	57.0	97.6	59.5	39.2	0.0	36.8	0.0	0.0	0.0	0.5	0.0	0.4	0.0	0.0	0.0	3.3	2.4	3.3
Kundapura	60.1	73.3	60.4	33.7	18.7	33.4	5.7	0.0	5.5	0.1	0.0	0.1	0.3	8.0	0.4	0.2	0.0	0.2
Hukeri	60.3	80.7	60.9	38.2	8.3	37.3	0.1	0.0	0.1	0.2	0.0	0.2	0.1	0.0	0.0	1.1	11.0	1.4
Beltangadi	61.9	87.0	62.6	32.6	10.9	32.0	4.8	1.1	4.7	0.3	1.1	0.3	0.2	0.0	0.2	0.2	0.0	0.2
Shorapur	62.4	78.9	64.2	36.4	20.0	34.7	0.1	0.3	0.2	0.2	0.5	0.2	0.1	0.1	0.1	0.7	0.2	0.7
Parasgad	66.1	83.1	66.7	32.7	16.2	32.1	0.3	0.3	0.3	0.2	0.0	0.2	0.0	0.3	0.0	0.6	0.0	0.6
Raybag	64.5	80.4	66.7	32.6	17.8	30.6	0.5	0.7	0.5	0.2	0.7	0.3	0.1	0.0	0.1	2.1	0.4	1.9
Indi	66.0	82.8	67.2	32.5	8.6	30.8	0.4	0.0	0.4	0.1	0.0	0.1	0.1	1.7	0.2	0.8	6.9	1.2
Jamkhandi	63.6	81.8	67.6	32.6	16.1	29.0	1.1	0.0	0.8	0.3	0.0	0.2	0.0	0.0	0.0	2.4	2.1	2.4

Annexure 45 : Main source of lighting – ST HHs % of HHs, 2011 Taluks

Highest 15 taluks (based on electricity as source)

Taluks	Electricity			Kerosene			Solar			Other Oil			Any other			No lighting		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Nelamangala	92.7	87.5	91.8	6.2	6.8	6.3	0.1	0.0	0.1	0.1	0.5	0.2	0.5	0.2	0.4	0.4	4.9	1.2
Dod Ballapur	91.1	94.4	91.9	8.2	3.8	7.2	0.1	0.6	0.2	0.3	0.1	0.3	0.0	0.2	0.1	0.4	0.9	0.5
Savanur	92.0	97.8	92.2	7.7	2.2	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
Harihar	92.4	91.9	92.3	6.8	7.5	7.0	0.1	0.2	0.1	0.2	0.0	0.1	0.1	0.0	0.1	0.4	0.3	0.4
Bengaluru East	92.4	0.0	92.4	7.6	0.0	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Krishnarajanagara	92.4	93.4	92.5	7.3	6.2	7.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3
Kolar	91.9	95.9	92.7	7.6	3.0	6.7	0.1	1.1	0.3	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.0	0.2
Bhadravati	92.1	94.4	92.8	6.9	4.6	6.3	0.1	0.4	0.2	0.3	0.4	0.3	0.1	0.0	0.1	0.5	0.2	0.4
Srinivaspur	93.0	92.5	92.9	6.5	7.5	6.6	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.0	0.3
Tumakuru	89.9	97.4	92.9	9.5	2.4	6.7	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.1	0.2
Gadag	93.4	93.1	93.3	6.1	5.5	5.9	0.1	0.8	0.4	0.0	0.1	0.0	0.0	0.1	0.1	0.4	0.4	0.4
Hosakote	93.9	91.5	93.4	5.1	7.6	5.6	0.4	0.2	0.3	0.1	0.2	0.1	0.1	0.2	0.1	0.4	0.4	0.4
Devanahalli	94.1	95.5	94.4	5.3	4.2	5.2	0.3	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.2
Mysuru	90.7	97.0	94.5	8.3	2.5	4.9	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.8	0.2	0.5
Bengaluru North	94.9	98.0	95.4	4.1	1.7	3.8	0.1	0.0	0.1	0.2	0.2	0.2	0.3	0.0	0.2	0.4	0.0	0.3

Annexure 46 : Type of Fuel used for cooking – All HHs %, 2011 Districts

Districts	Firewood			Crop residue			Kerosene			LPG/PNG			Electricity			Biogas			Others		
	Rural	Urban	Total	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T
Yadgir	93.3	58.7	86.6	2.6	2.0	2.5	0.2	2.2	0.6	3.1	35.8	9.5	0.1	0.3	0.1	0.1	0.3	0.2	0.4	0.7	0.5
Koppal	89.7	58.5	84.2	1.5	1.0	1.4	0.7	3.9	1.3	7.3	34.9	12.2	0.1	0.3	0.1	0.2	0.7	0.3	0.6	0.6	0.6
Bagalkote	92.7	60.4	82.1	2.5	1.3	2.1	0.2	2.7	1.0	4.1	34.0	13.9	0.0	0.1	0.0	0.3	0.7	0.4	0.3	0.7	0.4
Vijayapura	92.2	41.6	80.1	2.7	2.2	2.6	0.2	6.5	1.7	4.2	47.4	14.5	0.1	0.1	0.1	0.3	1.0	0.4	0.4	1.2	0.7
Raichur	89.0	52.5	79.3	3.0	2.3	2.8	0.4	3.8	1.3	6.4	36.4	14.3	0.2	2.3	0.7	0.4	1.2	0.6	0.7	1.4	0.9
Gadag	89.4	58.9	78.4	5.4	2.7	4.4	0.2	2.8	1.1	4.5	33.2	14.8	0.0	0.1	0.1	0.2	1.5	0.7	0.2	0.8	0.5
Chitradurga	88.3	33.8	77.2	3.0	1.2	2.6	0.3	8.0	1.9	7.3	55.4	17.1	0.0	0.1	0.1	0.4	1.0	0.5	0.6	0.6	0.6
Chamarajanagara	84.1	42.0	77.1	2.7	1.4	2.5	0.8	11.4	2.6	11.6	42.8	16.8	0.0	0.1	0.0	0.5	1.5	0.6	0.4	0.9	0.5
Tumakuru	89.5	26.6	75.6	1.9	0.6	1.6	0.7	12.8	3.3	7.1	58.0	18.3	0.0	0.1	0.1	0.4	1.3	0.6	0.3	0.6	0.4
Mandya	84.1	27.4	74.5	1.9	0.8	1.8	1.0	18.2	3.9	12.1	51.9	18.9	0.1	0.2	0.1	0.6	0.7	0.6	0.2	0.8	0.3
Chikkaballapura	85.6	32.4	73.9	1.7	0.9	1.5	1.2	16.7	4.6	9.5	48.5	18.0	0.1	0.2	0.1	1.5	0.7	1.4	0.5	0.5	0.6
Kalaburagi	88.0	42.3	72.9	8.2	2.9	6.5	0.2	7.9	2.8	2.8	44.6	16.6	0.1	0.1	0.1	0.1	0.8	0.3	0.7	1.3	0.8
Ramanagara	84.7	31.8	72.5	2.0	0.9	1.7	1.7	21.9	6.3	10.5	43.3	18.0	0.0	0.2	0.1	0.8	0.8	0.8	0.3	1.0	0.5
Hassan	86.0	16.8	71.6	2.0	0.4	1.6	0.7	15.4	3.7	9.4	65.4	21.1	0.0	0.1	0.0	1.7	1.2	1.6	0.2	0.7	0.3
Bidar	79.1	47.9	71.5	16.5	5.1	13.7	0.3	7.0	1.9	2.7	37.4	11.1	0.1	0.2	0.1	0.2	0.8	0.4	1.2	1.6	1.3
Haveri	75.2	51.8	70.1	18.7	4.1	15.5	0.1	2.0	0.5	4.9	40.8	12.8	0.0	0.1	0.0	0.8	0.6	0.8	0.2	0.6	0.3
Ballari	86.7	41.1	68.7	2.9	1.1	2.2	0.8	9.0	4.1	8.6	46.8	23.7	0.1	0.2	0.1	0.4	0.9	0.6	0.5	1.0	0.6
Kolar	86.1	30.5	68.5	1.5	1.1	1.3	1.2	19.5	7.0	10.1	47.3	21.9	0.1	0.3	0.1	0.7	0.5	0.6	0.4	0.8	0.5
Kodagu	76.2	17.1	67.7	0.7	0.6	0.7	0.5	3.0	0.8	21.6	77.5	29.6	0.0	0.0	0.0	0.6	1.2	0.7	0.3	0.5	0.3
Chikkamagaluru	80.0	20.7	67.6	1.7	0.4	1.5	0.4	7.3	1.9	16.2	69.7	27.4	0.1	0.1	0.1	1.2	0.9	1.1	0.6	0.9	0.7
Uttara Kannada	78.6	36.3	66.3	0.8	0.6	0.7	0.4	2.8	1.1	14.8	58.7	27.6	0.3	0.5	0.3	4.7	0.4	3.5	0.3	0.6	0.4
Davanagere	78.3	35.8	64.4	9.8	2.4	7.4	0.2	4.3	1.5	9.9	55.9	24.9	0.0	0.1	0.1	1.2	0.9	1.1	0.5	0.7	0.6
Udupi	74.2	37.3	63.5	0.5	0.4	0.5	0.3	1.0	0.5	23.4	59.9	34.0	0.3	0.0	0.2	1.0	0.8	0.9	0.3	0.5	0.3
Belagavi	76.8	26.2	63.4	7.8	1.3	6.1	0.4	5.6	1.8	10.6	64.8	25.0	0.1	0.1	0.1	1.8	0.9	1.5	2.6	1.0	2.2
Shivamogga	79.9	23.1	59.4	2.4	0.7	1.8	0.4	10.6	4.1	13.9	63.6	31.9	0.1	0.5	0.2	2.8	0.7	2.0	0.4	0.9	0.6
Dakshina Kannada	81.4	27.9	55.7	0.5	0.3	0.4	0.2	2.9	1.5	16.4	68.0	41.2	0.0	0.1	0.0	1.2	0.3	0.8	0.3	0.5	0.4
Bengaluru Rural	68.6	16.4	54.1	0.8	0.5	0.7	4.6	20.0	8.9	24.1	61.5	34.5	0.1	0.2	0.1	1.3	0.7	1.2	0.5	0.7	0.6
Dharwad	81.5	27.1	50.2	12.0	1.5	6.0	0.3	7.7	4.6	5.4	61.7	37.8	0.0	0.1	0.1	0.4	0.7	0.5	0.3	1.2	0.9
Mysuru	77.1	11.4	49.8	3.0	0.4	1.9	1.4	15.6	7.3	17.3	71.2	39.8	0.0	0.1	0.1	0.7	0.6	0.7	0.5	0.6	0.6
Bengaluru Urban	31.7	4.1	6.5	0.8	0.3	0.4	17.0	15.8	15.9	47.8	77.9	75.3	0.1	0.2	0.2	1.6	0.8	0.9	1.0	1.0	1.0
All Districts	**82.0**	**21.2**	**57.5**	**4.3**	**0.9**	**2.9**	**1.1**	**11.7**	**5.4**	**11.0**	**64.3**	**32.5**	**0.1**	**0.2**	**0.1**	**1.0**	**0.8**	**0.9**	**0.7**	**0.8**	**0.7**

Annexure 47 : Type of Fuel used for cooking – All HHs %, 2011 Taluks

Highest 15 taluks (based on fuelwood as source)

Taluks	Firewood			Crop residue			Kerosene			LPG/PNG			Electricity			Biogas			Others		
	Rural	Urban	Total	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T
Yelbarga	94.1	74.3	93.0	1.8	0.5	1.7	0.3	0.8	0.3	3.5	23.7	4.7	0.1	0.3	0.1	0.1	0.0	0.1	0.1	0.4	0.1
Devadurga	94.2	72.6	91.9	2.0	1.8	2.0	0.3	2.4	0.5	2.6	22.0	4.6	0.1	0.2	0.1	0.2	0.5	0.3	0.7	0.5	0.6
Jevargi	94.1	68.7	91.8	3.2	3.7	3.2	0.2	2.4	0.4	1.7	23.4	3.7	0.1	0.2	0.1	0.1	1.1	0.2	0.6	0.5	0.6
Kushtagi	94.8	64.2	91.8	1.5	1.3	1.5	0.2	1.6	0.4	2.9	31.4	5.7	0.1	0.4	0.1	0.2	0.2	0.2	0.2	0.8	0.3
Mundargi	95.5	72.3	91.3	1.8	1.9	1.8	0.2	1.2	0.4	2.0	20.7	5.3	0.1	0.1	0.1	0.1	3.4	0.7	0.3	0.5	0.3
Bilgi	93.8	69.7	90.9	1.0	0.8	1.0	0.2	1.1	0.3	4.6	27.4	7.3	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.6	0.2
Basavana Bagevadi	91.6	76.9	90.2	2.6	2.1	2.5	0.3	0.9	0.4	4.8	18.5	6.1	0.1	0.3	0.1	0.4	0.9	0.5	0.3	0.4	0.3
Afzalpur	92.9	66.9	89.6	2.3	3.4	2.4	0.3	1.2	0.4	3.8	27.2	6.8	0.1	0.0	0.1	0.2	0.9	0.2	0.4	0.3	0.4
Kalghatgi	91.3	70.7	89.1	5.0	1.8	4.7	0.3	2.0	0.5	2.7	24.6	5.1	0.0	0.2	0.0	0.4	0.1	0.4	0.2	0.6	0.2
Shorapur	91.9	68.9	89.1	2.2	1.1	2.0	0.3	1.2	0.4	4.9	27.1	7.6	0.1	0.2	0.1	0.2	0.8	0.2	0.5	0.8	0.5
Sindgi	92.8	52.3	88.9	2.9	2.6	2.8	0.1	0.9	0.2	3.7	42.7	7.4	0.0	0.1	0.0	0.2	1.1	0.3	0.2	0.4	0.2
Chincholi	90.1	72.6	88.7	7.7	4.4	7.4	0.1	1.0	0.2	1.6	21.2	3.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.7	0.4
Badami	95.2	68.1	88.0	1.5	2.1	1.7	0.2	1.3	0.5	2.8	27.5	9.4	0.0	0.2	0.1	0.1	0.2	0.1	0.1	0.7	0.3
Kudligi	94.6	57.3	87.9	1.1	0.6	1.0	0.3	1.9	0.6	3.3	39.3	9.7	0.1	0.2	0.1	0.5	0.2	0.4	0.2	0.5	0.3
Chiknayakanhalli	93.2	58.6	87.2	2.1	1.2	2.0	0.2	6.6	1.3	3.9	31.3	8.7	0.0	0.0	0.0	0.3	1.6	0.6	0.2	0.5	0.2

Lowest 15 taluks (based on fuelwood as source)

Taluks	Firewood			Crop residue			Kerosene			LPG/PNG			Electricity			Biogas			Others		
	Rural	Urban	Total	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T
Kalaburagi	84.4	32.6	50.1	10.7	2.1	5.0	0.3	9.7	6.5	3.7	53.8	36.9	0.0	0.1	0.1	0.1	0.8	0.6	0.8	0.9	0.9
Davanagere	79.9	31.5	49.1	8.2	2.3	4.5	0.3	4.6	3.1	10.2	59.7	41.8	0.0	0.1	0.1	1.0	1.0	1.0	0.3	0.6	0.5
Tumakuru	81.4	18.0	48.7	1.2	0.4	0.7	2.2	16.7	9.7	13.6	63.2	39.2	0.1	0.1	0.1	0.8	1.0	0.9	0.7	0.6	0.7
Chikkodi	52.3	30.1	47.9	14.5	2.7	12.2	0.5	4.1	1.2	18.6	61.1	27.1	0.1	0.1	0.1	2.5	0.4	2.1	11.5	1.5	9.6
Bhadravati	70.0	21.0	47.2	2.9	0.8	1.9	1.0	12.6	6.4	22.0	64.0	41.6	0.1	0.1	0.1	3.4	0.8	2.2	0.6	0.7	0.6
Hassan	77.6	7.3	46.4	2.6	0.3	1.6	1.9	17.7	8.9	15.6	72.4	40.8	0.0	0.1	0.1	2.0	1.5	1.8	0.2	0.6	0.5
Shivamogga	73.1	19.3	38.5	3.3	0.6	1.6	0.8	13.3	8.8	17.5	65.0	48.1	0.0	0.1	0.1	4.8	0.8	2.2	0.5	1.0	0.8
Karwar	53.1	21.1	36.5	2.1	0.7	1.3	0.9	3.6	2.3	40.7	73.8	57.9	1.7	0.0	0.8	0.7	0.1	0.4	0.8	0.6	0.8
Belagavi	73.7	14.2	32.9	2.0	0.7	1.1	0.7	7.3	5.2	14.1	75.8	56.4	0.0	0.1	0.1	8.0	1.0	3.2	1.5	0.9	1.0
Mangaluru	68.6	23.2	32.7	0.5	0.3	0.3	0.5	3.4	2.8	29.5	72.3	63.4	0.0	0.1	0.1	0.6	0.3	0.3	0.3	0.5	0.5
Bengaluru South	33.9	8.3	28.7	1.0	0.3	0.8	13.9	21.5	15.4	48.9	63.2	51.8	0.3	0.1	0.3	1.0	3.2	1.5	1.0	3.2	1.4
Bengaluru North	31.9	10.3	28.0	0.7	0.3	0.6	13.8	14.5	13.9	50.4	73.0	54.4	0.1	0.1	0.1	2.5	1.1	2.2	0.7	0.6	0.6
BengaluruEast	25.2		25.2	0.6		0.6	17.7		17.7	53.9		53.9	0.1		0.1	1.2		1.2	1.2	0.0	1.2
Anekal	32.3	7.8	24.5	0.9	0.5	0.8	20.3	23.3	21.3	43.9	65.9	50.9	0.1	0.2	0.1	1.3	1.5	1.4	1.0	0.7	1.0
Mysuru	62.5	6.7	18.0	1.2	0.3	0.5	4.5	16.2	13.9	30.3	75.4	66.3	0.0	0.1	0.1	0.8	0.6	0.7	0.4	0.6	0.6

Annexure 48 : Type of Fuel used for cooking – SC HHs %, 2011 Districts

Districts	Firewood			Crop residue			Kerosene			LPG/PNG			Electricity			Biogas			Others		
	Rural	Urban	Total	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T
Yadgir	96.5	74.2	93.8	2.1	2.5	2.2	0.1	1.6	0.3	0.7	20.6	3.0	0.1	0.5	0.1	0.1	0.2	0.1	0.4	0.5	0.4
Koppal	95.3	79.5	93.0	1.6	1.0	1.5	0.4	2.1	0.7	2.0	15.7	4.0	0.1	0.6	0.2	0.0	0.5	0.1	0.6	0.6	0.6
Bagalkote	96.0	78.5	91.4	2.3	1.7	2.1	0.1	1.3	0.4	1.3	17.6	5.6	0.0	0.1	0.0	0.0	0.4	0.1	0.2	0.5	0.3
Chikkaballapura	94.7	58.3	90.4	1.9	1.1	1.8	0.5	15.5	2.3	2.1	24.1	4.7	0.1	0.4	0.1	0.3	0.2	0.3	0.5	0.5	0.5
Hassan	95.5	43.1	88.9	1.7	0.6	1.6	0.3	15.8	2.2	2.1	39.4	6.9	0.0	0.2	0.0	0.2	0.6	0.2	0.1	0.4	0.1
Tumakuru	95.0	50.5	88.5	1.9	1.0	1.8	0.3	11.6	2.0	2.3	35.3	7.1	0.0	0.2	0.1	0.1	0.9	0.2	0.3	0.5	0.3
Raichur	94.2	68.0	88.4	3.5	2.7	3.3	0.3	3.1	0.9	1.2	21.6	5.8	0.1	2.7	0.7	0.1	1.0	0.3	0.5	1.0	0.7
Vijayapura	94.2	61.5	88.1	3.2	2.8	3.1	0.2	4.3	0.9	1.8	29.9	7.0	0.0	0.1	0.1	0.1	0.4	0.2	0.4	1.0	0.5
Gadag	92.5	75.2	87.6	5.8	3.1	5.0	0.1	2.3	0.7	1.3	18.3	6.1	0.0	0.1	0.1	0.0	0.6	0.2	0.2	0.4	0.2
Chitradurga	93.1	53.0	87.4	3.5	1.7	3.2	0.2	8.9	1.5	2.2	35.0	6.9	0.0	0.1	0.0	0.1	0.6	0.2	0.9	0.6	0.8
Udupi	91.1	75.2	87.2	1.2	0.8	1.1	0.1	0.7	0.3	6.6	21.8	10.4	0.4	0.1	0.3	0.2	0.2	0.2	0.4	1.0	0.5
Chamarajanagara	91.6	57.9	87.0	2.2	1.2	2.0	0.6	8.9	1.7	5.2	29.9	8.5	0.0	0.0	0.0	0.1	1.3	0.3	0.3	0.8	0.4
Chikkamagaluru	92.3	48.3	86.5	1.9	0.4	1.7	0.2	7.3	1.2	5.2	42.9	10.1	0.0	0.0	0.0	0.2	0.4	0.2	0.2	0.7	0.3
Dakshina Kannada	96.2	63.4	86.5	0.5	0.4	0.4	0.1	4.0	1.2	2.9	31.5	11.4	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.5	0.3
Kodagu	91.0	41.5	85.3	0.9	1.0	0.9	0.3	2.6	0.6	7.5	52.8	12.7	0.0	0.0	0.0	0.0	1.8	0.2	0.2	0.2	0.2
Ramanagara	92.4	52.2	85.2	1.8	0.9	1.7	1.2	22.4	5.0	4.2	23.3	7.6	0.0	0.2	0.0	0.1	0.3	0.2	0.3	0.8	0.3
Mandya	90.9	46.5	83.8	2.5	1.3	2.3	0.8	15.7	3.2	5.3	35.3	10.1	0.0	0.3	0.1	0.2	0.4	0.2	0.1	0.6	0.2
Ballari	92.6	63.7	83.6	3.8	1.6	3.1	0.5	9.3	3.2	2.7	23.8	9.2	0.1	0.4	0.2	0.1	0.5	0.2	0.2	0.7	0.5
Kalaburagi	90.4	62.2	83.2	8.1	4.4	7.1	0.2	6.1	1.7	0.7	24.5	6.8	0.1	0.2	0.1	0.1	0.5	0.2	0.3	2.0	0.8
Davanagere	86.8	56.0	81.0	9.9	2.7	8.5	0.1	4.0	0.9	2.6	35.9	8.9	0.0	0.1	0.0	0.1	0.7	0.3	0.3	0.5	0.4
Bengaluru Rural	85.5	42.9	79.3	0.8	1.1	0.9	2.7	23.9	5.7	10.3	30.7	13.2	0.1	0.2	0.1	0.3	0.5	0.3	0.4	0.5	0.4
Kolar	94.0	43.3	79.3	1.4	1.5	1.4	0.7	24.3	7.5	3.4	29.6	10.9	0.0	0.3	0.1	0.2	0.3	0.2	0.3	0.6	0.4
Uttara Kannada	88.5	58.4	79.1	0.8	0.6	0.8	0.5	3.1	1.3	9.1	36.5	17.6	0.4	0.8	0.5	0.5	0.1	0.4	0.3	0.5	0.4
Bidar	81.9	61.8	78.4	15.9	7.2	14.4	0.2	5.7	1.2	0.7	23.4	4.7	0.1	0.1	0.1	0.0	0.6	0.1	1.2	1.1	1.3
Haveri	80.8	61.2	78.1	16.7	3.9	14.9	0.1	1.7	0.3	2.2	32.0	6.3	0.0	0.1	0.0	0.1	0.7	0.2	0.2	0.6	0.2
Shivamogga	89.5	41.7	76.9	3.4	1.2	2.9	0.2	12.8	3.5	6.1	42.4	15.7	0.1	0.5	0.2	0.4	0.7	0.5	0.2	0.7	0.3
Belagavi	81.8	46.5	74.0	8.6	2.1	7.2	0.3	5.7	1.5	6.0	43.9	14.4	0.1	0.1	0.1	0.4	0.4	0.4	2.8	1.3	2.5
Mysuru	87.9	27.9	70.9	4.3	0.8	3.3	1.0	22.2	7.0	6.3	47.9	18.1	0.0	0.1	0.1	0.3	0.6	0.4	0.2	0.6	0.5
Dharwad	85.5	40.9	58.3	12.1	1.5	5.6	0.2	8.7	5.4	1.9	46.8	29.3	0.0	0.1	0.1	0.1	1.0	0.7	0.2	1.1	0.7
Bengaluru Urban	56.0	9.2	16.4	1.0	0.6	0.6	13.5	34.2	31.0	28.1	54.4	50.3	0.1	0.1	0.1	0.7	0.8	0.8	0.6	0.8	0.8
All Districts	**89.9**	**36.9**	**74.3**	**4.4**	**1.4**	**3.5**	**0.8**	**19.2**	**6.2**	**4.1**	**40.7**	**14.9**	**0.1**	**0.2**	**0.1**	**0.2**	**0.6**	**0.3**	**0.7**	**0.8**	**0.6**

Annexure 49 : Type of Fuel used for cooking – ST HHs %, 2011 Districts

Districts	Firewood			Crop residue			Kerosene			LPG/PNG			Electricity			Biogas			Others		
	Rural	Urban	Total	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T
Koppal	96.2	76.3	94.6	1.4	1.1	1.4	0.2	2.6	0.4	1.7	18.6	3.1	0.1	0.3	0.1	0.1	0.4	0.1	0.4	0.7	0.4
Yadgir	96.0	72.8	93.3	2.7	5.0	2.9	0.1	1.4	0.3	0.8	19.8	3.0	0.1	0.3	0.1	0.0	0.3	0.0	0.4	0.3	0.4
Raichur	94.6	75.3	92.7	3.3	3.6	3.4	0.2	2.2	0.4	1.0	15.5	2.4	0.1	1.4	0.2	0.1	0.6	0.1	0.7	1.3	0.8
Bagalkote	96.2	77.1	92.6	2.0	2.1	2.0	0.1	1.3	0.3	1.3	18.6	4.6	0.1	0.1	0.1	0.0	0.4	0.1	0.3	0.5	0.4
Kodagu	94.3	29.5	92.2	0.8	1.4	0.9	0.2	3.6	0.3	4.1	63.1	6.1	0.0	0.2	0.0	0.1	1.2	0.2	0.5	1.0	0.5
Chitradurga	93.5	51.7	88.0	3.0	2.0	2.9	0.2	7.9	1.2	2.4	37.2	7.0	0.0	0.1	0.0	0.1	0.6	0.2	0.7	0.4	0.7
Udupi	93.6	65.9	87.9	0.5	0.6	0.5	0.1	1.3	0.4	4.9	31.6	10.4	0.2	0.0	0.2	0.4	0.1	0.4	0.2	0.3	0.3
Chikkaballapura	92.6	44.2	87.2	2.2	0.7	2.0	0.6	18.8	2.7	3.6	35.0	7.1	0.1	0.4	0.1	0.6	0.3	0.5	0.3	0.5	0.3
Chamarajanagara	92.8	61.1	86.6	2.8	1.6	2.6	0.9	13.0	3.2	3.1	21.9	6.8	0.0	0.0	0.0	0.2	1.0	0.3	0.3	1.4	0.5
Ballari	94.2	63.8	85.6	2.3	1.4	2.1	0.3	8.2	2.5	2.5	24.9	8.9	0.1	0.2	0.1	0.2	0.8	0.3	0.4	0.8	0.5
Gadag	91.1	62.4	85.6	6.4	3.5	5.8	0.2	5.4	1.2	2.0	26.7	6.7	0.1	0.1	0.1	0.1	0.7	0.2	0.1	1.3	0.4
Uttara Kannada	92.9	55.7	85.6	1.0	0.7	0.9	0.3	3.5	0.9	4.9	38.5	11.5	0.2	0.9	0.4	0.5	0.1	0.4	0.2	0.7	0.2
Tumakuru	93.4	37.6	84.8	1.6	0.7	1.4	0.5	14.9	2.7	3.9	45.1	10.3	0.1	0.1	0.1	0.2	1.0	0.3	0.3	0.6	0.3
Dakshina Kannada	94.4	46.7	84.2	0.6	0.3	0.5	0.1	4.8	1.1	4.4	47.3	13.6	0.0	0.0	0.0	0.3	0.2	0.3	0.2	0.6	0.3
Chikkamagaluru	91.3	30.2	83.9	1.4	1.8	1.5	0.2	6.8	1.0	6.4	58.9	12.8	0.0	0.1	0.0	0.3	1.2	0.4	0.3	1.0	0.4
Kolar	93.2	32.0	83.7	1.6	2.0	1.7	0.7	21.7	4.0	3.9	41.9	9.8	0.0	0.3	0.1	0.1	0.6	0.2	0.4	1.4	0.6
Vijayapura	94.3	48.3	82.4	2.5	2.7	2.6	0.3	8.3	2.4	2.0	38.5	11.5	0.1	0.1	0.1	0.2	0.4	0.2	0.6	1.6	0.9
Belagavi	88.0	51.6	81.9	7.4	1.5	6.4	0.2	6.1	1.2	2.9	39.3	9.0	0.0	0.0	0.0	0.5	0.4	0.5	1.0	1.1	1.1
Davanagere	85.8	49.7	78.9	9.7	2.3	8.3	0.1	4.2	0.9	3.6	42.3	11.0	0.1	0.1	0.1	0.2	0.8	0.3	0.4	0.7	0.5
Bidar	81.6	53.8	78.8	16.0	4.1	14.8	0.1	6.7	0.8	1.1	33.1	4.3	0.1	0.4	0.1	0.1	0.3	0.1	0.9	1.6	1.1
Ramanagara	87.6	39.4	78.8	2.5	1.3	2.3	3.9	27.3	8.2	4.8	30.6	9.6	0.0	0.1	0.0	0.4	0.5	0.4	0.7	0.8	0.7
Hassan	92.0	24.7	78.3	1.9	1.1	1.7	0.7	16.6	3.9	4.6	56.3	15.1	0.1	0.1	0.1	0.5	0.3	0.5	0.2	1.1	0.4
Mandya	86.6	37.8	75.9	2.7	0.8	2.3	1.5	19.0	5.3	8.4	41.6	15.7	0.1	0.2	0.1	0.3	0.3	0.3	0.4	0.4	0.4
Haveri	76.3	58.4	74.3	21.0	4.0	19.1	0.1	1.7	0.3	2.1	33.7	5.7	0.0	0.1	0.0	0.2	0.9	0.3	0.2	1.4	0.4
Kalaburagi	87.2	52.0	73.9	10.3	6.9	9.0	0.3	7.3	3.0	1.8	31.4	12.9	0.0	0.2	0.1	0.0	0.4	0.2	0.4	1.7	0.8
Shivamogga	88.3	29.7	73.4	3.0	1.1	2.5	0.4	12.5	3.5	7.3	54.8	19.4	0.1	0.5	0.2	0.6	0.8	0.7	0.2	0.6	0.4
Mysuru	87.6	21.4	71.7	3.7	0.6	3.0	1.0	24.0	6.5	7.2	52.7	18.2	0.0	0.1	0.1	0.2	0.5	0.3	0.2	0.7	0.5
Bengaluru Rural	80.0	25.3	69.3	1.1	1.7	1.2	4.0	26.3	8.4	13.6	45.4	19.8	0.1	0.1	0.1	0.5	0.4	0.5	0.5	0.7	0.6
Dharwad	85.1	43.6	66.7	12.2	1.5	7.4	0.2	7.4	3.4	2.2	44.6	21.0	0.0	0.2	0.1	0.1	0.4	0.2	0.2	2.2	1.1
Bengaluru Urban	41.9	7.4	10.9	1.3	0.8	0.9	19.6	25.4	24.8	35.1	64.2	61.3	0.1	0.2	0.2	1.2	1.0	1.0	0.8	1.0	1.0
All Districts	**89.9**	**35.8**	**76.9**	**4.9**	**1.5**	**4.1**	**0.7**	**15.2**	**4.2**	**3.7**	**45.6**	**13.8**	**0.1**	**0.2**	**0.1**	**0.2**	**0.7**	**0.3**	**0.6**	**1.0**	**0.6**

Annexure 50 : Type of Fuel used for cooking – SC HHs %, 2011 Taluks

Highest 15 taluks (based on fuelwood as source)

Taluks	Firewood			Crop residue			Kerosene			LPG/PNG			Electricity			Biogas			Others		
	Rural	Urban	Total	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T
Sulya	97.4	85.3	96.3	0.4	0.5	0.4	0.0	0.5	0.1	1.4	13.7	2.5	0.0	0.0	0.0	0.1	0.0	0.1	0.6	0.0	0.5
Yelbarga	97.1	81.9	96.3	1.6	0.2	1.6	0.1	0.7	0.1	0.9	16.5	1.7	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.5	0.1
Bilgi	98.3	77.7	96.2	0.5	0.7	0.5	0.1	1.1	0.2	0.9	20.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.1
Chiknayakanhalli	97.7	75.6	95.5	1.1	2.6	1.3	0.1	3.4	0.4	0.8	16.4	2.4	0.0	0.0	0.0	0.0	1.7	0.2	0.1	0.4	0.2
Mundargi	97.4	82.5	95.4	1.4	3.9	1.7	0.1	1.1	0.2	0.7	10.9	2.1	0.1	0.3	0.2	0.1	1.1	0.2	0.2	0.2	0.2
Alur	97.2	70.3	95.2	1.2	0.8	1.2	0.1	7.7	0.7	1.1	20.5	2.5	0.0	0.3	0.0	0.2	0.3	0.2	0.1	0.3	0.1
Puttur	97.5	81.5	95.2	0.3	0.4	0.3	0.0	0.9	0.2	1.9	16.6	4.0	0.0	0.2	0.1	0.2	0.3	0.2	0.0	0.1	0.0
Beltangadi	95.8	82.0	95.1	0.7	0.0	0.6	0.1	0.0	0.1	3.2	17.7	3.9	0.0	0.4	0.0	0.1	0.0	0.1	0.1	0.0	0.1
Afzalpur	96.6	83.9	95.0	1.9	4.6	2.2	0.1	0.3	0.2	0.7	10.3	1.9	0.1	0.1	0.1	0.1	0.5	0.1	0.4	0.2	0.4
Kushtagi	96.6	81.9	95.0	1.6	1.5	1.6	0.1	0.8	0.2	1.3	14.5	2.7	0.1	0.3	0.1	0.1	0.3	0.1	0.2	0.8	0.2
Devadurga	96.1	79.0	94.8	2.4	2.7	2.4	0.1	0.9	0.1	0.7	16.0	1.9	0.0	0.3	0.1	0.1	0.1	0.1	0.5	0.9	0.5
Gubbi	97.1	57.5	94.8	1.1	0.3	1.1	0.2	7.9	0.7	1.3	33.7	3.2	0.0	0.5	0.0	0.1	0.0	0.1	0.1	0.2	0.1
Shorapur	95.8	81.9	94.8	2.1	1.7	2.1	0.1	0.5	0.2	1.3	14.6	2.3	0.1	0.1	0.1	0.0	0.3	0.1	0.5	0.9	0.5
Kudligi	96.7	80.0	94.6	1.1	0.6	1.1	0.2	1.2	0.3	1.3	17.3	3.4	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.6	0.2
Sakleshpur	97.1	62.2	94.6	0.6	0.3	0.6	0.1	3.7	0.4	2.0	33.4	4.3	0.0	0.2	0.0	0.1	0.0	0.1	0.1	0.2	0.1

Lowest 15 taluks (based on fuelwood as source)

Taluks	Firewood			Crop residue			Kerosene			LPG/PNG			Electricity			Biogas			Others		
	Rural	Urban	Total	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T
Hirekerur	69.0	58.3	68.5	28.5	0.8	27.0	0.1	1.7	0.2	2.1	38.3	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8	0.3
Mangaluru	93.6	56.8	68.5	0.4	0.4	0.4	0.2	5.1	3.5	5.5	36.8	26.9	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.5
Bhadravati	85.5	39.3	68.2	3.6	1.1	2.7	0.5	14.8	5.8	9.0	43.1	21.8	0.1	0.1	0.1	0.8	1.0	0.9	0.5	0.6	0.6
Bangarapet	93.4	42.4	65.4	1.4	1.4	1.4	0.9	26.2	14.8	3.7	28.8	17.4	0.0	0.2	0.1	0.3	0.3	0.3	0.3	0.6	0.5
Shivamogga	85.4	40.4	65.3	4.2	1.3	2.9	0.3	15.1	6.9	9.2	41.9	23.8	0.1	0.1	0.1	0.6	0.5	0.6	0.1	0.7	0.5
Byadgi	62.8	72.4	64.5	35.5	1.0	29.5	0.1	0.7	0.2	1.2	25.0	5.4	0.0	0.2	0.0	0.1	0.2	0.1	0.2	0.5	0.2
Kundgol	63.7	65.1	63.9	34.8	20.8	33.1	0.0	2.5	0.3	1.0	10.7	2.1	0.1	0.3	0.1	0.3	0.3	0.3	0.0	0.3	0.1
Chikodi	59.2	47.3	56.6	18.5	3.1	15.2	0.3	2.7	0.9	10.1	43.9	17.4	0.1	0.1	0.1	0.8	0.4	0.7	11.0	2.5	9.1
Anekal	59.7	19.7	52.4	1.0	1.0	1.0	13.8	29.6	16.7	24.3	47.4	28.5	0.1	0.1	0.1	0.4	1.3	0.6	0.7	0.6	0.7
Bengaluru North	55.3	32.4	52.2	1.0	0.2	0.9	13.3	17.7	13.9	28.8	48.9	31.5	0.0	0.2	0.0	1.2	0.1	1.0	0.2	0.5	0.3
Bengaluru South	55.3	21.3	51.9	1.4	0.6	1.3	11.4	30.5	13.3	30.3	43.8	31.7	0.4	0.3	0.3	0.8	1.7	0.9	0.5	1.8	0.7
Karwar	49.4	41.6	45.3	2.4	0.7	1.5	1.6	6.2	4.0	40.8	50.7	46.1	4.1	0.1	2.0	0.5	0.0	0.2	1.1	0.7	1.0
Belagavi	81.4	29.6	43.8	2.7	1.0	1.5	0.9	10.0	7.5	11.2	57.8	45.0	0.1	0.1	0.1	1.8	0.4	0.8	1.9	1.2	1.4
Bengaluru East	43.5		43.5	0.7		0.7	15.5		15.5	38.7		38.7	0.2		0.2	1.0		1.0	0.4		0.4
Mysuru	80.7	18.1	36.7	1.3	0.7	0.9	4.2	26.4	19.8	12.7	53.3	41.2	0.0	0.1	0.1	0.7	0.7	0.7	0.3	0.7	0.6

Annexure 51 : Type of Fuel used for cooking – ST HHs %, 2011 Taluks

Highest 15 taluks (based on fuelwood as source)

Taluks	Firewood			Crop residue			Kerosene			LPG/PNG			Electricity			Biogas			Others		
	Rural	Urban	Total	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T
Bilgi	97.5	80.2	96.9	1.3	0.0	1.2	0.0	0.0	0.0	1.0	18.9	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	0.1
Kushtagi	97.5	76.3	96.8	1.4	0.9	1.4	0.1	0.4	0.1	0.7	20.5	1.3	0.1	0.0	0.1	0.0	0.0	0.0	0.2	1.8	0.3
Yelbarga	96.8	63.5	96.5	1.5	0.0	1.4	0.0	0.0	0.0	1.3	36.5	1.7	0.1	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.3
Molakalmuru	97.3	73.9	96.2	0.9	0.7	0.9	0.2	2.1	0.3	1.1	21.8	2.1	0.0	0.2	0.0	0.1	0.2	0.1	0.3	0.9	0.3
Devadurga	96.5	90.6	96.0	2.1	1.3	2.0	0.1	2.1	0.3	0.5	5.7	1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.1	0.5
Virajpet	96.8	42.1	95.9	0.6	2.9	0.7	0.1	2.3	0.1	2.1	46.8	2.8	0.0	0.6	0.0	0.0	3.5	0.1	0.2	1.8	0.3
Badami	97.6	86.5	95.6	0.9	2.7	1.2	0.1	0.8	0.2	1.3	9.4	2.7	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.4	0.2
Sulya	97.2	73.6	95.2	0.2	0.9	0.3	0.0	0.9	0.1	2.1	24.2	4.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.4	0.1
Alur	97.1	70.0	95.1	0.2	2.5	0.4	0.0	10.0	0.7	1.4	17.5	2.5	0.0	0.0	0.0	1.0	0.0	0.9	0.4	0.0	0.4
Mundargi	96.7	80.0	94.9	2.2	1.3	2.1	0.2	0.4	0.2	0.6	17.4	2.4	0.1	0.0	0.0	0.1	0.4	0.1	0.4	0.4	0.2
Mudigere	96.5	23.0	94.5	0.9	2.0	0.9	0.1	6.0	0.3	2.3	68.0	4.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	1.0	0.1
Kudligi	97.7	72.7	94.4	1.0	0.8	1.0	0.1	1.7	0.3	0.7	23.8	3.8	0.0	0.4	0.1	0.1	0.3	0.1	0.3	0.2	0.3
Shorapur	96.2	78.1	94.3	2.3	1.3	2.2	0.1	1.4	0.3	0.9	18.4	2.8	0.1	0.2	0.1	0.0	0.4	0.0	0.3	0.3	0.3
Kundapura	94.9	65.3	94.2	0.8	1.3	0.8	0.1	0.0	0.1	3.2	33.3	3.9	0.3	0.0	0.3	0.4	0.0	0.4	0.3	0.0	0.3
Gangawati	95.7	81.8	94.0	1.4	1.3	1.4	0.3	2.5	0.5	1.9	13.8	3.5	0.1	0.1	0.1	0.0	0.1	0.0	0.5	0.5	0.4

Lowest 15 taluks (based on fuelwood as source)

Taluks	Firewood			Crop residue			Kerosene			LPG/PNG			Electricity			Biogas			Others		
	Rural	Urban	Total	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T	R	U	T
Kundgol	61.9	32.1	60.9	35.8	52.6	36.4	0.2	5.1	0.4	1.5	7.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.6	0.7
Nelamangala	68.9	19.6	60.2	0.9	0.0	0.8	6.5	19.1	8.7	22.8	60.9	29.5	0.1	0.0	0.0	0.2	0.0	0.2	0.7	0.4	0.5
Tumakuru	85.0	19.2	58.9	1.4	0.2	0.9	2.0	21.9	9.9	10.7	57.2	29.1	0.2	0.2	0.2	0.4	0.8	0.5	0.4	0.5	0.4
Siddapur	73.2	22.2	57.6	0.0	0.0	0.0	2.4	11.1	5.1	22.0	61.1	33.9	0.0	0.0	0.0	2.4	0.0	1.7	0.0	5.6	1.7
Mangaluru	91.2	37.9	57.5	0.9	0.2	0.4	0.4	7.1	4.6	7.1	53.7	36.6	0.0	0.0	0.0	0.2	0.3	0.3	0.2	0.7	0.6
Shivamogga	83.8	27.9	56.2	3.4	1.0	2.2	0.9	15.0	7.9	10.3	54.5	32.1	0.0	0.1	0.1	1.1	0.9	1.0	0.5	0.5	0.5
Kalaburagi	82.4	44.7	55.3	12.3	3.9	6.3	0.7	9.3	6.9	4.2	40.4	30.2	0.0	0.1	0.1	0.0	0.4	0.3	0.4	1.1	1.0
Chikodi	60.4	35.1	55.1	16.2	2.7	13.3	0.3	4.1	1.1	7.9	56.0	18.0	0.0	0.0	0.0	1.4	0.7	1.2	13.9	1.4	11.3
Hassan	87.4	9.3	49.4	1.0	0.7	0.8	2.5	18.4	10.2	8.5	70.8	38.8	0.1	0.0	0.1	0.5	0.1	0.3	0.0	0.7	0.5
Bengaluru South	49.7	14.9	41.0	2.2	0.6	1.8	13.3	26.2	16.5	31.3	50.6	36.1	0.1	0.0	0.1	2.9	5.4	3.6	0.5	2.2	1.0
Mysuru	81.8	10.3	39.2	1.3	0.5	0.8	2.4	27.2	17.2	14.0	60.7	41.8	0.1	0.1	0.1	0.2	0.5	0.3	0.2	0.8	0.6
Karwar	41.6	29.9	36.5	0.0	1.1	0.5	1.2	8.0	4.2	51.0	61.0	55.3	4.9	0.0	2.8	0.0	0.0	0.0	1.2	0.0	0.7
Bengaluru North	39.7	15.4	36.4	0.7	0.7	0.7	16.8	25.2	17.9	41.2	57.0	43.3	0.1	0.0	0.1	0.8	0.7	0.8	0.6	1.1	0.6
Bengaluru East	36.2	0.0	36.2	0.4	0.0	0.4	22.3	0.0	22.3	40.1	0.0	40.1	0.1	0.0	0.1	0.4	0.0	0.4	0.4	0.0	0.4
Anekal	41.8	9.8	34.2	1.5	1.0	1.4	24.4	31.3	26.0	30.1	55.4	36.1	0.2	0.2	0.2	1.0	1.2	1.0	1.1	1.1	0.9

Annexure 52 : Road length of NH, SH and MDR per 100 sq.km geographical area

District	2009	2010	2012	2013	2015	CAGR (2009-15)
Mandya	70.69	70.71	69.32	69.32	69.34	-0.32
Hassan	64.15	63.21	64.04	64.11	64.27	0.03
Ramanagara	54.64	54.42	54.67	54.67	54.00	-0.20
Haveri	52.85	52.54	52.54	52.54	53.59	0.23
Mysuru	48.32	48.77	48.41	47.79	50.08	0.60
Dharwad	43.05	48.43	48.43	48.43	48.49	2.00
Bengaluru Rural	46.53	46.57	46.45	46.45	47.78	0.45
Tumakuru	45.96	44.87	44.26	44.44	45.91	-0.02
Bengaluru Urban	43.65	41.92	42.27	42.48	45.18	0.58
Davangere	41.15	41.24	40.96	41.00	42.56	0.56
Gadag	42.83	42.35	42.34	42.34	42.23	-0.23
Kolar	38.10	38.50	38.51	38.38	42.01	1.64
Belagavi	41.59	41.66	41.62	41.62	41.74	0.06
Shivamogga	37.77	37.67	37.94	37.92	40.91	1.34
Bagalkote	27.16	40.97	39.75	39.75	39.05	6.24
Ballari	26.15	36.38	35.70	35.54	37.03	5.97
Raichur	24.45	35.62	36.81	36.81	36.92	7.11
Uttara Kannada	33.40	35.42	35.27	35.27	35.31	0.93
Kodagu	33.89	33.91	33.96	33.96	33.98	0.05
Chikkamagalur	34.52	33.79	33.60	33.60	33.83	-0.34
Dakshina Kannada	34.04	34.41	34.42	34.42	33.79	-0.12
Udupi	33.17	33.17	33.16	33.16	33.69	0.26
Yadgir	33.41	33.41	33.41	33.41	33.44	0.01
Chitradurga	34.42	34.98	34.24	34.26	33.44	-0.48
Vijayapura	31.71	32.33	32.33	32.33	32.38	0.35
Koppal	32.51	32.51	32.50	32.50	31.79	-0.37
Bidar	30.32	30.32	30.33	30.33	31.78	0.79
Chamarajanagara	29.88	29.92	29.89	29.89	29.72	-0.09
Chikkaballapura	30.61	29.73	29.62	29.62	29.62	-0.55
Kalaburagi	42.53	41.86	25.37	25.22	26.10	-7.81

Annexure 53 : MDR Type of surface and carriageway

District	2009			2010		2012		2013		2015		
	Length*	WBM + Un sur faced**	SL**	WBM + Un sur faced	SL	WBM + Un sur faced	SL	WBM + Un sur faced	SL	Length	WBM + Un sur faced	SL
Dharwad	1168	25.51	93.66	30.74	94.82	22.27	91.74	22.99	89.75	1390	15.93	86.81
Uttara Kannada	1861	21.12	88.12	22.34	88.64	20.81	87.78	17.40	87.82	2039	13.97	93.84
Mysuru	2514	29.40	91.29	29.43	91.91	19.20	89.17	15.89	88.68	2603	13.47	87.33
Mandya	2967	49.41	88.54	49.43	88.51	17.02	76.54	14.07	76.44	2882	11.26	72.84
Davangere	1716	13.52	89.04	6.05	91.83	13.65	91.13	10.91	87.48	1603	10.70	85.23
Raichur	662	8.01	97.89	11.72	95.37	12.15	96.13	12.08	96.13	1507	10.63	88.87
Ramanagara	1558	5.46	86.46	5.48	86.45	6.77	86.84	6.77	86.51	1554	8.86	77.26
Chitradurga	2162	0.00	95.24	16.65	95.33	10.80	89.90	10.29	89.89	2096	8.73	87.29
Hassan	3128	22.41	96.93	17.50	96.61	12.31	96.40	12.18	96.40	3131	8.42	92.40
Tumakuru	3920	22.37	92.50	14.68	85.21	11.38	82.24	8.77	82.16	3788	8.31	84.01
Chikkamagaluru	1775	22.54	91.04	9.54	89.91	8.14	88.33	8.14	87.94	1633	8.07	87.54
Chamarajanagara	994	18.01	87.63	18.07	87.55	13.53	80.03	13.53	80.03	995	8.00	76.78
Vijayapura	2376	17.59	94.28	17.37	93.73	11.55	92.04	11.18	91.17	2403	6.39	90.63
Ballari	1033	3.29	77.35	9.49	86.23	7.81	86.12	7.65	84.86	1805	5.62	81.73
Kodagu	852	6.10	81.69	5.16	81.13	4.95	81.58	4.60	78.73	856	4.96	74.67
Gadag	1210	0.50	100.00	6.31	97.39	5.90	95.74	5.47	95.48	1179	4.30	90.04
Kalaburagi	2932	2.86	95.80	7.86	94.92	10.54	95.82	7.45	93.94	1246	3.75	90.39
Koppal	1504	14.56	94.28	12.10	90.56	12.68	87.38	12.09	85.79	1449	3.44	82.19
Bagalkote	784	3.83	76.28	9.75	85.82	6.23	79.85	4.66	77.73	1586	2.92	73.93
Shivamogga	1984	10.08	93.95	9.74	92.02	6.71	89.03	5.97	87.62	2116	2.76	86.79
Bengaluru Urban	696	28.02	69.68	19.56	69.71	7.26	65.14	5.94	60.66	726	2.65	51.56
Chikkaballapura	968	6.30	92.67	9.62	82.69	3.93	76.95	3.52	71.53	928	2.33	67.61
Haveri	1859	5.11	93.92	7.48	89.32	4.98	85.30	5.08	82.82	1839	2.17	79.40
Yadgir	0	n.a.	n.a.	n.a.	n.a.	6.54	92.21	5.15	91.04	1206	1.49	94.90
Belagavi	3037	5.83	89.36	5.42	88.45	3.94	87.00	3.14	85.71	3046	0.78	82.56
Bidar	877	7.98	91.11	6.50	88.48	0.00	82.78	3.20	81.83	869	0.74	76.10
Dakshina Kannada	777	3.09	67.95	2.84	67.31	1.34	63.85	1.34	58.22	775	0.27	48.82
Udupi	791	2.15	67.89	1.39	67.89	1.33	64.01	0.35	59.89	790	0.07	55.31
Bengaluru Rural	652	1.07	74.23	0.61	72.24	0.38	70.94	0.38	69.91	667	0.00	62.84
Kolar	1079	7.23	79.70	5.26	80.24	4.04	79.10	3.16	77.91	1225	0.00	74.92

Note: * km and ** Percentage of Road length

Annexure 54 : Location of main water source, Availability of Electricity and Latrine - 2011

District	No. of HHs	Away					Near Premises					Total	
		Electricity available, Latrine available	Electricity available, Latrine not available	Electricity unavailable, Latrine available	Electricity unavailable, Latrine not available		Electricity available, Latrine available	Electricity available, Latrine not available	Electricity unavailable, Latrine available	Electricity unavailable, Latrine not available		Electricity unavailable, Latrine not available	
	No.	No.	No.	No.	No.	%	No.	No.	No.	No.	%	No.	%
Kodagu	138303	1084	463	850	1339	0.97	2360	493	943	1036	0.75	2375	1.72
Raichur	359337	3448	23990	283	4246	1.18	2452	8348	154	1221	0.34	5467	1.52
Yadgir	200424	293	3010	46	1965	0.98	279	1541	45	521	0.26	2486	1.24
Chikkamagaluru	272173	2120	1066	505	1173	0.43	6008	1944	768	1441	0.53	2614	0.96
Bagalkote	355377	362	3752	35	1725	0.49	2038	5704	96	1619	0.46	3344	0.94
Belagavi	963825	2011	10035	239	4515	0.47	6122	14783	293	4171	0.43	8686	0.90
Uttara Kannada	319912	1525	2455	179	1229	0.38	4433	3609	292	1591	0.50	2820	0.88
Gadag	215602	701	13549	30	1148	0.53	1150	6788	84	555	0.26	1703	0.79
Kalaburagi	465245	820	12166	56	3114	0.67	1396	2685	36	544	0.12	3658	0.79
Vijayapura	405076	375	4517	39	1788	0.44	2067	3635	52	1098	0.27	2886	0.71
Dharwad	372054	1780	13739	108	1864	0.50	3103	6213	143	774	0.21	2638	0.71
Dakshina Kannada	425291	3206	728	1145	1453	0.34	7581	932	1588	1474	0.35	2927	0.69
Shivamogga	402139	2313	2207	402	1560	0.39	2767	1931	329	848	0.21	2408	0.60
Udupi	246313	1651	693	391	894	0.36	1696	465	259	571	0.23	1465	0.59
Koppal	259396	668	4248	19	710	0.27	447	1893	28	486	0.19	1196	0.46
Chamarajanagara	244198	175	1175	85	731	0.30	329	867	44	361	0.15	1092	0.45
Bidar	313521	622	3015	117	1037	0.33	1386	2045	102	346	0.11	1383	0.44
Kolar	330990	7973	4949	101	839	0.25	4385	2739	102	463	0.14	1302	0.39
Ballari	481704	999	8330	51	1376	0.29	1001	4123	43	450	0.09	1826	0.38
Haveri	325456	1267	2199	72	644	0.20	1269	1079	42	395	0.12	1039	0.32
Mysuru	688422	539	2346	118	1190	0.17	2773	1585	96	653	0.09	1843	0.27
Bengaluru Rural	224745	4986	520	66	277	0.12	1647	228	44	130	0.06	407	0.18
Bengaluru Urban	2377056	31548	3026	806	3730	0.16	35441	1131	572	438	0.02	4168	0.18
Tumakuru	636394	2568	2335	94	787	0.12	757	1050	57	279	0.04	1066	0.17
Davanagere	404840	461	1344	40	438	0.11	2827	2211	81	235	0.06	673	0.17
Chikkaballapura	282311	1870	1048	30	272	0.10	1725	841	40	158	0.06	430	0.15
Hassan	429292	387	1180	25	352	0.08	1239	1012	32	234	0.05	586	0.14
Chitradurga	354143	252	935	54	232	0.07	1436	1033	302	209	0.06	441	0.12
Mandya	426578	281	794	21	333	0.08	853	684	123	154	0.04	487	0.11
Ramanagara	259794	241	472	20	130	0.05	438	330	103	87	0.03	217	0.08
All Districts	13179911	76526	130286	6027	41091	0.31	101405	81922	6893	22542	0.17	63633	0.48

Annexure 55 : Location of main water source, Availability of Electricity and Latrine in slums – 2011

Main source of water	Near premises					Away				
	No. of HHs	Electricity unavailable, Latrine available		Electricity unavailable, Latrine unavailable		No. of HHs	Electricity unavailable, Latrine available		Electricity unavailable, Latrine unavailable	
		No.	%	No.	%		No.	%	No.	%
Hand pump	6762	68	1.01	936	13.84	7561	113	1.49	1975	26.12
Tube well/Borehole	27611	370	1.34	2267	8.21	15267	295	1.93	2651	17.36
Tap water from treated source	170200	2514	1.48	12839	7.54	45304	753	1.66	7181	15.85
Un-Covered well	3882	57	1.47	320	8.24	3414	72	2.11	519	15.20
All Others	9926	241	2.43	1136	11.44	13260	306	2.31	1994	15.04
Tap water from un-treated source	64772	1595	2.46	5517	8.52	19980	326	1.63	2625	13.14
Covered well	824	60	7.28	102	12.38	1434	44	3.07	182	12.69
Total	**283977**	**4905**	**1.73**	**23117**	**8.14**	**106220**	**1909**	**1.80**	**17127**	**16.12**

Annexure 56 : Reliability Index of ESCOMs (Average, %) 2012-13 to 2015-16

	2012-13			2013-14			2014-15			2015-16		
ESCOM	District HQ	Towns/ Cities	Rural	District HQ	Towns/ Cities	Rural	District HQ	Towns/ Cities	Rural	District HQ	Towns/ Cities	Rural
CESC	89.07	90.51	69.51	97.62	94.24	72.07	96.39	92.13	71.03	95.69	89.52	70.96
HESCOM	96.85	94.58	81.47	97.47	95.88	81.51	97.25	95.82	81.85	96.79	94.63	79.74
MESCOM	97.44	95.58	90.41	97.50	95.52	92.24	97.90	95.11	91.21	96.57	92.21	84.99
GESCOM	91.55	87.90	79.73	92.17	85.32	86.60	93.29	84.86	84.36	94.80	91.19	94.28
BESCOM	95.94	95.90	86.83	96.89	96.07	87.06	97.31	96.90	94.53	96.99	97.03	95.14

Urbanization and Human Development

Chapter-11

Urbanization and Human Development

Introduction

Cities and urban areas are engines of economic growth, creators of livelihood opportunities, and sites of innovation in India. They are equally, however, sites of contestation, exclusion and deep vulnerabilities. Urbanisation thus, represents both an opportunity as well as a challenge to the fundamental question of human development: how can people realize their capabilities to flourish from a foundation of decent conditions of life and work? The challenge of "Inclusive Cities" is to ask if Karnataka's urbanization can create not growth for its own sake but towards and in service of equitable and sustainable human development for all urban residents. It is important to realise that this is not given – it is possible that urbanization can be exclusionary and worsen human development outcomes just as much as it is possible that it is a source of opportunity and socio-economic transformation.

It is a pivotal time to ask the urban question in India. A country that "lived in its villages" no longer dominantly does so. A significant structural and demographic transition is underway. Karnataka is part of this transition as the seventh most urban State in the country. In this chapter, our task is to assess the current state of human development in urban areas in Karnataka and identify the key challenges for moving forward towards building inclusive cities in the State.

As we do so, our intention here is not to suggest that there is something specifically urban about these thematic or that they are not also "rural." We also do not wish to argue that human development is more or less severe in degree in urban or rural areas. Instead, we argue that place matters-an urban location is not just an incidental data point in understanding human development but a context that determines its form. To Put simply: an urban location shapes the structural conditions of poverty and inequality, the experience of coping with it as well as the possibilities and forms of responding to it. It must be understood, therefore, as related to rural human development but also distinct and autonomous from it. Showing how particular themes in human development are shaped by an urban location is thus, the focus of this chapter. In writing, we are conscious that many of the themes are discussed in this report in chapters of their own. We do not wish to repeat the arguments of those chapters here, and rely on the reader's access to them to read in conjunction with the arguments made here.

The challenges we cover like cities themselves are complex. Following

A Country that 'lived in its villages' no longer dominantly does so A significant structural and demographic transition is underway. Karnataka is part of this transition as the seventh most urban State in the country.

Karnataka is India's 7th most urbanized State, with 38.6% of residents living in urban areas. Its levels of urbanization are consistently higher than the national average in India.

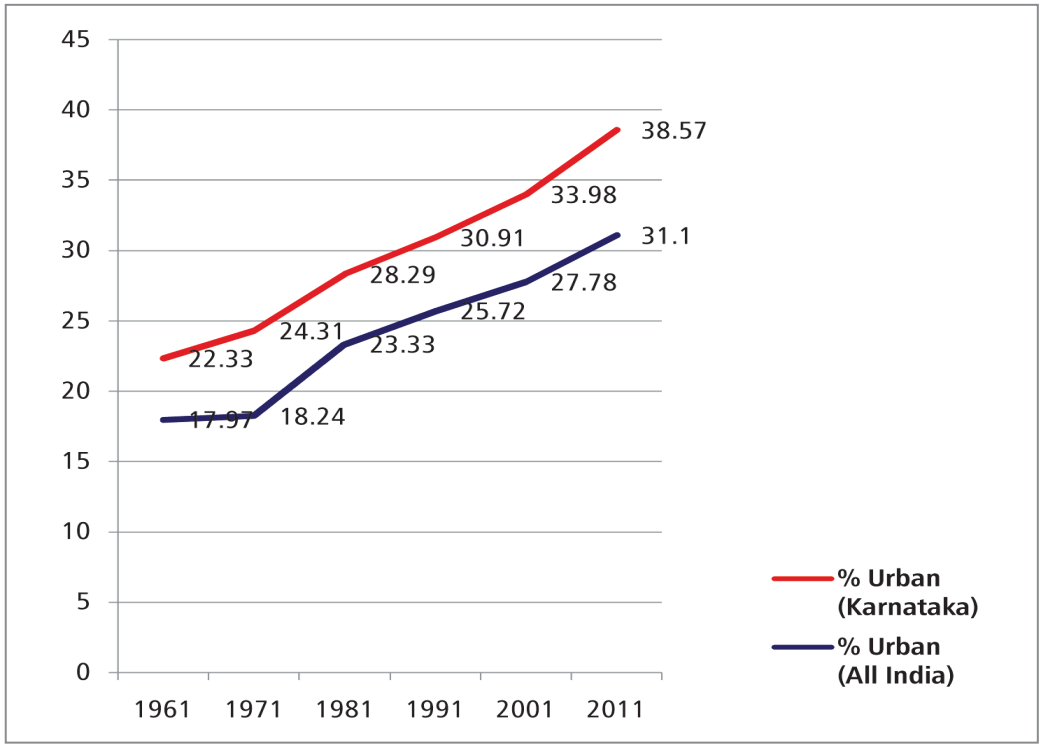
the multi-dimensional framework of human development, we look not just at income poverty but to its manifestations in quality and access to environmental services, housing, employment, education, health and well-being, and socio-cultural inclusion. The picture the chapter paints is one of grim realities but also a sense of progress – even if slow – towards better human development outcomes for urban residents. The difficult conclusion, however, remains that the uneven development of physical, economic and social infrastructure means that adequate human development outcomes are still inaccessible for too many. More importantly, the slow pace of progress implies too great a cost for several generations before basic needs are met. Put simply: the business-as-usual scenario for urbanization will not address human development concerns adequately. This trend is not irreversible but changing its trajectory has to begin by first acknowledging and taking seriously existing inequalities and then beginning to accord them priority in our paradigms of urban development.

This chapter seeks to contribute to such analysis. It begins with an overview of the patterns of urbanization in Karnataka and a discussion on multiple dimensions of human development in the urban process. It then turns to sectoral analysis of different aspects of human development and then, finally, to recommendations in accelerating progress to build more inclusive cities.

Urbanization in Karnataka

Karnataka is India's 7th most urbanized State, with 38.6% of residents living in urban areas. Its levels of urbanization are consistently higher than the national average in India. The decadal growth rate has been gradual, though particular cities and districts have grown rapidly.

Figure 11.1
Population of Urban Karnataka



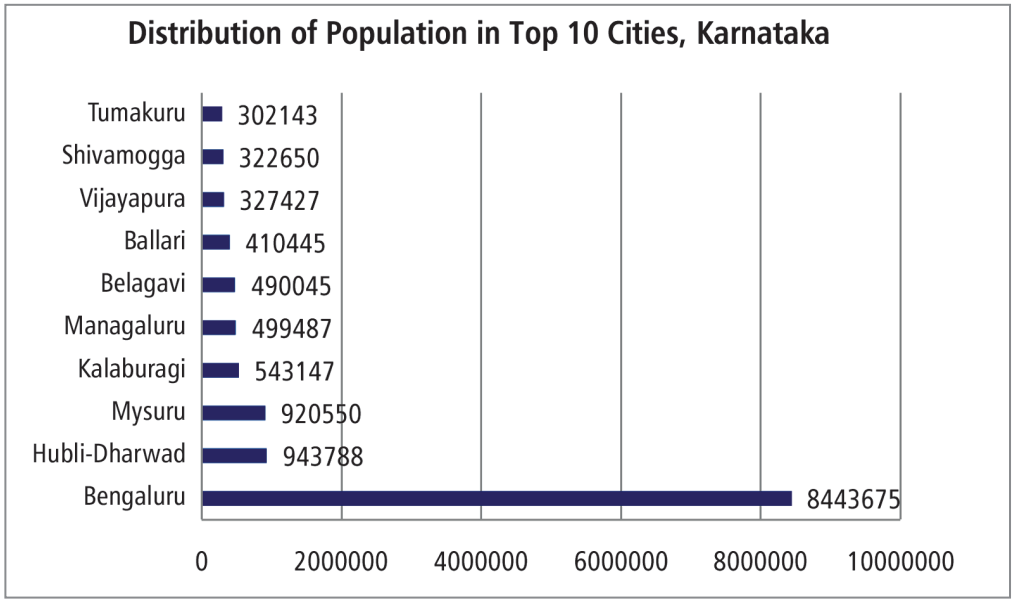
Source: Census 2011

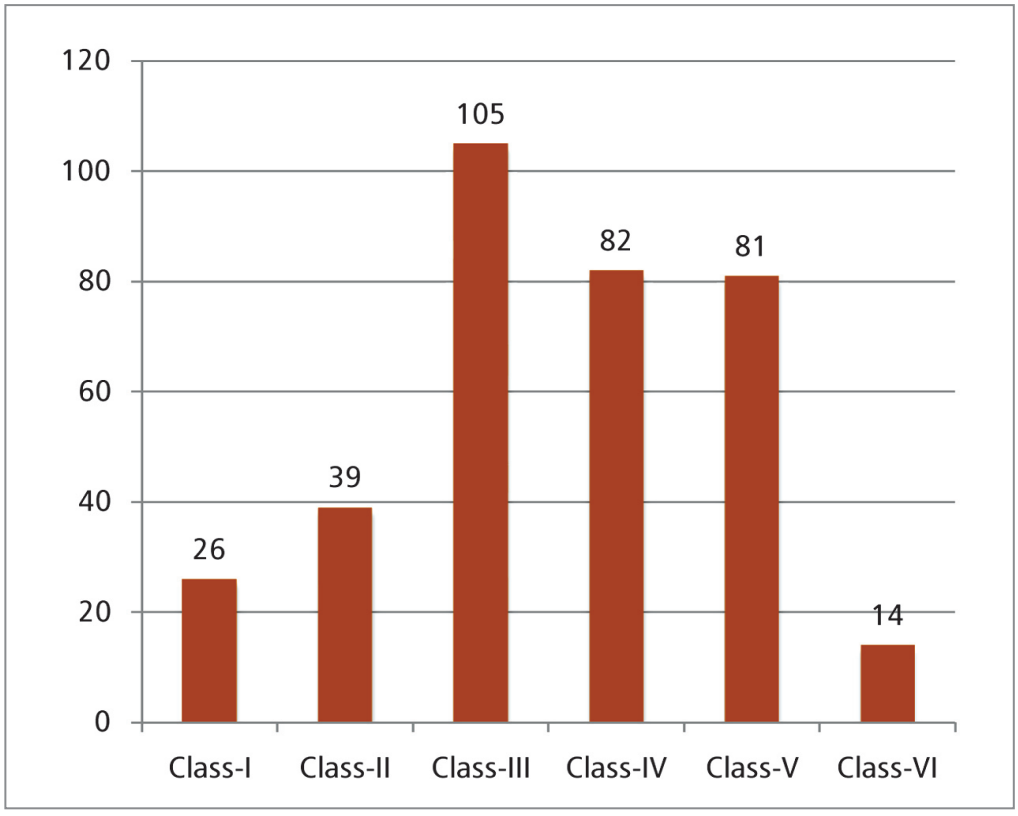
The State's urbanization pattern is particular. It has only one large metropolitan area – Bengaluru (8.4mn in 2011) – as its only million plus city though Mysuru (0.94mn) and Hubli-Dharwad (0.92mn) may soon cross that barrier. About37% of the State's urban residents live in Bengaluru. Figure 11.2 visualises this metropolitan primacy that sets the State apart from its neighbours, particularly Kerala and Tamil Nadu which have much more dispersed and balance settlement structures, the former with rural-urban areas relatively inter-mixed and the latter with several medium sized million plus cities beyond Chennai. Metropolitan primacy has posed challenges for the State, particularly in raising investments in small and medium urban centres. Authors argue that this has had its impact on urbanisation by stagnating capacity of ULBs to manage urbanisation (Kundu, 2011); deteriorating funds to improve the infrastructure for urban services(Kamath, 2012; Kundu, 2011); uneven concentration of urbanisation slowing down growth of smaller towns (Hashim, 2009); and several other urban challenges.

The skew in the settlements structure goes further. Nearly 67% of all urban residents live in the 26 Class I cities – the remaining 23% live in 321 urban hamlets that are Class II to VI cities. This is a critical structural aspect to note. Human development challenges rise sharply as we move down the scale of settlements. Small urban centres are caught in a double bind: they have weak urban government structures instead of panchayats, are ineligible for rural development funds like NREGA yet also cannot attract either State or private capital investment or have the economic dynamism associated with larger urban areas. This implies a concentrated vulnerability to them. Insufficient data about basic urban conditions in these small urban centres further exacerbates the situation. Here we will repeatedly call attention to the need to focus on smaller urban centres to address the most glaring human development inadequacies. This will also enable us to track future urbanization - The decadal growth rates are higher in Class II-VI cities than in Class I cities which means the opportunity to intervene with the scale of the problems are manageable will soon fade.

Nearly 67% of all urban residents live in the 26 Class I cities – the remaining 23% live in 321 urban hamlets that are Class II to VI cities.

Figure 11.2
Urbanisation Patterns in Karnataka





Spatial informality or illegality can impact access to services, adequate housing, economic development, as well as socio-cultural inclusion and belonging. It is arguably a clear pattern that spatial illegality has strong co-relations with exclusions from human development.

Who is an Urban Resident?

Yet beyond the demographics of urbanization it is also important to briefly note the nature and form of how urban space is produced and settled. We mark here that many urban residents in Karnataka's cities live in auto-constructed settlements that are built in some tension with formal regimes of law, planning and property. This kind of "tension" – also often called "informal" or "illegal" settlement – has diverse forms. It's most recognizable form is the "slum" – settlements that lack basic infrastructure and amenities and has physically inadequate dwelling units. Many slums – though not all – also have uncertain security of tenure, i.e. claims to be able to use and exchange the land they are on. Other kinds of informal settlement include more elite developments – often called "unauthorized colonies" – that are also built in violation of Master Plans, usually through the illegal conversion of rural land or through violation of zoning laws.

Throughout this chapter, it is dicussed to how being "informal" impacts human development outcomes. Spatial informality or illegality can impact access to services, adequate housing, economic development, as well as socio-cultural inclusion and belonging. It is arguably a clear pattern that spatial illegality has strong co-relations with exclusions from human development. As we will argue in the conclusion, spatial illegality makes urban residence and citizenship uncertain and insecure for many thereby significantly hindering their ability to attain human development outcomes. In each section below, we detail the impact of such uncertain and informal residence.

Income Poverty and Inequality

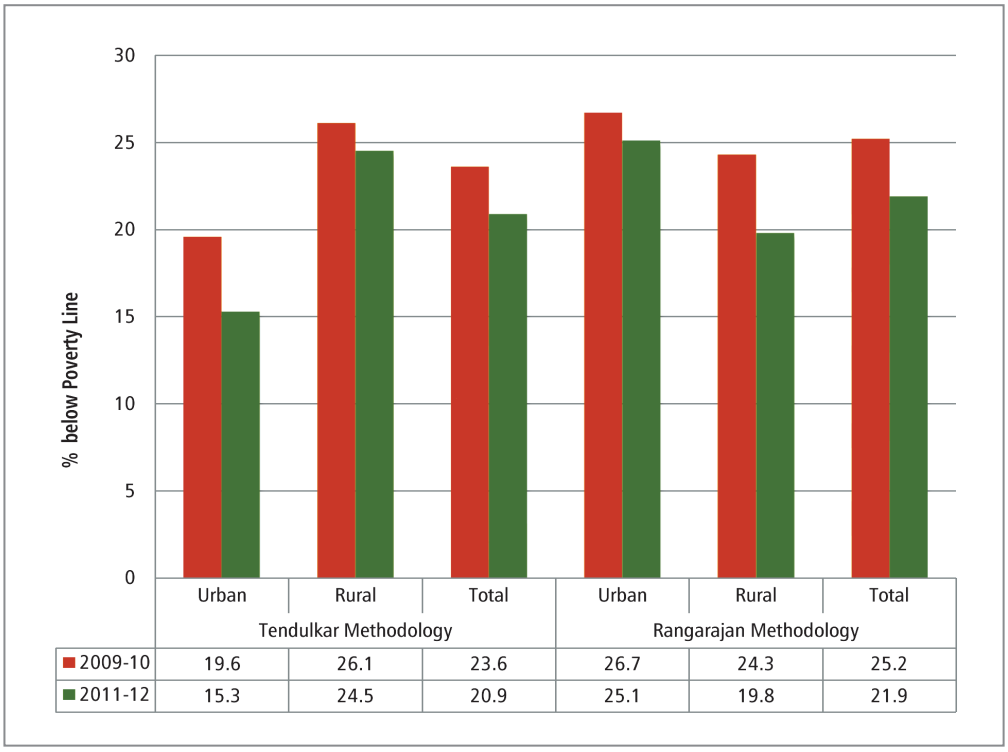
From a human development perspective, poverty is not just the absence of income and resources but of the means to live a dignified life where core capabilities can be turned into valued functionings that allow human beings to flourish (Sen, 1999). Yet a paucity of income is certainly one key part of this multi-dimensional understanding of poverty as long as our frameworks are not narrowly reduced to this reading. To prevent such a reduction, this section uses the term income poverty to refer specifically to monetary measures of minimal or adequate income.

Income poverty differs in urban and rural locations. On the one hand, incomes are usually higher in urban areas, access to employment presumably easier, and proximity to infrastructure higher. Yet, costs are also higher, proximity does not always imply meaningful access and the presence of work does not equate to a living wage. In a debate that will echo across different sections of this chapter, an urban location is both seen as a dividend and a penalty – opening up some opportunities, but also creating new challenges. Yet some differences do exist quite clearly in urban and rural income poverty. First, it is argued that the urban areas are highly commodified and rely on frequent cash transactions for everyday life, especially for the poor. This implies that it is not just that income must be sufficient, it must also be regular and timely. Second, authors argue that the poor living in urban areas pay a 'poverty premium' (Lee, 2011; Mitlin & Satterthwaite, 2013) for basic services including food and non-food expenses, spending more on average as a percentage of their income than their rural counterparts. This is, as we shall argue later, linked to the kind of services – often private, more expensive, cash-based – they access because they live in uncertain conditions of tenure and residence.

In India, income poverty is conventionally estimated with reference to a poverty line. Two important recent revisions to measuring poverty lines include food and non-food expenditure, measuring poverty by what families spend on a core set of items deemed necessary for meeting basic needs. The Tendulkar Committee in 2009 estimated per capita rural poverty at Rs.816 and Rs.1000 in the rural and urban, respectively. The poverty line for the urban districts in Karnataka was set higher than all India average at Rs.1089. In 2011-12, urban poverty rates stood at 15.3%, or 3.7 million people. It has to be borne in mind that poverty lines represent essentially minimum levels of expenditure. Many have argued that they measure destitution, and that poverty exists above the poverty line in large measures.

Income poverty differs in urban and rural locations. On the one hand, incomes are usually higher in urban areas, access to employment presumably easier, and proximity to infrastructure higher. Yet, costs are also higher, proximity does not always imply meaningful access and the presence of work does not equate to a living wage.

Figure 11.3
Poverty Ratios in Karnataka
Tendulkar and Rangarajan Method Estimates



	Tendulkar Methodology			Rangarajan Methodology		
	Urban	Rural	Total	Urban	Rural	Total
2009-10	19.6	26.1	23.6	26.7	24.3	25.2
2011-12	15.3	24.5	20.9	25.1	19.8	21.9

Source: Karnataka Economic Survey 2013-14 (GoK, 2014)

In both estimates, it was clear that rural poverty was falling faster than urban poverty. Karnataka has the highest incidence of poverty in urban areas among the four southern states.

In 2014, a revised methodology to estimate poverty was proposed by the Rangarajan Committee. This revision indeed raised the poverty line in response to the broad criticism that the Tendulkar estimates were too low. The Rangarajan committee raised the urban poverty line in Karnataka to Rs.1373. According to the Rangarajan committee method, 2011-12 urban poverty rates were revised to 21.9%. In both estimates, it was clear that rural poverty was falling faster than urban poverty.

Karnataka has the highest incidence of poverty in urban areas among the four southern states. Using the Rangarajan method of poverty estimation, Figure 11.4 suggests Kerala has the least percentage of urban poor (15.3%) followed by (then undivided) Andhra Pradesh (at 15.6%) and Tamil Nadu (at 20.3%).

Spatialising this poverty is essential. Studies have shown that the primate city of Bengaluru, the only million plus city in the State, has remained an area with the least number of poor in the state (Chaudhuri & Gupta, 2009). while most of the smaller urban areas have higher concentrations of poor (Government of Karnataka, 2014). This resonates with the national estimate of 25% of urban population largely concentrated in small and medium towns.

The distribution of income is equally important. Very often, development

policies speak about the need and importance of targeting the "common man," yet common-sense understandings of who this person is are wide and varied. Table 11.1 below shows the distribution of household income (measured through a proxy of monthly per capita expenditure (MPCE), as is common for measuring the poverty line). What it reveals is important to bear in mind. The "common household" in urban Karnataka is still largely poor. Nearly 90% of urban households earn less than Rs. 2 lacks a year – that are classified as Low Income Group families by the Ministry of Housing and Urban Poverty Alleviation. The new wealth of Karnataka's bigger cities represents less than 10% of its households.

Access to Basic Environmental Services - Water Supply and Sanitation

Basic urban environmental services such as water supply and sanitation are a key part of urban human development. Valuable ends unto themselves, they are also intimately linked with vulnerabilities related to health and well-being that in turn affect broader social and economic competencies. Some of India's greatest public health challenges are related to the lack of sanitation, for example, and have resulted in considerable social and economic losses in the country – estimated by some at 6.4% of India's GDP (WSP, 2012).

The UNDP Human Development Report 2014 recommends a universal provision of basic services, recognizing the criticality of access to water and sanitation facilities to all urban citizens (UNDP, 2014). In Indian cities such universal access is hampered by both availability of sufficient water as well as inequities in access, affordability and distribution. Many large urban areas in India are in arid and semi-arid regions where insufficient local water supply means relying upon water drawn from far-off areas (Mukherjee, Shah, & Kumar, 2010). This increases the investments required to build the infrastructure for service delivery with State governments often failing to meet universal targets, or even deciding to be settled for only targeted coverage (UNDP, 2014).

Our focus in this section is on distributional concerns, i.e. measuring access to water supply and sanitation for a given level of supply. This is a particular view but helps us focus on improvements that can be made to access even without augmenting supply. Thus, highlights inequalities in access that are central to a human development lens. Available data yet again creates a minor bias towards larger cities. We place these snapshots of access against current State efforts to provide universal access to water supply and sanitation. We begin with looking at water supply.

Table 11. 1
Distribution of Household Income (2009-10)

Model 1: Distribution of Household Income (Karnataka 2009-10)			
Decile	Annual Urban Household MPCE	Decile	Annual Urban Household MPCE
1	46,244	6	1,09,418
2	58,317	7	1,28,839
3	67,970	8	1,55,318
4	79,586	9	1,93,324
5	93,233	10	3,34,198

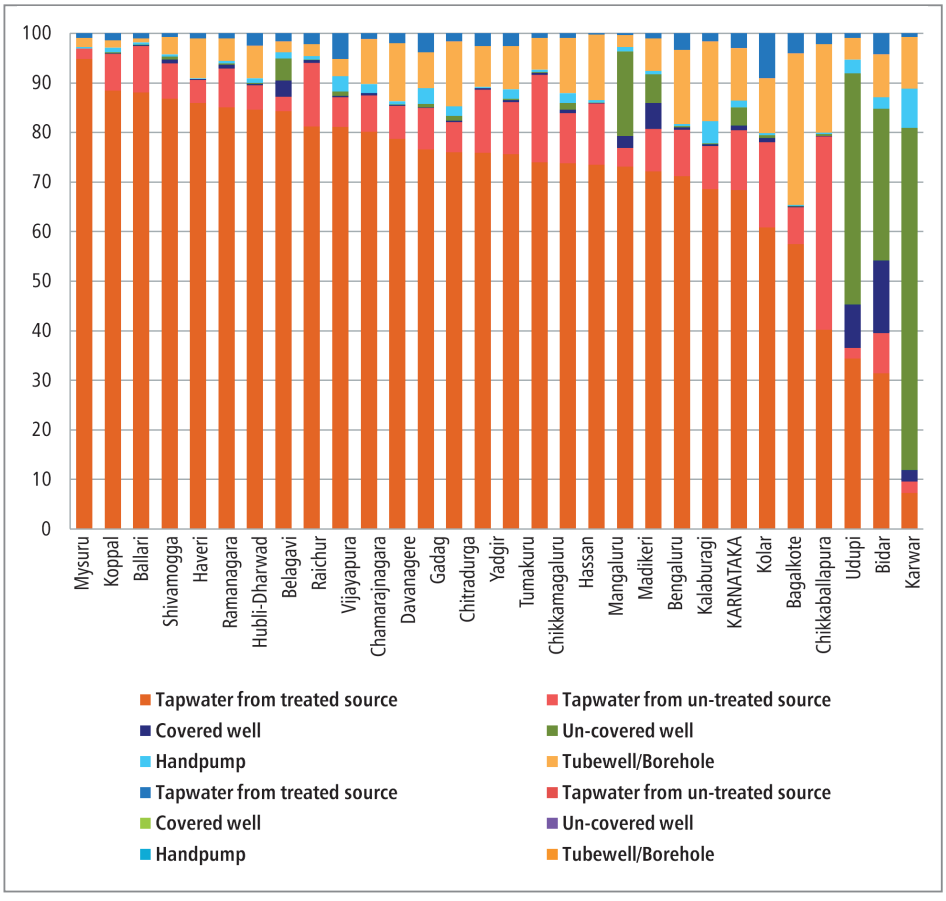
Mysuru city has the highest percentage of households (95%) with tap water from treated sources with Karwar having the least percentage of households (7.2%). Bengaluru city has around 71% of the households receiving treated water supply.

Water Supply

The data in this section measures access through three key variables for water supply: (a) source of drinking water, (b) location of this source, and (c) service level benchmarks for frequency and reliability of supply.

The Census captures the source of drinking water accessed by urban households under the broad categories of tap water (treated or non-treated), wells (covered or non-covered), tubewells or borehole. It is important to note that this data does not measure the quality of such water, or give us information about the ease of access, regularity of supply or adequacy of its quantum. Figure 11.4 below shows the distribution of households by source of drinking water populated across 29 cities in Karnataka. Mysuru city has the highest percentage of households (95%) with tap water from treated sources with Karwar having the least percentage of households (7.2%). Bengaluru city has around 71% of the households receiving treated water supply. In general, the trend shows 22 cities have over 70% of the households accessing treated tap water. Wells, covered and uncovered, appear to be providing water to a larger population in smaller cities. These households often use a combinations of wells, handpumps and tubewells, highlighting the direct dependence of almost 30% of households on groundwater. This will have an impact on the sustainability of such a form of consumption in the future.

Figure 11.4
Percentage Distribution of Household by Source of Drinking Water

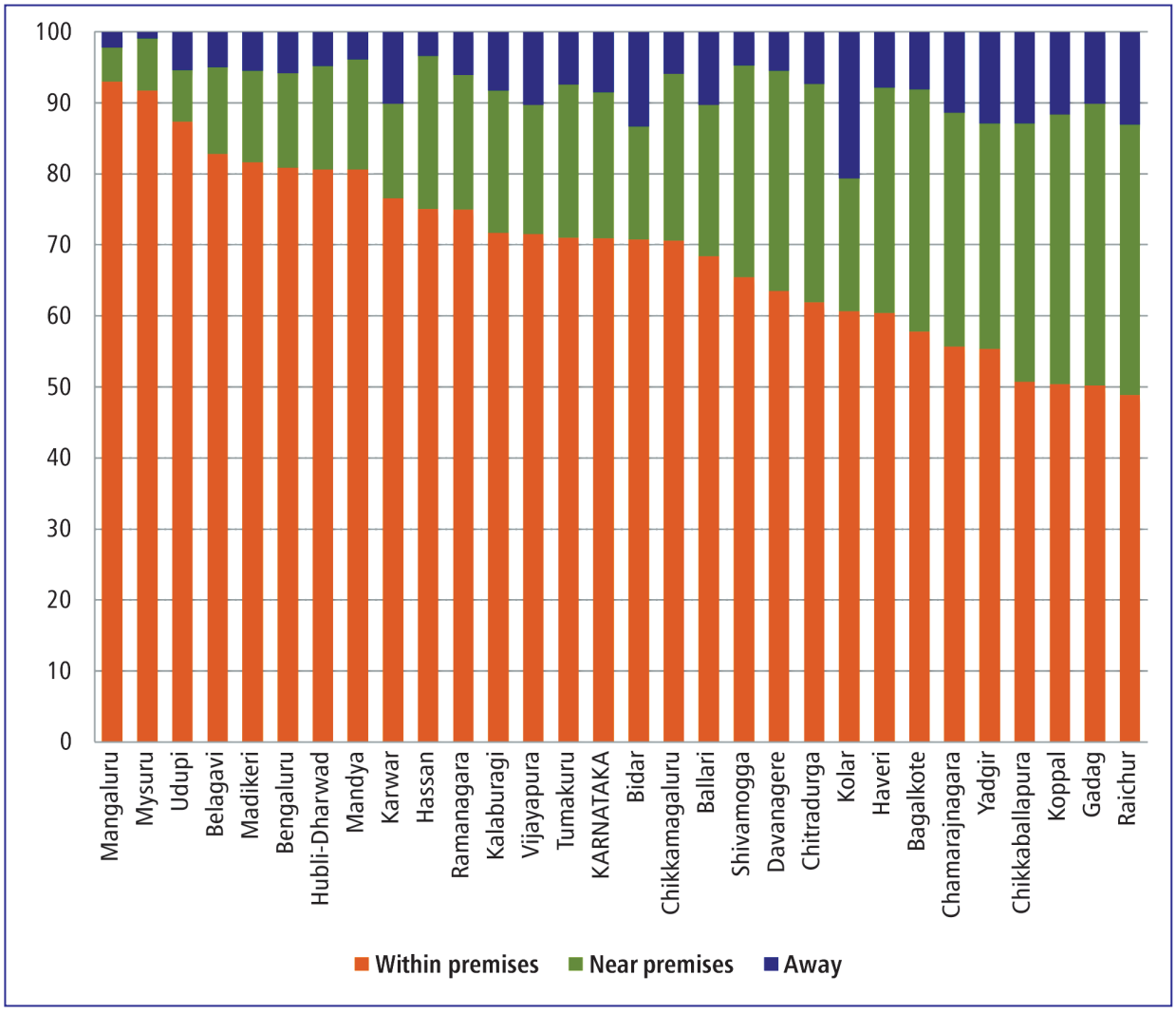


Source: Census 2011

Where are these sources located? Proximity of the water source is measured as three categories– within premises, near premises (<100m) and away (> 100m). Figure 11.5 shows the distribution of households by distance from the source as per Census 2011. The data gives us reason to pause: in cities like Kolar, over 20% of households fetch water from over a 100m away. For the ten cities that rank lowest, less than 60% of households have sources of water within the household. This has particular gendered implications beyond lost time and labour. In many households, the responsibility for gathering water is with

women and girls. The farther the source and the longer the time taken to collect water from the source, more severe the impacts on education and health for women and girls become. As mentioned earlier the census data does not tell us much about the quality and frequency of the service.

Figure 11.5
Percentage Distribution of Household by Source of Drinking Water (within, Near & away from the premises)



Source: Census 2011

Data that does allow us to capture frequency and reliability of supply from these sources comes from a nation-wide exercise of Service Level Benchmarking which was undertaken in 1142 cities in 2010-11. The table below lists the indicators of the SLB, what their benchmark values should be and the figures are based on the reports from 1142 cities. Coverage of connections are only at 51% in Bengaluru. Even in the best performing city Kalaburagi, nearly 20% of households do not have water connections. Supply remains under the benchmark for all except two cities Mangaluru and Mysuru meeting the benchmark for treatment.

Table 11.2
Service Baselines in the year 2011-12

Service Level Baselines in the year 2011-12										
Indicator	Bench mark	Benga luru	Bela gavi	Ballari	Davana gere	Kalabu ragi	Dhar wad	Manga luru	My suru	Tuma kuru
Coverage of connections	100%	51	62	80	70	80	60	60	79	60
Per capita Supply	135 LPCD	96	110	120	80	100	85	135	135	70
Metering of Connections	100%	98	30	0	0	30	65	60	65	0
Quality and Treatment	100%	83	100	90	75	95	90	90	81	100
Cost Recovery	100%	92	44	30	25	30	25	30	62	20

Source: MOUD, 2012

Karnataka is, in fact, one of the first States to adopt National Urban Sanitation Policy (2008),

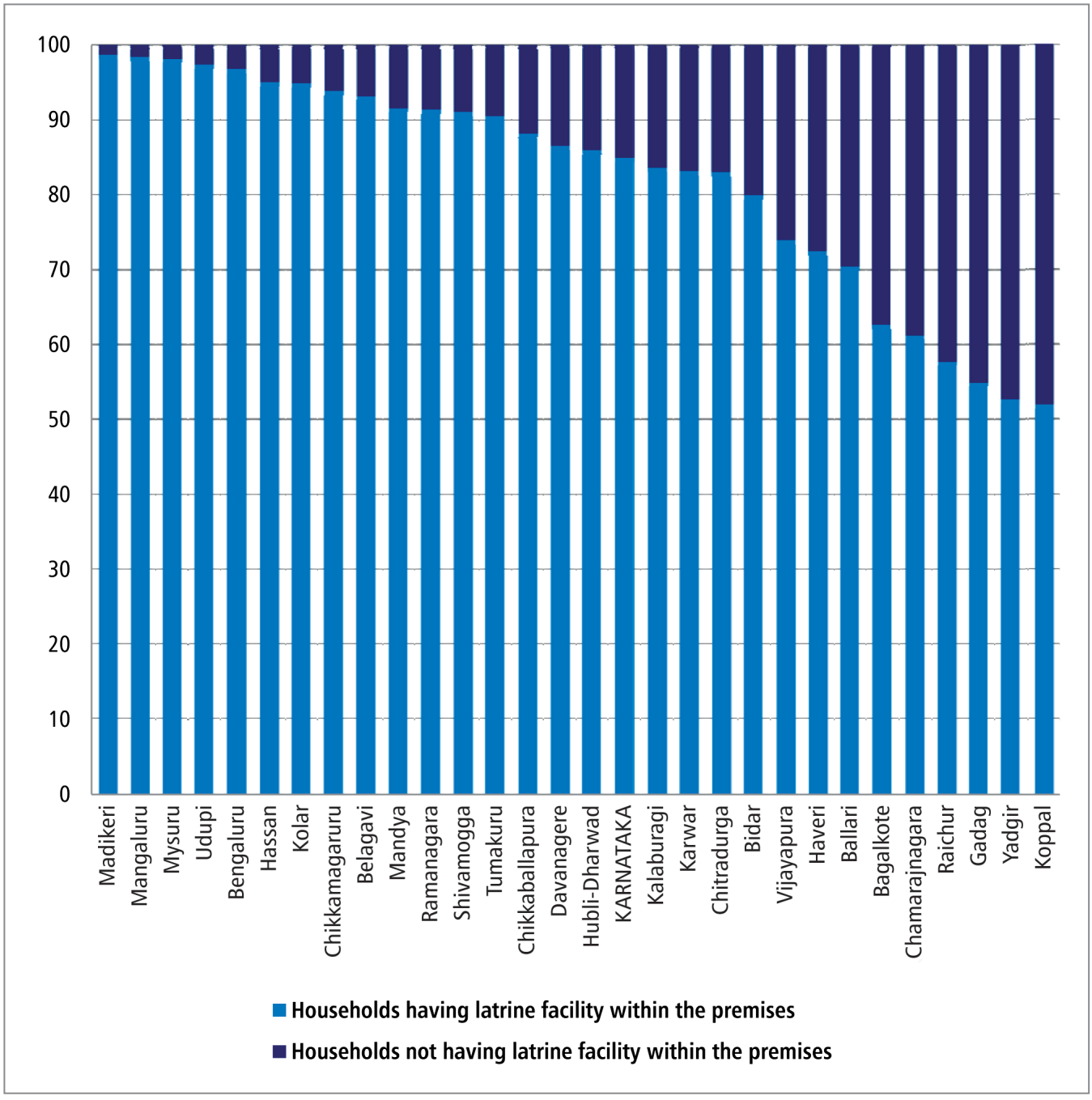
For metering in Ballari, Davanagere and Tumakuru, water supplied at fixed monthly rates, hence no metered connections in 2010-11. However, current status on metering might have changed.

Sanitation

We understand sanitation to mean the safe management of human excreta, including its safe collection, conveyance, treatment and disposal.In this section, we focus on a set of key measures: (a) location of toilets; (b) type of toilet facility; (c) access to sewerage; and (d) a composite measure of sanitation from the National Urban Sanitation Policy ratings. Karnataka is, in fact, one of the first States to adopt National Urban Sanitation Policy (2008), recognizing the necessity for urban infrastructure investments and reforms to improve sanitation service and maximize service coverage (Ranganathan, Kamath, & Baindur, 2009).

As Figure 11.6 shows, Karnataka still has an average of 15% of households that do not have a latrine in the premises of their household. These numbers rise to over 35% for six cities, indicating severe deficiencies in adequate access. As argued earlier, the worst access is spatially concentrated in smaller towns: Koppal, Yadgir, Gadag, Raichur, Chamarajnagar, Bagalkote, among others.

Figure 11.6
Percentage Distribution of Household with Toilet Facility



Source: Census 2011

Figure 11.7
Percentage Distribution of Households & type of Toilet facilities

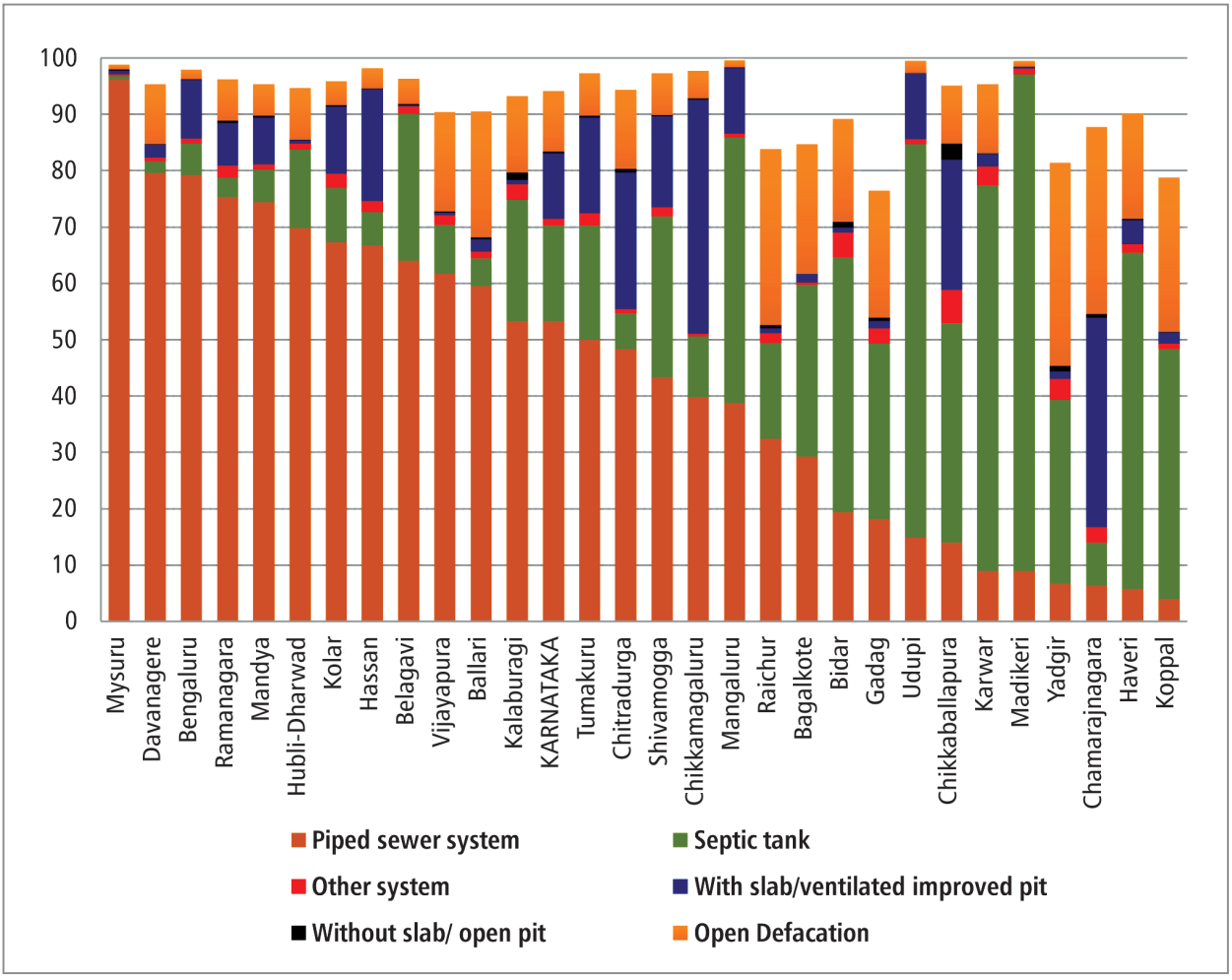
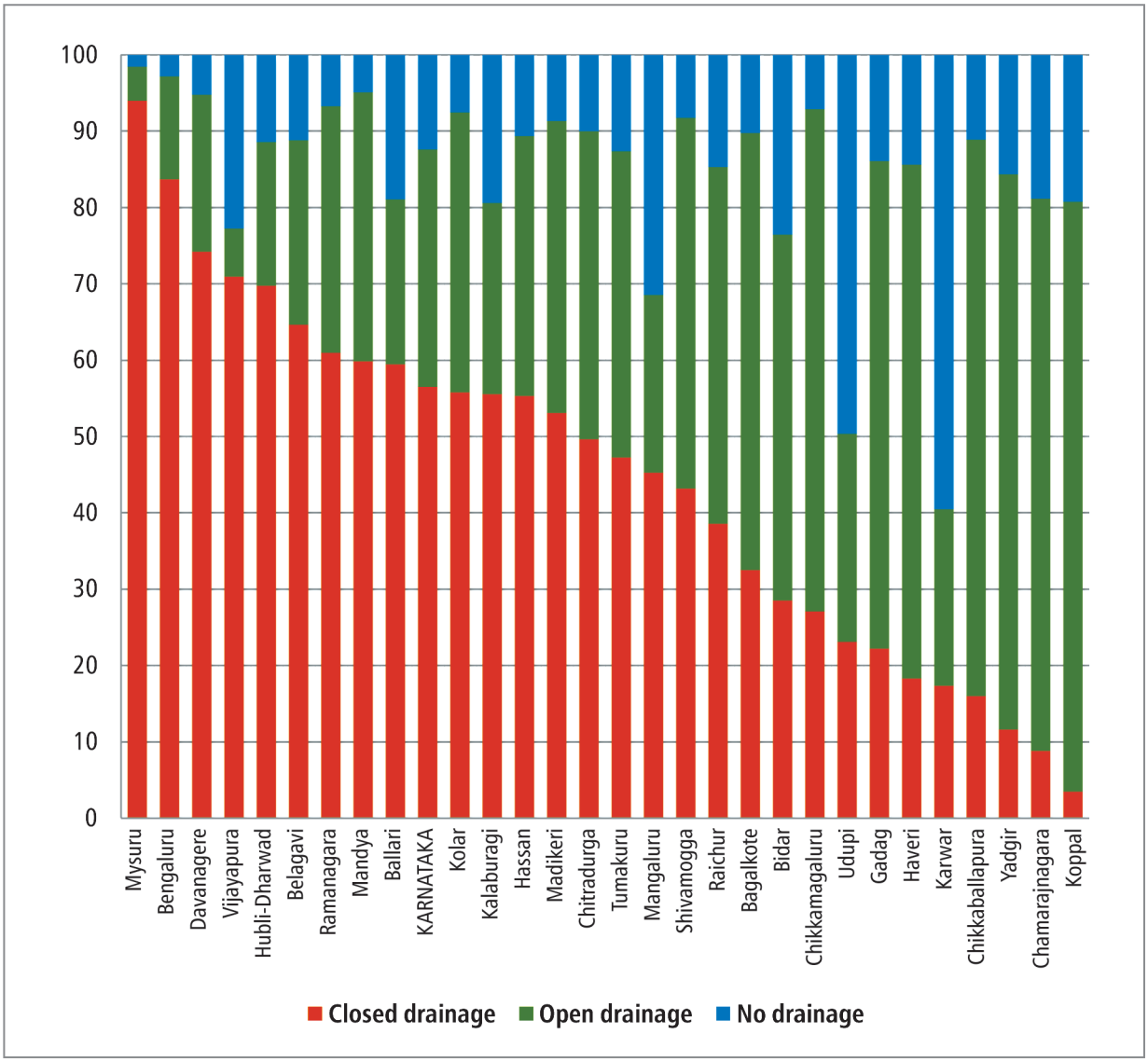


Figure 11.7 shows the distribution of households by type of toilet facilities. Here, the use of open defecation remains remarkably high in many cities, including even those that have large number of households connected to sewer systems like Davangere. Raichur, Ballari, Koppal, Chamarajnagar and Yadgir once again are worse off on sanitation indicators. Further, even for urban areas that have high rates of households with toilets connected to sewer systems, studies conducted by the Water Sanitation Program have indicated that within cities the condition and type of toilets are often worst for the poorest communities, i.e. dysfunctional with clogged toilets, leaking taps, broken floors or roofs (WSP, 2012).

For disposal, the presence of closed drains is seen as a desirable indicator. The high figures for Mysuru indicate the success of Mukhyamantrigala Nagara Yojane (MNY) that sought to use a 100-crore package to improve access to underground drainage (Sridhar, Reddy, & Srinath, 2011). The State average, however, remains at 56% and a majority of urban centres are well below this average with cities like Karwar reporting 60% of households with no access to open or closed drains.

Figure 11.8
Distributions of Households with Sewerage Connections



The National Urban Sanitation Program introduced a ranking system based on multiple indicators. By ranking it was intended that the comparative status of cities forced a spotlight on sanitation conditions making State governments prioritize this. In total there are 19 indicators scored for 100 points (NUSP, 2010b). The table below shows only cities and their ranking in Karnataka. All the Class-I cities and Bengaluru are included in the ranking. The scoring highlights poor sanitation conditions prevail across most cities of the State. Mysuru is the only city that has scored well with Chitradurga and Davanagere indicated for immediate action.

The State average, however, remains at 56% and a majority of urban centres are well below this average.

Table 11.3
Sanitation Ranking of Cities

National Ranking	City	Total	Output	Process	Outcome
2	Mysuru	70.65	33.08	25.07	12.5
8	Mangaluru	57.34	20.84	22.5	14
12	Bengaluru	53.637	21.7	18.87	13.07
15	Mandya	53.33	18.74	20.59	14
22	Bidar	49.82	17.17	21.45	11.2
44	Udupi	45.4	13.67	19.48	12.25
47	Chikkamangaluru	45.02	14.92	19.95	10.15
77	Vijayapura	41.52	11.02	20.01	10.5
91	Belagavi	40.51	16.83	12.48	11.2
102	Hassan	39.92	13.25	17.72	8.95
168	Shivamogga	37	13.17	14.03	9.8
175	Kalaburagi	36.67	12.92	17.91	5.95
177	Kolar	36.71	16.08	14.33	6.3
181	Ballari	36.49	12.05	17.44	7
185	Tumakuru	36.61	9.61	22	4.55
197	Hubli-Dharwad	35.23	10.77	19.21	5.25
212	Raichur	34.53	10.5	12.28	11.75
222	Gadag	34.12	8.76	16.96	8.4
355	Chitradurga	25.11	8.76	10.75	5.6
357	Davanagere	24.95	9.67	11.08	4.2

Source: NUSP ranking 2009-10 (NUSP, 2010a)

Table 11.4
Description of Categories according to Sanitation Ranking of Cities

Category	Description	Points
	Cities requiring immediate remedial action	<33
	Needing considerable improvement	34-66
	Recovering but still diseased	67-90

Box 11.1
Water and Sanitation in Slum and Non-Slum Areas, is the slum an Adequate Proxy

Often, when one speaks of urban poverty, the only discussion is of the "slum." Yet it is worth noting that the slum is not as an effective spatial proxy of urban poverty – and certainly not of human development – as imagined (see Bhan and Jana 2013). Two quick empirics on water and sanitation itself makes this clear. According to the Slum Listings of the Census 2011, while 36% of slum households do have a latrine facility on premises, for example, it is also true that 15% of non-slum households also lack such access. In access to tap water, the figures worsen. While 16% of slum households access tap water from a treated source, 24% of non-slum households do so.

We cite this figures to caution, again, that policies and programs that seek to target human development by focusing on slum areas will risk excluding a significant number of households in need. We return in the conclusion to emphasize the need for universal approaches.

Housing

Housing is often reduced to the just the physical dwelling unit of the house yet adequate housing is much more than that. From the perspective of human development particularly, housing is both a basic need as well an asset that determines other desired outcomes such as employment, access to mobility, physical security and better health. This section sees adequate housing as having three clear components: (a) secure tenure and protection from forced eviction; (b) adequate access to services; and (c) adequate physical construction of the housing unit itself (IIHS, 2014). Housing shortage then represents shortages in any or all of these three dimensions.

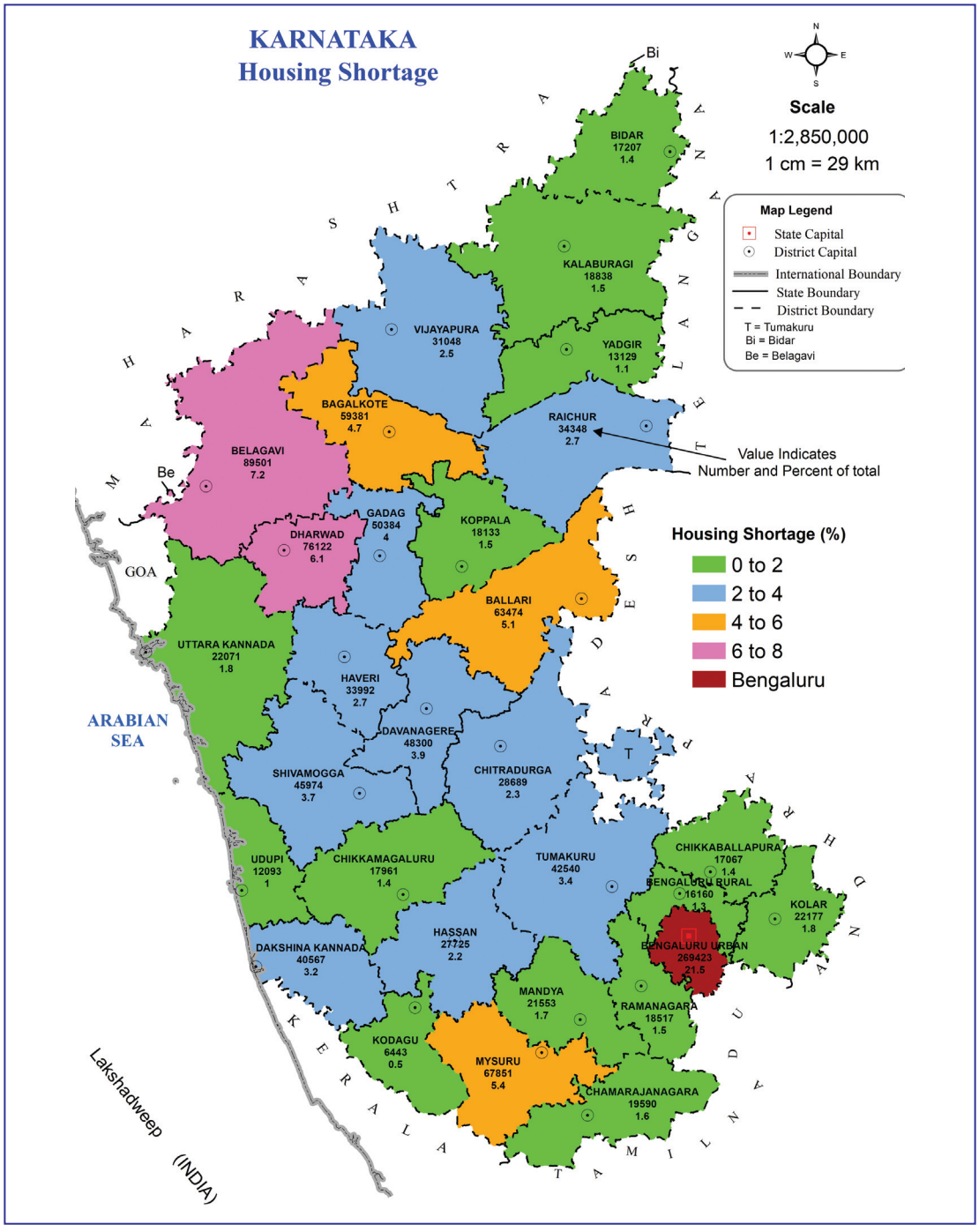
According to the Kundu Committee report, Karnataka has a housing shortage of 10.2 lakhs (1.02 mn) units. Other estimates – shared in Table 11.5 argue for 12.5 lakhs (1.25 mn). This compares to 5 lakhs (0.5 mn) in Kerala, and 12.7 lakhs (1.27 mn) in Tamil Nadu. Figure 11.9 spatialises this shortage across districts in Karnataka.

Table 11.5
Housing Shortage in Karnataka

1	Urban Population in Karnataka (2011)	2,36,25,962
2	Number of Urban Households (2011)	53,78,520
3	Number of Households Without Houses	10,922
4	Number of Households living in semi-permanent and temporary houses	8,24,700
5	Number of Households that will require habitation after they move out of congested houses	4,14,247
6	**Total number of households requiring immediate habitation**	**12.5 lakhs**

Source: IIHS Analysis; Census 2011

Figure 11.9
Housing Shortage in Karnataka



Like in the rest of India, a majority of this shortage is for EWS and LIG households that earn below Rs. 2 lakhs a year as household income. According to the Ministry of Housing and Urban Poverty Alleviation, an affordable house is five times annual household income. Using this ratio and the MPCE data (see Table 11.6) as a proxy measure of income, we get the Affordability Spectrum for Karnataka.

Table 11.6
Karnataka Affordable Housing Spectrum

1	No. of Households who can pay up to Rs. 5 lakhs for a house	23%
2	No. of Households who can pay between Rs. 5 and 10 lakhs for a house	45%
3	No. of Households who can pay between Rs. 10 and 16 lakhs for a house	22%
5	No. of Households who can pay above Rs. 16 lakhs for a house	10%

The disjuncture that threatens housing conditions for many residents, is that housing that is affordable (i.e. <5 or 10 lakhs) is often either inadequate, or lakhs secure tenure as part of a "slum." Housing that is legal is unaffordable and is built above Rs. 10 lakhs for a different housing market. As urban political economies change, the housing stock belonging to that upper bracket has been growing, especially in Bengaluru, Mysuru, and Hubli-Dharwad.

Here lies the unique challenge for urban housing and human development: adequate housing is unaffordable; affordable housing is inadequate. This inadequacy is not just in terms of the physical dwelling unit but also, as we have argued earlier, in terms of access to basic services like water supply and sanitation. It is thus, imperative to read data in this section on housing along with data on water supply and sanitation. As we have argued, housing is not just a kuccha or pucca unit, but a liveable settlement with access to tenure and basic services. Many inadequacies in access to water supply and sanitation are also precisely in neighbourhoods that lack adequate housing. This is not a co-incidence. Often, services are not provided precisely because households lack legal title. When provided, as in the case of Bengaluru, reduced service levels are used. For example, in slums, the Bengaluru Water Sewerage and Supply Board (BWSSB) gives shared taps rather than individual water connections. Spatial illegality of different housing forms limits access to basic services. We will return to this connection in the conclusion.

What spatial illegality also does is to make existing affordable housing vulnerable to eviction. Such insecurity of tenure can have debilitating effects on the human development of already vulnerable outcomes. Evictions represent a welfare shock from which most urban poor households cannot recover through loss of assets, removal from housing that is close to mobility and employment, as well as drop-outs from education, leading to what some scholars have called "permanent poverty" (Bhan and Menon-Sen 2008). In Karnataka, evictions have marred many cities (HRLN-PUCL 2015) and represent a grave challenge to building equitable cities.

Health and Well-being

Urban centers in India indicate some of the best health outcomes for the country as well as some of the most negative. Debates in public health worldwide have argued for both an urban advantage in health but also an urban penalty (Butsch et al, 2012). Urban residents face the health risks of

A paradox emerges: though urban residents are likely to live longer than their rural counterparts, they are also more likely to be faced with a greater burden of illness through their lives.

'urban' and 'modern' lifestyles and dense living conditions with inadequate or lacking infrastructure. While this is offset by the presence of a high concentration of medical facilities compared to rural areas these come at a disadvantage for many residents as these are private institutions, accessed through cash usually as out of pocket expenses.

This section examines health and well-being in urban areas against this debate. It looks first at disease burdens in urban and rural areas; then at nutrition; care-seeking and financing; maternal and child health, and, finally, violence.

Disease Burdens

Urban residents in Karnataka fare better in broader health indicators like morbidity. According to the District Household Survey (2011-12), urban Karnataka's overall morbidity rate is four percentage points below rural Karnataka, 2.5% and 6.5% respectively though morbidity rates are seen to be strikingly similar at 2.5% and 3.4% respectively (NSSO 60th Round).

Yet, if we look closer, urban areas seem to have higher mobility rates in non-infectious, acute, and chronic diseases such as diabetes, cardiovascular disease and respiratory disease. Chronic illnesses require longer care and have more costs involved in terms of seeking medical advice and treatment. A paradox emerges: though urban residents are likely to live longer than their rural counterparts, they are also more likely to be faced with a greater burden of illness through their lives.

Table 11.7
Morbidities for Chronic Illness and Lifestyle Disease

Acute Illness*	Chronic Illness*	Cardiovascular Diseases*	Respiratory Diseases*
◂ Urban: 5.0%	◂ Urban: 6.8%	◂ Urban: 14.5%	◂ Urban: 16.1%
◂ Rural: 5.7%	◂ Rural: 5.3%	◂ Rural: 10.3%	◂ Rural: 12.3%

**District Household Level Survey -4*

Type-2 diabetes has particularly risen with the country often labeled as the 'diabetes capital' of the world. Diabetes is an important risk factor for cardiovascular disease and this is the major cause of death and disability in persons with diabetes. Rates are at 13.5% for urban men, nearly twice that of rural men; and 10.4% for urban women, nearly two-and-a-half times that of rural women.It is important to note here that the public health system in India is not fully oriented to addressing this rising burden of non-infectious diseases. The focus is still on providing acute care but no chronic care. This leads to people seeking private medical assistance, a care-seeking pattern that we will discuss later in this section.

Care-Seeking and Financing

Where do urban residents seek care when they are ill? While urbanization is associated with a concentration and accessibility of services like health care, it's equally associated with growing income disparities and urban poverty. This is especially important to note when we look at the data on care-seeking behavior

across Karnataka. The biggest rural-urban differential is noted here. Rural areas have a stronger public health system because of years of targeted interventions by the government to improve rural health outcomes. The decentralized public health institutions have been designed to the features and characteristics of rural India. The National Urban Health Mission is fairly newer than the National Rural Health Mission and is not implemented well across the country. Agarwal & Sangar (2005) point out that the access to health care services of the urban poor is comparable to the restricted access of rural populations. This follows through in Karnataka's case as well. NFHS-03 indicates that only a fourth of urban residents access public medical services, while in rural Karnataka close to half the population does. Consequently, seventy five percent of urban residents access private medical services.

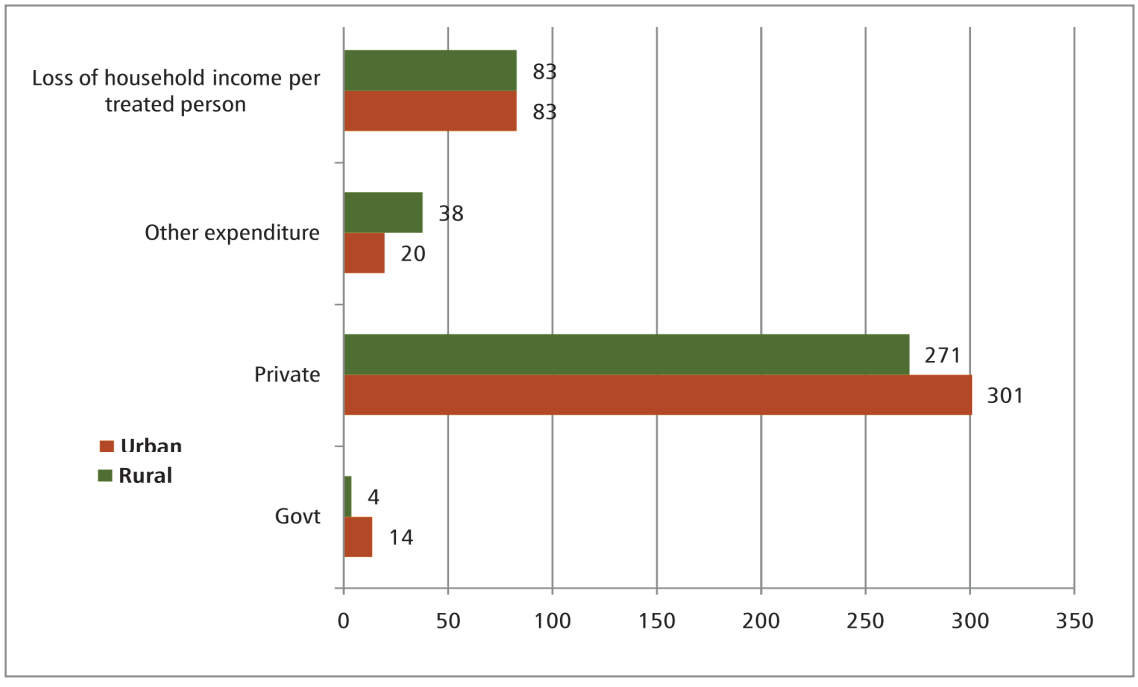
Table 11.8
Sources of Health Care

Source of Health Care	Urban	Rural
Public Medical Sector	23.3%	44.6%
Private Medical Sector	75.6%	54.5%

Source : NFHS-3

This has strong financial consequences. Often, one sickness in the family can send a family into a cycle of poverty that can affect the next generation's health and income status. World Bank reporting for all India states that 40% of Indians have to borrow or sell assets to cover hospitalization fees which forces 39 million across the country into poverty. This "medical poverty trap" is caused by high costs for medical treatment especially in the private sector which may lead to high rates of debt.
(Whitehead et al, 2001).

Figure 11.10
Average Expenditure for Treatment of Illness and Hospitalisation by Source

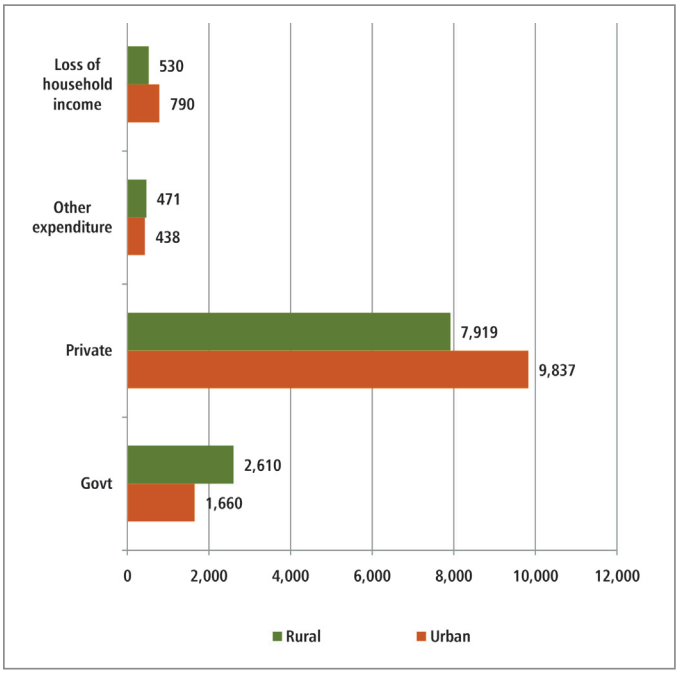


Source : NSS 60th round

The percentage of children (0-4 years) receiving immunization was high at 98% in rural areas and 97% in urban. Where the differential shows up is in the cost borne by households for this immunization. Institutional delivery is also high

The NSSO 60th Round provides data on the average cost of medical treatment and cost of hospitalization in urban and rural India. Though this data is not specific to Karnataka it is a good indicator of costs incurred in the State. Figure 11.11 indicates that in rural areas the greater share of medical cost are in expenses of transport for example. It is more expensive to visit both public and private medical institutions in urban areas. The data on hospitalization costs indicate that the burden of financing hospital care is significantly heavier on urban residents.

Figure 11.11
Average medical & total expenditure per Hospitalization.



Source : NSS 60th round

Further, while private medical services are often highly specialized, they also encompass different systems of medicine at a wide range of costs and quality. At the lower end (in terms of prices), "private" refers to informal practitioners of unspecified training and quality. Yet, public health institutions at the same scale such as primary health care centers often lack doctors and medical supplies. In an evaluation of Urban Family Welfare Centers in urban Karnataka, it was reported that various categories of health staff positions were vacant in 20-28 percent of the centers at the time of evaluation study (Sharma, 2005).

Maternal and Child Health

Karnataka fares well on indicators of maternal and child health compared to other States in India. The percentage of children (0-4 years) receiving immunization was high at 98% in rural areas and 97% in urban. Where the differential shows up is in the cost borne by households for this immunization. Institutional delivery is also high though familiar differences in accessing public and private care show up, as shown in Table 11.9. The related cost differentials are in Table 11.10.

Table 11.9
Childbirth Health seeking Behaviour Karnataka.

Place of Delivery	Urban	Rural
Institutional Delivery	94%	85.8%
Delivery at Government Health Institution	41%	58.5%
Delivery at Private Health Institution	52.2%	27%

Table 11.10
Expenditure per Child birth by place of Delivery, All -India (in Rs)

Place of Delivery	Urban	Rural
Government Hospital	483	340
Pvt.Hospital	6,937	4,141
Home	319	195

Source : NFHS-3

Violence and Decision-Making

One of the key aspects of health from a human development lens is to focus on holistic well-being, including freedom not just from disease but also from violence. For household health to improve, women in households must be empowered, freed from violence and have the confidence to make decisions. The absence of these can affect women's contraceptive use, causes unwanted fertility, can impact the spread of sexually transmitted diseases and the mother and child's access to immunization and health care.An empirical way to measure this is to see women's perceptions of their own decision-making power. Tables 11.11 and11.12 summarize NFHS data on women's experience of violence.

Table 11.11
Decision making on Health care, Karnataka

Decision making	Urban	Rural
Makes own Health care decision	61.9%	47.8%

Source : NFHS-3

In Karnataka, urban women have more autonomy in making their own health-care decisions than their rural counterparts yet even here only 6 of 10 women felt they could make their own health-care decisions.

Table 11.12
Experience of Violence by women,Karnataka

Types of Violence	Urban	Rural
Emotional Violence	6.5%	9.1%
Physical Violence	14.6%	22.7%
Sexual Violence	3.7%	4.2%

Source : NFHS-3

In Karnataka, urban women have more autonomy in making their own health-care decisions than their rural counterparts yet even here only 6 of 10 women felt they could make their own health-care decisions. It is vital to keep this in mind and review the information that we have already presented on women's high rates of anemia and women's low body mass index. A woman's right to health cuts across the economic, social and cultural as well as civil and political rights, affecting the individual, as well as the entire family unit. This is linked to high rates of violence, though lower than that of urban women.

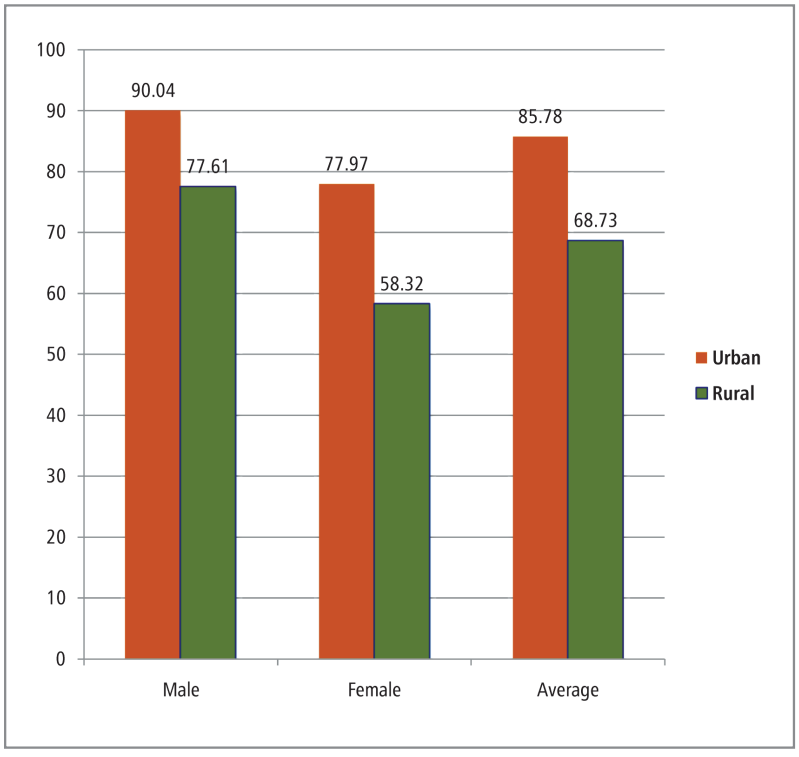
Education

Education has been recognized as the key to human development goods that are multi-dimensional and multi-faceted. It is the cornerstone that will aid people in gaining knowledge, agency, opportunity and betterment. Education allows people the ability to make informed choices about their lives, to know about their rights as citizens. It is seen as a pathway for women to achieve gender justice, allowing women to have enhanced knowledge, employment capacity, sense of autonomy and self-worth. Above all, education is valued, quite simply, for itself and the avenues of knowledge and awareness that it opens for all of us. Following the Millennium Development Goal of free and basic education for all, India's commitment took the form of a constitutional guarantee for universal primary education. Children between the ages of [6-14] are guaranteed education in government-run facilities. While this has led to and reinforced a positive human development impact there are gaps in how this good is spread across urban Karnataka.

Urban areas fare far better than rural ones for overall literacy rates. Karnataka is no exception, with a high literacy rate of 90% for men and 77.97% for women.

This section examines the current educational attainment in urban Karnataka. Generally high enrollment debates imply that the debates vis-à-vis human development are more on persistent gender gaps, quality, cost, enrollment and attendance rather than simple measures of literacy. There also remain pockets of deep vulnerability and last mile enrollments: street children or children to migrant families that remain excluded from near universal enrollment.

Figure 11.12
Literacy Rates in Karnataka



Literacy

Urban areas fare far better than rural ones for overall literacy rates. Karnataka is no exception, with a high literacy rate of 90% for men and 77.97% for women. The gender gap, however, remains strong and widens in rural areas. The urban gender literacy gap is, in fact, the same as the urban-rural gap for men. Gender gaps in literacy are disturbing as education forms the basis upon which women's outcomes for self-action, better health outcomes, employment opportunities, and to be empowered figure. What's equally critical is that, as Figure 11.14 shows, the gender gap widens in smaller cities. Ballari has a difference of 13% between the literacy rates of men and women and, similarly, Kalburagi has 11%, whereas Bengaluru and Mysuru are under 5%.

Figure 11.13
Distributions of Schools Across Urban and Rural Karnataka

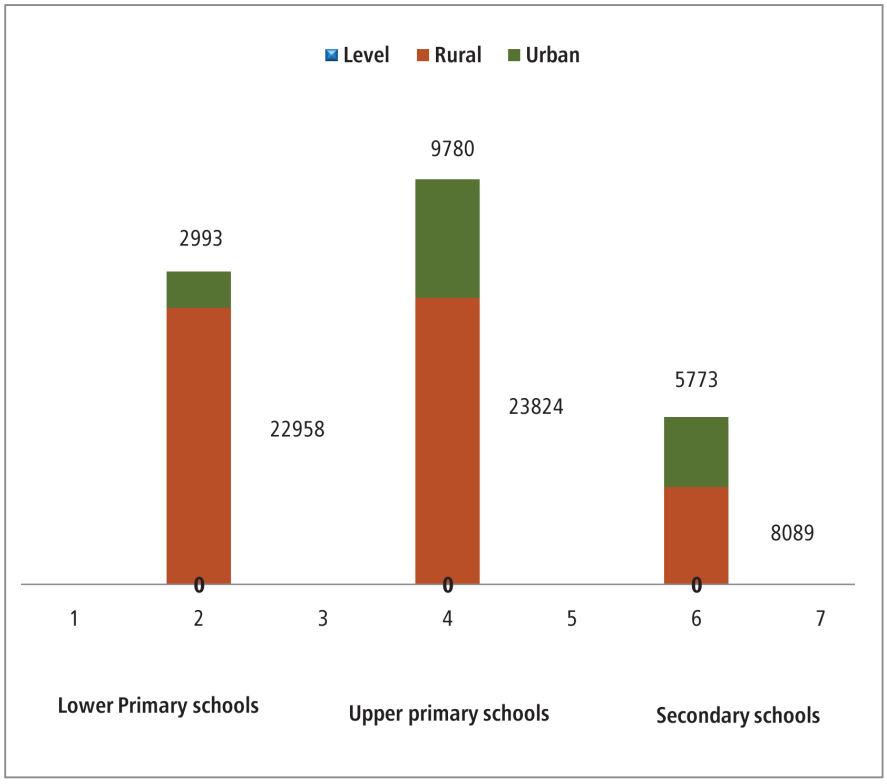
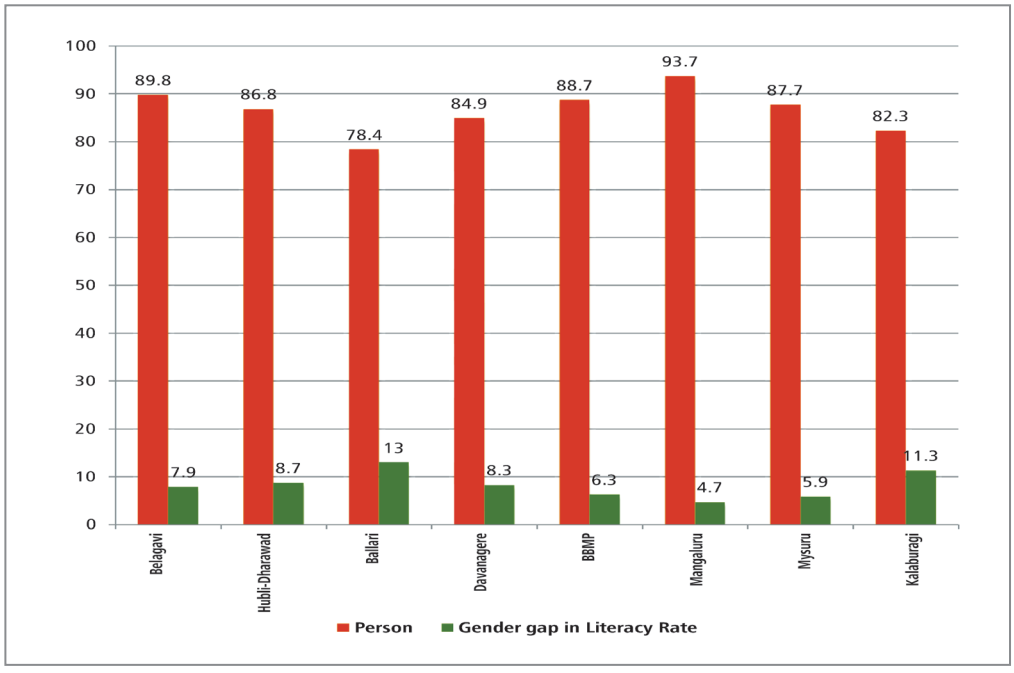


Figure 11.14
Gender Gap and Literacy Rates by Size of Settlement



Enrollment and Type of Schooling

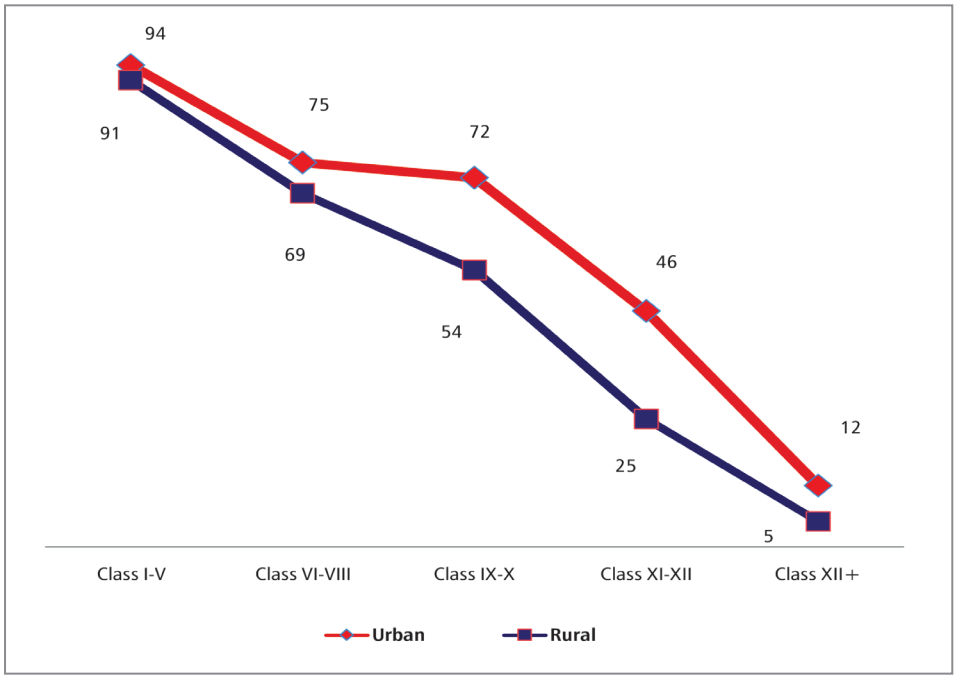
gender differentials in enrolment into secondary schools are worse in some of less developed districts of North Karnataka, viz. Vijayapura, Bagalkote, Kalaburagi, Ballari and Raichur.

The presence of type of schooling is complex. The Karnataka District Information System for Education report indicates that rural areas have more government schools at the primary and secondary level, but urban areas have a stronger concentration of Pre-University (PU) colleges and higher educational institutions. Looking more closely, this implies that urban areas present greater cost barriers to access at the primary level, with only 38% of primary schools being public. The Right to Education (RTE) is known to be harder to implement in private institutions and there has been significant push back from private educational institutions in urban areas like Bengaluru who have resorted to legal action against the institution of the RTE in their schools.

Yet access to education though is not simply about the presence of educational facilities. Enrollment and dropout rates are first-cut indicators that show whether children are able to make use of educational opportunities that exist around them.Figure 11.15 compares enrollment across urban and rural areas against gender and level of schooling.

Enrollment is higher in urban areas throughout, but a significant drop occurs in Class IX in both, though the drop is more severe in rural areas than in urban. The net attendance ratio falls steeper for female students as they move out of primary education into secondary and senior secondary schooling in both urban and rural areas. There is again a spatial pattern here: gender differentials in enrolment into secondary schools are worse in some of less developed districts of North Karnataka, viz. Vijayapura, Bagalkote, Kalaburagi, Ballari and Raichur.

Figure 11.15
Net Attendance Ratio for General Education of Girls in Karnataka



Many studies done in Karnataka and at the all-India level find that loss of interest in studies caused by poor quality of education in government schools, inability to afford private tuition, lack of academic support at home, which affect outcomes of education (Bhatty, 2014). A study done on drop outs in urban parts of district Belagavi, Karnataka indicates that poverty and parents neglect account for forty-five percent of the sampled dropout students.

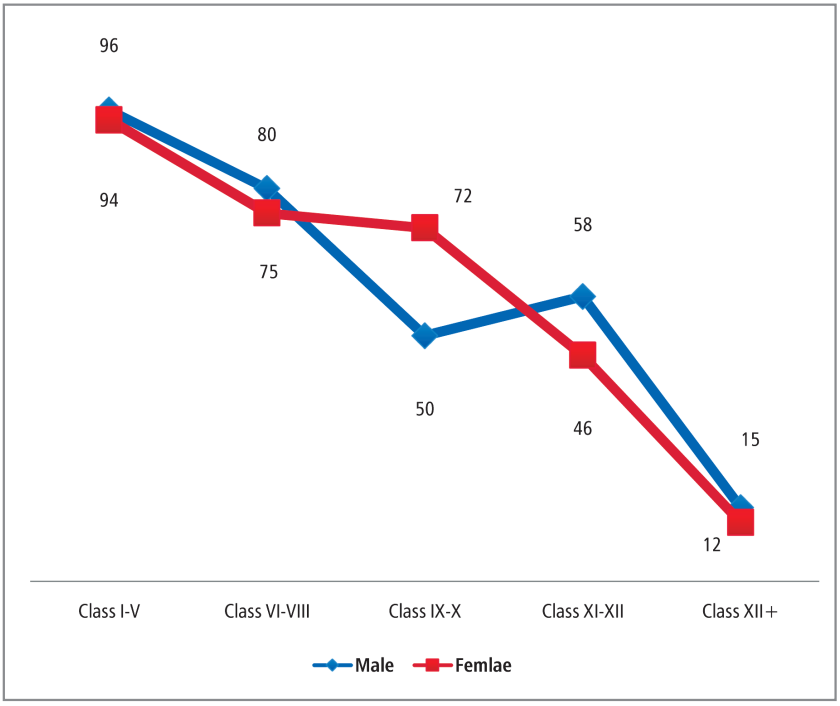
Quality of Learning

Though beyond the scope of this chapter to delve into in detail, it is imperative to recognize that enrollment is only the first part of reaching adequate education. Organizations like Pratham through their monitoring and reporting on education (through Annual Survey of Education, or ASER) have questioned how much near universal enrollment in primary education impacts learning. The ASER evaluation of Mysuru (Pratham, 2014) found that the learning rate for children in government schools was not at par with counterparts in private schools. Three out of four children in private schools were able to perform arithmetic for their standard of education compared to only half of students in public schools. Further data that disaggregates within public and private schools would add to the complexity of this picture.

Financial Access

Education in urban areas, as with other basic services, comes at a higher cost than in rural areas. This holds true in Karnataka as much as it does for the rest of the country. The table below presents the cost of education in different types of educational institutions across urban and rural India. Reporting on education expenditure in Karnataka uses the same estimates in assessing the cost incurred for schooling (Bakshi and Jha, 2012)[22]. The NSSO found that the average annual private expenditure per student on primary and middle level education is Rs. 1,413 and Rs. 2,088 respectively. In primary education, the average expenditure by a rural student is Rs. 826, while it is Rs. 3,626 for urban students. Similarly, the survey mentions that a student attending middle school in rural areas spends Rs. 1,370, while in an urban area, students spend Rs. 4,264. In

Figure 11.16
Net Attendance Ratio for General Education in Urban Karnataka



Education in urban areas, as with other basic services, comes at a higher cost than in rural areas. This holds true in Karnataka as much as it does for the rest of the country.

[22] *Bakshi, Shubhashansha, and Jyotsna Jha. Public Financing of Primary Education in Karnataka - Trends and Reflections. Rep. Global Development Network, n.d. Web. (2012)*

government schools, parents spend Rs. 1,267 out of their pockets in a year. The amount of private expenditure is highest in private unaided schools, but even in schools run by government and local bodies in rural areas, the parents have to shell out an average of around Rs. 100 monthly and this amount doubles in the case of urban areas. It requires greater sensitivity to realize that below poverty line (BPL) families comprising marginal farmers and migrant/ casual laborers would find it impossible to educate their children.

Table 11.13
Annual Private Expenditure per student on primary and middle level education (in Rs)

Type of institution	Urban	Rural
Government	2744	987
Local Body	1999	689
Private aided	5737	2955
Private unaided	7867	3876

Source:NSSO report 532 Education in India 2007-8: Participation and Expenditure

Given the State's concentration of engineering and technical institutions as well as a strong and growing software and hardware engineering industry, the cost of education to enter these industries is higher than for the rest of the country

Table 11.14 indicates the rising cost of education as a child progresses from elementary education to higher, technical and vocational education. Karnataka has a more expensive education on average (across urban and rural areas) compared to the all-India rates for most levels of education barring a few. Given the State's concentration of engineering and technical institutions as well as a strong and growing software and hardware engineering industry, the cost of education to enter these industries is higher than for the rest of the country. This has a significant impact on the ability for students to access job-readying education and it implies a mismatch between the industry and the services present in the State.

Table 11.14
Private expenditure on education by student in Karnataka, All-India (in Rs)

Education	Karnataka State	All-India
Primary	**1493**	**1413**
Middle	1574	2088
HS	3720	4351
Above HS	9604	7360
Technical	34,201	32,112
Vocational	16, 255	14, 881

The rising cost of education through the years has implications on the opportunity cost of keeping children in schools. Thus, any noticeable effects of the current quality of schooling on the distribution of skills and income will become apparent some years in the future, when those now in school become a significant part of the labour force.

Employment

From the perspective of human development and when we think of cities as magnets for people seeking work, it is worth remembering that we do so because employment has far greater value than merely the income it generates (Human Development Report 2014). Meaningful and decent work can unleash human potential, creativity and innovation. It is essential in making human lives productive, worthwhile and meaningful. It enables people to earn a living, gives them a means to participate in society, provides them with security and gives them a sense of dignity. Work is thus, inherently and intrinsically linked to human development and cities with the potential to be the platforms to provide this kind of work.

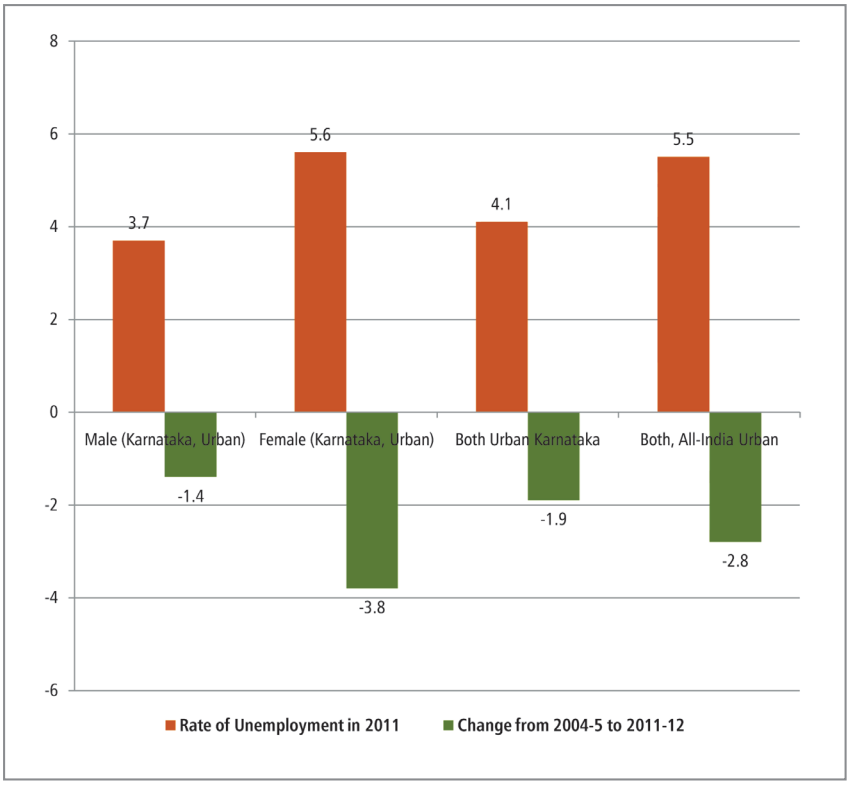
Cities can yield the conditions of decent jobs and decent wages given good infrastructure, availability of employment with good conditions of work. Yet for this potential to be realized cities need to have labour markets that are receptive to a range of skills and conditions of work. The first part of this section looks at the nature of employment in urban Karnataka from unemployment rates to the nature of work. The second then focuses two particular disparities: gender differentials in urban workforce participation and widespread youth unemployment that further diminish the development potential of employment and represent a key human development challenge.

Workforce Participation and Unemployment

Globally, at the beginning of the decade, one-third of the world's urban population were living in poverty, with lack of productive employment as one of the most direct causes. (International Labor Organization 2011) In Karnataka, rates of unemployment in urban areas are slightly higher than the all-India figures. Urban Karnataka has higher unemployment rates than rural Karnataka, which follows the all-India trend. The gender differential in unemployment indicates that unemployment rate is highest for urban women, this follows through for Karnataka and for all India.

Urban Karnataka has higher unemployment rates than rural Karnataka, which follows the all-India trend. The gender differential in unemployment indicates that unemployment rate is highest for urban women.

Figure 11.17
Unemployment Figures, Karnataka



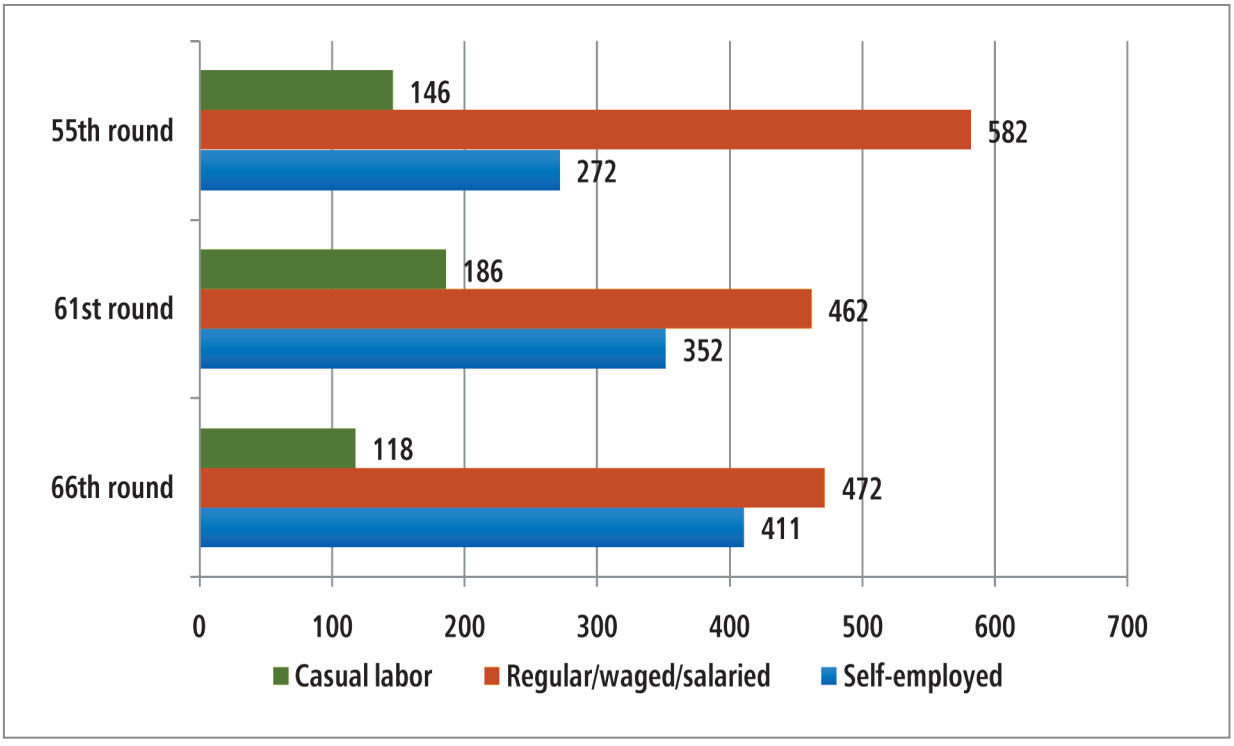
Unemployment, However, is only one part of the picture in a context where most work is unrecognized or under-recognized due to its informal nature. Another way of looking at changing dynamics that impact the quality of employment rather than a binary of employed-unemployed is to look at the rate of marginal or contract workers that often lack secure and dignified work. The impact of employment on human development outcomes has much to do with nature of employment. Causal, non-contract and temporary work that is unstable and insecure has the potential to yield less outcomes for people. The Census of India categorizes workers as either main or marginal given the time duration of work completed. For Karnataka there has been an increase in main workers amongst both genders but this increase is more evident in rural areas. This is especially clear in the case of rural female main workers who show an increase of 8% between 2001 and 2011.

In urban Karnataka though the story is different, illustrating the casualization of labor. Residents of urban Karnataka are engaged in regular salaried jobs or self-employed in almost equal measure. (NSSO, 2012). A significant portion of people are engaged in casual jobs. Census 2011 indicates that change in percentage of main workers in urban Karnataka has decreased for men, women and for overall "persons". This implies that men and women are less likely to be working for a continuous period of six months or more in urban centers of the State. Subsequently, the Census 2011 also indicates that in urban Karnataka the percentage of marginal workers has increased across men, women and overall persons. This directly illustrates a process of casualization of labor which leaves workers with less secure wages and increases the potential of more urban poor with informal housing in cities.

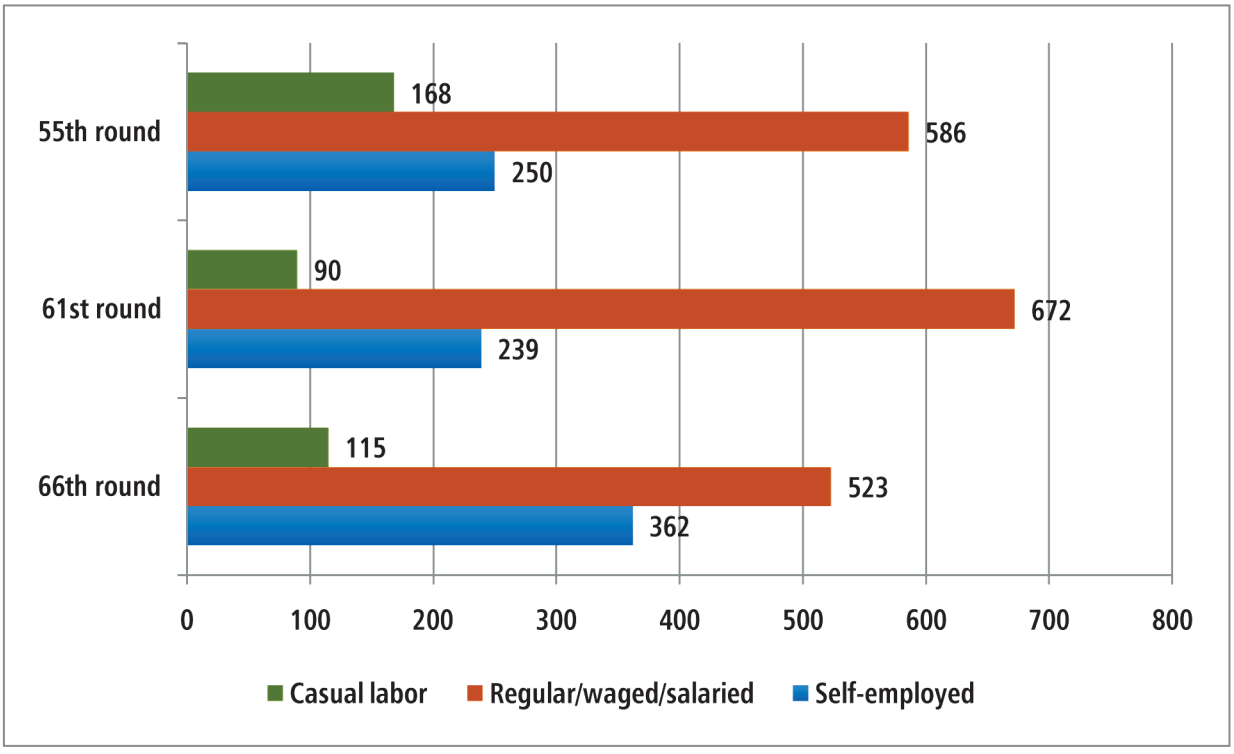
Nature of Work: Case Study of Bengaluru

Let us examine these trends in the case of Bengaluru which accounts for 31% of organized and 15% of all unorganized employment in the State.

Figure 11.18
Male and Female Employment in Bengaluru



Bengaluru: Male Employment Distribution per 1000



Bengaluru: Female Employment Distribution per 1000

For men, the trends are clear: a persistence of casual work, a reduction of regular/salaried work and an increase in self-employment. Yet this self-employment largely consists of what is also called "own-account" work (NCEUS, 2009) that occurs largely in the informal economy.

For men, the trends are clear: a persistence of casual work, a reduction of regular/salaried work and an increase in self-employment. Yet this self-employment largely consists of what is also called "own-account" work (NCEUS, 2009) that occurs largely in the informal economy. This work varies widely, but a significant proportion of it is undoubtedly vulnerable and marked by risk. Let us take the example of street vendors. These workers are subject to a number of risks for their work given factors of rising prices, sluggish demand and unreliable supply chains (Roever, 2014). The precariousness of operating in the informal economy is reflected in financial costs like paying cash for accessing city streets or sidewalks, bribing municipal authorities to ward off evictions, to paying for basic services like water, electricity, storage, public toilets, waste removal, whether or not these services are actually delivered (Roever, 2014). There are a number of unfavourable ways in which informal economic actors are incorporated into the economic and social life of cities that bears on their ability to have decent work and income.

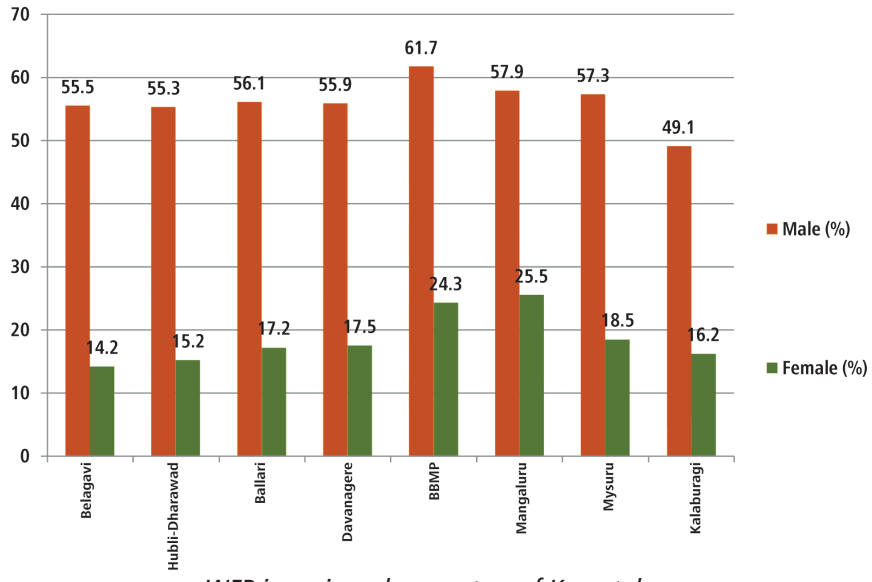
For women, the data indicates that there was first an increase in formal employment for women and then a larger decrease in those numbers. A similar trend can be seen for casual women workers – there has been an increase in these numbers. Self-employment has increased marginally for women in the city. Working population is considered to fall between the age group of 15-59. According to the NSSO more urban women in Karnataka are between the ages of 20 to 34 which are also the peak marriageable and childbearing years and typically the years where women exit the workforce.

Gender and Workforce Participation

One of the most significant concerns for the potential of employment to increase human development is significant gender differentials in workforce participation. This is an All-India trend, and Karnataka is no exception to it. India has been an outlier when it comes to major international theories about women's labor force participation (Goldin, 1994) in spite of seeing similar trends in patterns of industrialization, creation of a manufacturing base and rise in the service sector as have been brought about by industrialization and urbanization. It has been posited that the shift from agriculture to manufacturing to the rise of the service sector has uniquely affected what kind of work women have done outside their homes.

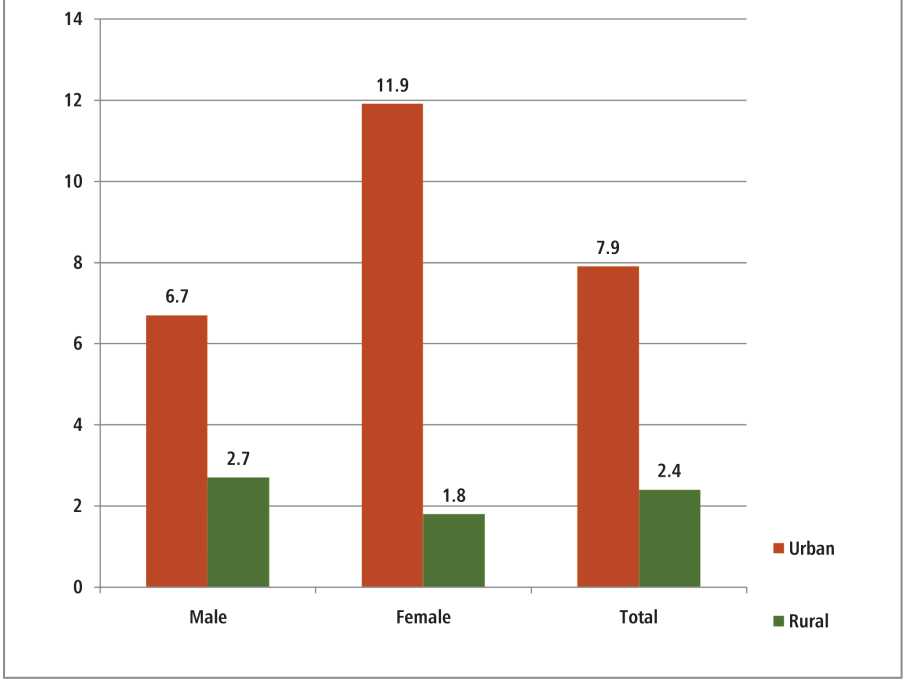
These trends have been associated with other shifts in drivers of labor force participation that specifically impinge on the role of women in society and in the labor market. This is why many see female labor supply as "both a driver and outcome of development" (IZA and ILO, 2014). In India, the NSS data indicates that female labor force participation rate in urban India has stagnated at around 18% since the 1980s. Compared to other countries at similar income levels researchers like Gaddis and Klasen (2013) have found that India is 20 percentage points lower on female labor participation. While the work force participation amongst women is low across rural and urban areas the differential is even more marked in Karnataka's towns.

Figure 11.19
Gaps in work force Participation between Men & Women in Urban Centers of Karnataka



WFP in major urban centers of Karnataka

Figure 11.20
Youth Unemployment Rate in Karnataka



Youth Unemployment

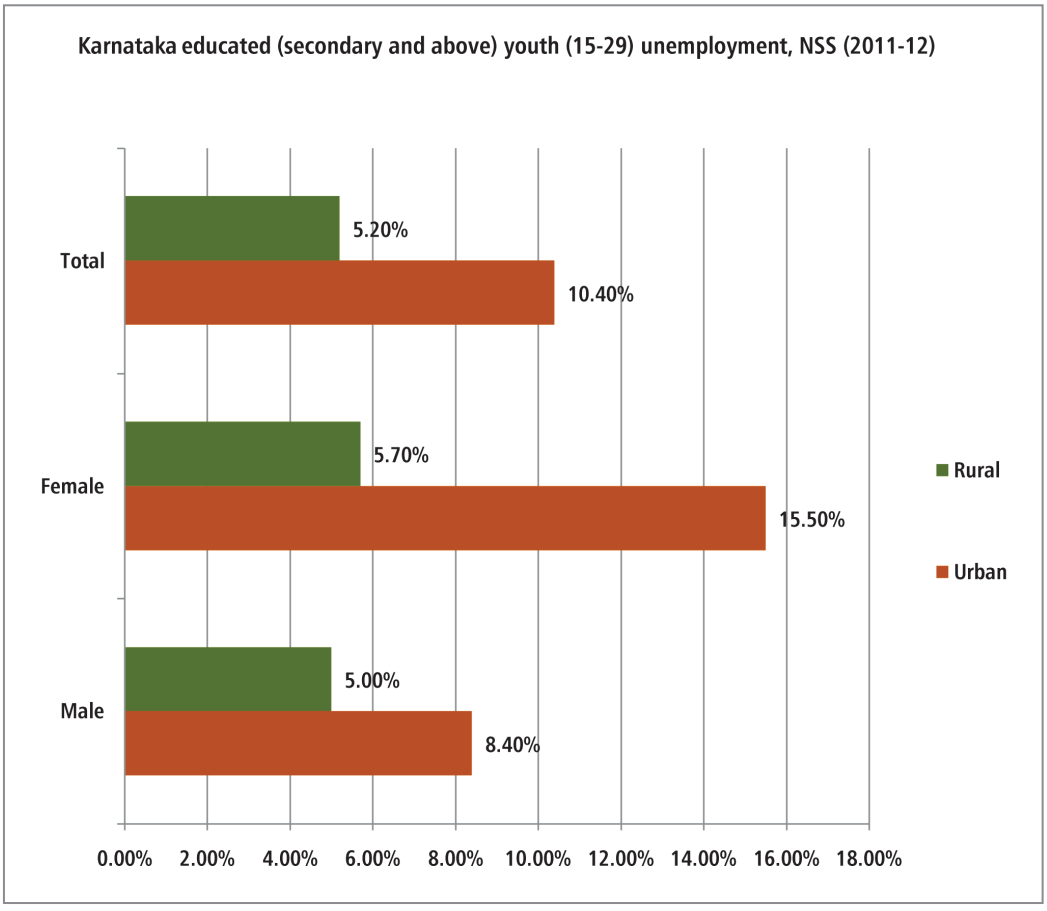
The second particular disparity that must be noted, especially given India's demographic dividend and highly young population, is youth unemployment. At 7.9%, Karnataka's youth unemployment rate is low as compared to other southern states - Kerala for example has an unemployment rate of 8.6% for urban men, 20% overall for youth; Andhra Pradesh has a rate of 11.2% unemployment of urban men.

Karnataka, the differentials across urban and rural areas are visible in the graph and once again more prominent for female youth given their relative work participation rates. Youth unemployment indicates at least partly, the mismatches between skills demand and supply. Early unemployment has a negative effect not only on the future employability of young people but also on their self-esteem, their role in the society and can represent a serious economic burden on State finances. Being young and unemployed can lead to increase in the risk of poverty, deskilling and social exclusion as well as cause loss of motivation and mental health problems. Young people struggling to find permanent jobs are bound to accept temporary work which is keeping with the labor market trend of casualization.

Delving further into this we need to look at the mismatch between skills, education and employment demand which come through

when we look at the data on Karnataka's educated youth unemployment from the NSS. Such high unemployment rates reflect, at least partly, the mismatches between skills demand and supply. The skill levels of those who join the labor market early are low as they are often school drop-outs and haven't had the opportunity to undergo vocational training. But given the chart below, even youth with secondary education and above is high.

Figure 11.21
Educated Youth Unemployment in Karnataka



Such high unemployment rates reflect, at least partly, the mismatches between skills demand and supply.

Being educated in urban Karnataka does not guarantee a job. Across genders the rate of educated youth unemployment is quite high at 10.40%, this increases by five percentage points when we look only at women. Job creation is a challenge across the globe and this follows through for Karnataka as well. While in most countries poverty and low levels of education bar people from entering decent jobs, here we see that even having a secondary level of education does not lead to gainful employment. Here again, we must recognize that much of this unemployment is being enumerated for the formal economy. The flipside, or the number of young people who accept self-employment or low paid contractual jobs in the

informal economy with potentially deplorable working conditions is hard to count.

Resilience

Cities agglomerate people and economic output in dense geographies. In doing so, they also accumulate risk. These risks are from external hazards caused by climatic variance and stresses that result from the process of urbanisation itself. Human development has increasingly begun to take seriously the impact of climate change and disasters in shaping human capabilities.

The most immediately observable signs of climate variability is the increasing intensity and frequency of current hazards and extreme events (for e.g. flooding in Srinagar, or cyclones in Vizag). Disaster losses are rising every year with grave consequences for the survival, dignity and livelihood of individuals, particularly the poor. These can pose severe setbacks to hard-won development gains (Jain, Jigyasu, Gajjar, & Malladi, 2014). Critical from a human development perspective is that disaster impacts disproportionately fall on those already vulnerable in cities.

This happens in many ways. Urban poor communities tend to live precisely in areas of high risk and face greater exposure. Loss of livelihood opportunities via an interruption of economic activity as well as short- and long-term displacement or loss of health and ability to work both directly impact income. Structural changes in livelihood opportunities that include housing, household and financial assets, as well as tenure rights can have further indirect impacts on the income. Recovery from disasters are also differentiated: poor households rarely have resources to access to rebuild homes and lives. Low-income communities are particularly hit hard by a loss of community and informal social safety nets due to dislocation, displacement or forced migration (Mukhopadhyay & Revi, 2009).

In Karnataka, like in the rest of the country, risk management perspective is limited to rescue and response (Government of Karnataka, 2011)and not risk reduction and preparedness. The hazard profile of the State mainly impacts from cyclonic winds, drought, floods and a few regions with seismic activities and coastal erosion. There is very little emphasis on the impacts of such events in the urban areas. However, recent floods in Bengaluru have enabled some traction in the space of risk management. As argued above, studies indicate the urban poor in Bengaluru are first in line to incurr loss and damage from flooding (Gupta & Nair, 2011).

The hazard profile of the State mainly impacts from cyclonic winds, drought, floods and a few regions with seismic activities and coastal erosion.

A diagnostic study suggests risk profiling of cities is a way forward to build strategies for risk reduction and preparedness (CDKN, 2014; Gupta & Nair, 2011; Mukhopadhyay & Revi, 2009). Such a study for Bengaluru, for example, suggests that not only does the city face a wide range of environmental risks but that the urban poor are particularly vulnerable to those risks. The table below shows a graded profile of risks from climate related hazards to assets that are broadly grouped under Physical, Social and Financial.

Table 11.15
Risk Analysis for Bengaluru

Hazard	Physical	Social		Financial	
	Buildings	Systems	People	Asset	Revenue
Temperature	Medium	High	High	Low	High
Heat Island Effect	High	High	High	Low	High
Drought	Low	Very High	Low	Low	Very High
Pluvial Flooding	Medium	Very High	Very High	High	Very High
Fluvial Flooding	Low	Low	Low	Low	Low
Storm/ Pressure Winds	Medium	Medium	Low	Medium	Medium
Solid Waste Release	Low	Very High	High	High	Very High
Water Pollution	Low	Very High	Very High	Medium	High

Social and Political Inclusion

Human development paradigms have been ground breaking within paradigms of development in taking questions of the cultural, social and political belonging as seriously as material resources, infrastructure and incomes. Cities are particularly salient sites in which to undertake these debates. Given their density and cosmopolitan nature, they are both areas for the affirmation of democracy and diversity as well as, sites of conflict and the reproduction of inequalities.

Karnataka's urban areas are diverse. Bengaluru remains one of the most linguistically diverse cities in the country, and the State has a long history of inter-twining and mixing of cultures.

Karnataka's urban areas are diverse. Bengaluru remains one of the most linguistically diverse cities in the country, and the State has a long history of inter-twining and mixing of cultures. Yet this diversity has also had moments of disquiet and tension with the rise, particularly in southern Karnataka, of groups with exclusionary ideologies. The attacks in Mangalore (pub[23] and homestay[24]) have been highlighted by media and citizens alike but at a gathering of concerned citizens, a Bengaluru-based lawyer enumerated over a hundred incidents of moral policing between 2009-2011. Pre-existing organizations like the Journalists Study Centre, Karnataka and Forum Against Atrocities on Women, Vimochana brought concerned citizens together to take a stand against the policing of forms of engagement between people. Similarly, Bengaluru's educational institutions, industrial strength and retail market have brought Indian nationals from the North Eastern States to live and work. Reports emerged in 2014 of violence against some men from these States given their inability to speak the local language. This caused what some reports call a "mass exodus" of people of the North Eastern States from the city which had "ripple effects" on the economy of the city. (Business Standard, 2012) Bengaluru is not alone in struggling with anti-migrant sentiment several groups in the city are actively trying to fight such prejudice

[23] *'Girls Assaulted at Mangalore Pub." Times of India. Times of India, 26 Jan. 2009. Web.*
[24] *'Moralists' Molest Women." Deccan Herald. Deccan Herald, 28 July 2012. Web.*

and exclusions, but they Continue to remain strong barriers to achieving truly inclusive cities.

Though concentrated in larger cities, Karnataka's urban areas also benefit from strong presence of a vibrant civil society in the form of associations, Universities, NGOs, as well as independent forums that strengthen public life. These are incredibly diverse from service-based trusts that work on particular sectors and themes to forums that promote public participation in the political process. Several institutions focused on urban affairs have also emerged in the State, bringing much needed attention to urban affairs. This density of political life is essential to democratic practice, and greater participation in urban and civic affairs.

What remains a challenge is for associations and representatives of vulnerable groups – dalits, women, transgender communities, workers, sexual minorities, and others – to have equal say in the shaping of the city towards greater equity. Systemic barriers exist to a more level playing field even within civil society and some issues clearly have more purchase and power than others. Different types of groups also use different modes for activism – from influencing government and directly engaging with them to mass mobilization and public protest, depending on the structural location and power of the voices that speak and the issues they seek to address. Expectations for urban activism are high: they make our cities more livable, strengthen our sense of community, and lower the bar for participation. Yet thinking about how to strengthen the diversity of the voices within this activism remains a challenge.

Transport

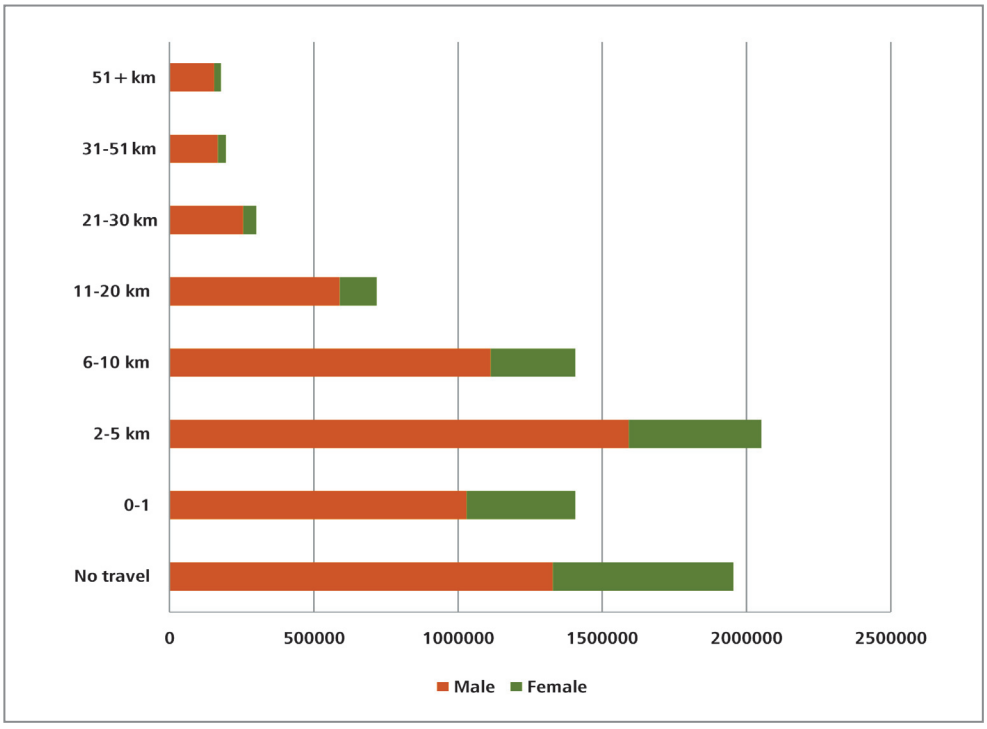
The vitality of city economy for employment and industry is dependent on its transport system. Karnataka's urban areas are in sync with trends in other urban centers in India for the imbalance in modal spilt, inadequate transport infrastructure and its suboptimal use and an increasing shift to personalized modes of transport. While the strength of transport in a city or State is often measured in its share of GDP, more relevant to human development is to assess the role urban transport plays in the reduction of poverty by improving access to labor markets and in the experience of transit systems that poorer or vulnerable people use(Antonio Estache, 2007).

We begin this section by looking at the distance that workers travel to get to work in urban Karnataka. This data point is indicative of the mis-match of spatial and transportation planning, showing increasing spatial disconnects between where people can afford to live and where they work, imposing strong transport costs on households and the city. We then look at what modes of transport most urban residents use, and discuss the particular challenges for modes used by more vulnerable urban residents.

Urban Karnataka's residents on average travel about 2- 5 km from their residence to their place of work. For those women who do travel to work this holds true. For Karnataka's urban men while a majority do still travel 2 - 5 km, a significant number work up to 6 - 10 km away from their homes. This affects the mode of travel used by genders and their mobility in urban Karnataka.

Urban Karnataka's residents on average travel about 2- 5 km from their residence to their place of work.

Figure 11.22
By Distance From Residence to Place Of Work in Urban Karnataka



Source Census of India (2011)

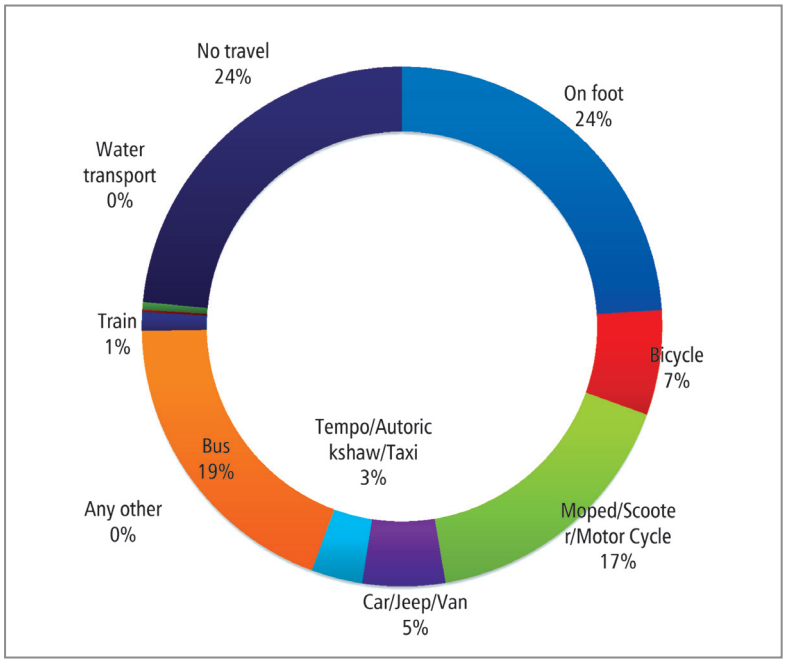
Travel in Karnataka's cities predominately happens through walking, on scooters or using buses

The Census provides us with detailed information on the mode of transport used across Karnataka's urban districts. Figure 11.22 data indicates that across genders there is either no travel or most travel is done on foot. This corroborates our earlier finding that both men and women if they do travel mostly work a short distance, 2-5 km away from their homes. This pattern is increasingly coming under strain in the larger cities where distances are expanding.

Travel in Karnataka's cities predominately happens through walking, on scooters or using buses as shown in Figure1.23. This is in line with all-India urban trends where predominantly happen through walking, cycling and public transport, including intermediate public transport (IPT). This is an important fact to note: media discourse tends to focus on traffic woes of car-drivers, especially in larger cities like Bengaluru, but the dominant focus of transport by use must be on public, para-transit and walking and cycling.

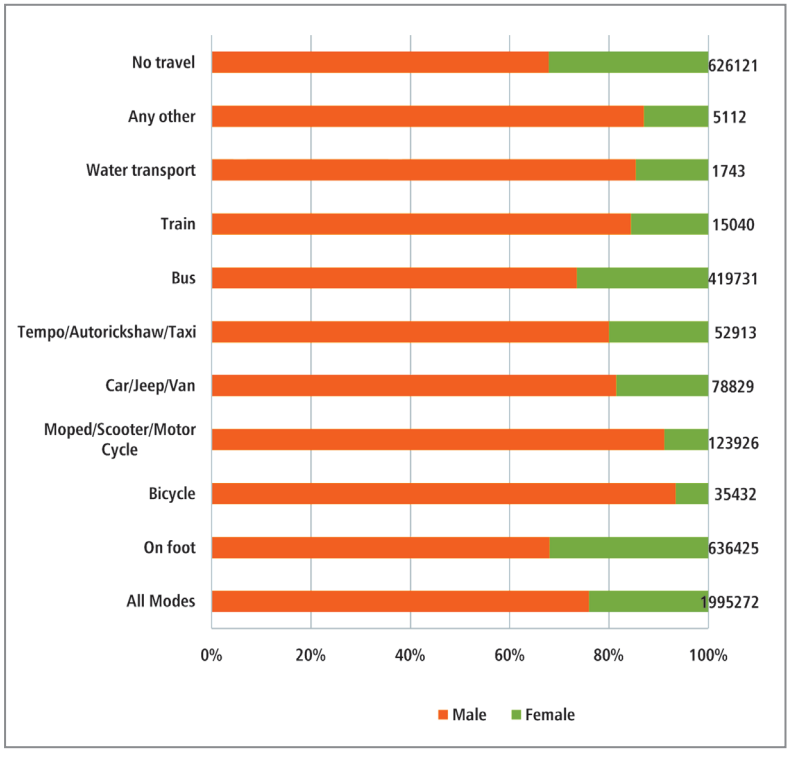
Yet it must be noted that the country has seen an exponential increase of motorized forms of transport – more in the form of two wheelers, car ownership remains low at 3-13% of urban households while two wheelers at 40-50% (Tiwari, 2007).

Figure 11.23
Modes of transport in Urban Karnataka



Source: Census of India (2011)

Figure 11.24
Modes of Transport used in Urban Karnataka by Gender

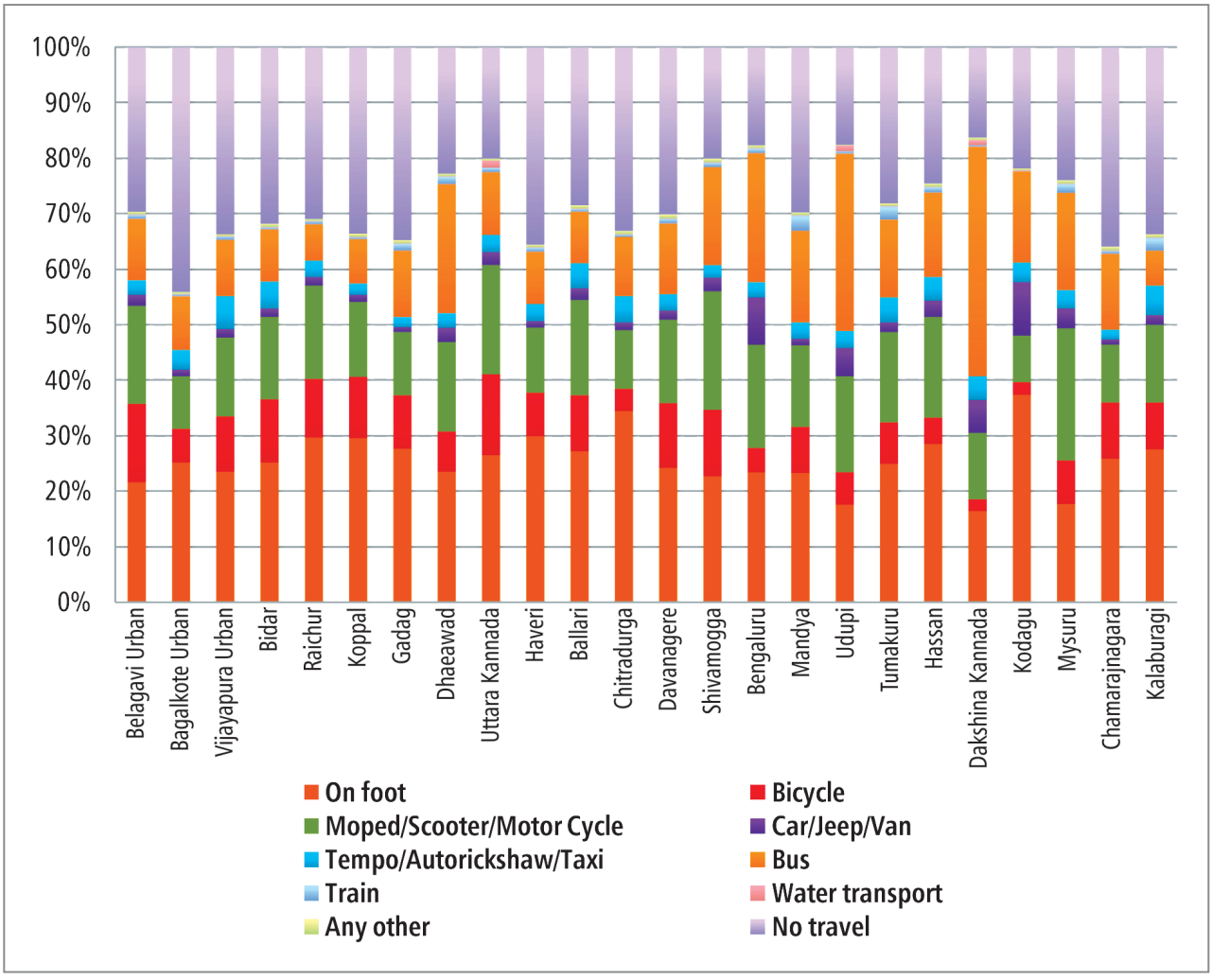


Source :Census of India (2011)

This pattern is gendered. Following the overall pattern observed for urban Karnataka, (figure 11.24) there is a larger share of women that either don't travel or travel on foot. Women's dependence on buses is also to be noted. Studies indicate that women's travel patterns are mired by persistent inequalities such that women assume a higher share of a household's travel burden and care-taking responsibilities, they have inferior access to public means (buses, trains) and private modes (two-wheelers, cars, carts) of transport(Shah, 2016). Characteristic to women's travel is trip changing i.e. combining multiple destinations within one trip. This also often makes it more expensive for women to get around, since they may have to pay numerous single fare tickets during such chained trips.

Since women's travel predominately on foot or in buses and their safety from harassment and violence are key issues in addressing how to provide safe and efficient transport that allows women to achieve ambition and travel safely. The State government has tried to do this by reserving seats for women in buses and putting CCTV cameras in public transport and starting women-only bus services (Nougrum, 2016). Reports indicate though that women's ability to access seats reserved for them is difficult and infrequent. Experts illustrate that the nature of sexual violence against women is routinized, normal and continuous that are not hindered by technologies such as CCTV cameras. Experts also correlate women traveling shorter distances for work and using slower modes of transport (foot, bus) to suggest that women are forced to restrict their choice of location of workplace, thereby severely limiting their employment options (Rao, 2016). This has immense implications for women's economic empowerment and their all-rounded development.

Figure 11.25
Modes of Transport in Urban Karnataka by District



Source Census of India (2011)

Studies have correlated the size of towns, their per capita income and most common forms of transport used by urban residents. Tiwari notes that bus infrastructure is vital in smaller or medium-sized tows (Tiwari, 2007). Medium and small towns often are dependent on private bus operators and various forms of intermediate public transport like tempos, shared cars and rickshaws for transport needs. Private operators are vital for urban residents' mobility needs but are not regulated by State transport policies and laws. This is a matter of concern since they don't often follow fare regulations, emissions and safety standards. At this point there is no policy that looks into improving or regulating the operation of para-transport modes (Tiwari, 2007).

The augmentation of urban bus transport has been a thrust area of the Jawaharlal Nehru Urban Renewal Mission (JNNURM) I and II. The objective of program was to create empowered and financially sustainable Urban Local Bodies (ULBs) for successfully managing

the local urban issues (Thornton, 2011). JNNURM allocated 11 per cent of the total investment to urban transport. This was unique since until then most urban transport systems had been funded and owned by State governments as transport is a State subject according to the Constitution of India(Baindur, 2011). This national intervention went hand in hand with the National Urban Transport Policy which was announced in 2006. The JNNURM program attempted to improve the public transport system in larger cities through funding of public transport buses, development of comprehensive city mobility plans and supporting city transport infrastructure projects (Baindur, 2011). Many reports surfaced over the duration of JNNURM that States including Karnataka were delayed or not fully able to procure buses under the scheme (Shastry, 2015).

The problematic aspects of urban transport in India and Karnataka is the worsening quality of travel for reasons of road congestion, bad air quality and road accidents. Bengaluru, Karnataka's capital city and economic hub is seen globally as the sixth worst city for traffic congestion which has costed it a larger share in economic development. It causes urban residents to face longer and more expensive commutes, loss of time and pay and associated physiological effects. While alternative transport options such as city metro rail are being implemented their construction and availability is slow. Other measures such as congestion tax have been considered by the State government but not yet implemented.

Safe, reliable, and affordable transport is vital to not only the economic vitality of cities but to provide an even field for poorer, vulnerable people to work, study, run their own businesses, access medical facilities etc. Increasing urban populations are putting a strain on transport systems that are characterized by high levels of congestion, pollution, traffic fatalities and inequity leading to what experts call an undesired 'accessibility crisis'. Lack of public transport infrastructure is augmenting this crisis as there is a rapid modal shift to privately owned vehicles. Those who cannot afford motorized transport will increasingly be put at a disadvantage for mobility and will be cut off from employment, recreational, educational, medical activity sites they need to access in the city.

Solid Waste Management

'A city's ability to manage its waste is often its calling card - If a city is dirty, the local administration is written off as ineffective. If not, governance is presumed in the public eye to be effective.' (UN Habitat, 2010) This has been particularly true for Karnataka's major urban center – Bengaluru. The city has a unique relationship with the issues of mismanagement and unscientific disposal of waste. The problem has come to spoil the city's image but this has also resulted in strong citizen mobilization and innovative approaches to responding to the problem.

The governing legislation for solid waste management is the Municipal Solid Wastes (Management and Handling) Rules, 2000. The Central Pollution Control Board in a report focused on compliance with this legislation admitted that "by and large, hardly any city/town complying with these

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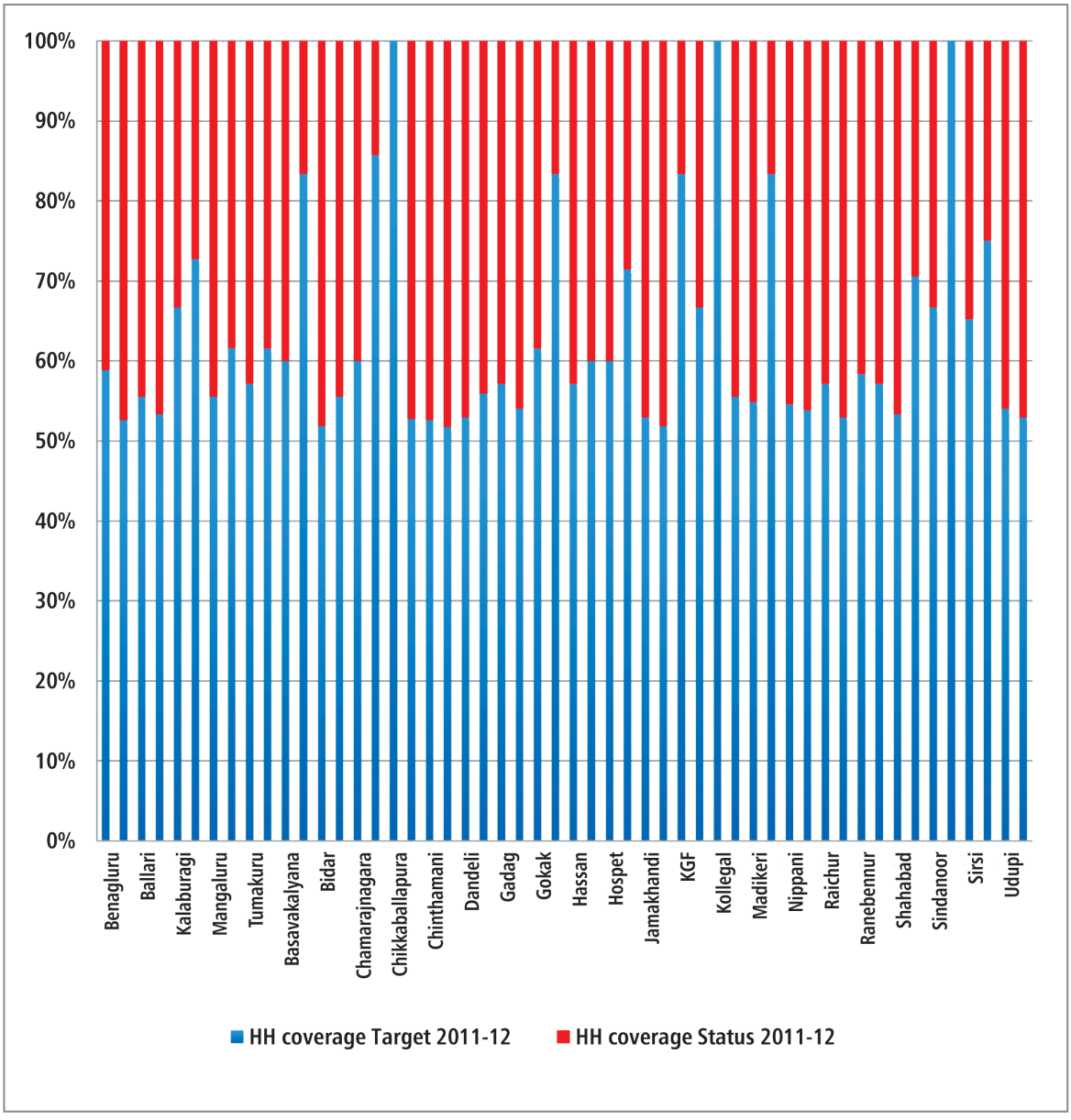
The MoUD (2012) report illustrates that Karnataka's urban centers are failing at meeting their own targets of waste collection for households.

rules." (Central Pollution and Control Board, 2009) The Ministry of Urban Development (2012) reported service level benchmarks for waste collection in urban centers across the country. Reports of the CPCB and MoUD's report on SLBs are some of the only sources of data on waste management since the implementation of municipal solid waste management is haphazard and mostly enumerated through self-reporting by urban local bodies. The MoUD (2012) report illustrates that Karnataka's urban centers are failing at meeting their own targets of waste collection for households.

Figure 11.26
Household Coverage (Target and Status) of Solid Waste Collection, Karnataka 2011-12



Source: MoUD, 2012

Managing solid waste is one of the biggest challenges of urban areas of all sizes and is intrinsically tied to the struggle to achieve Millennium Development Goals (MDGs). Despite the explicit articulation of this relationship, the MDG targets of poverty reduction, public health and environmental protection cannot be achieved without paying attention to solid waste management as one part of the solution. The segregation of waste is equally important in the scientific management of waste, though the segregation of waste as an activity is located in the household. The MoUD (2012) report indicates (depicted in charts below) that urban households in Karnataka are failing to segregate waste, making its collection and scientific management difficult.

Figure 11.27
Extent of Waste Segregation (Status and Target), Karnataka 2011-12

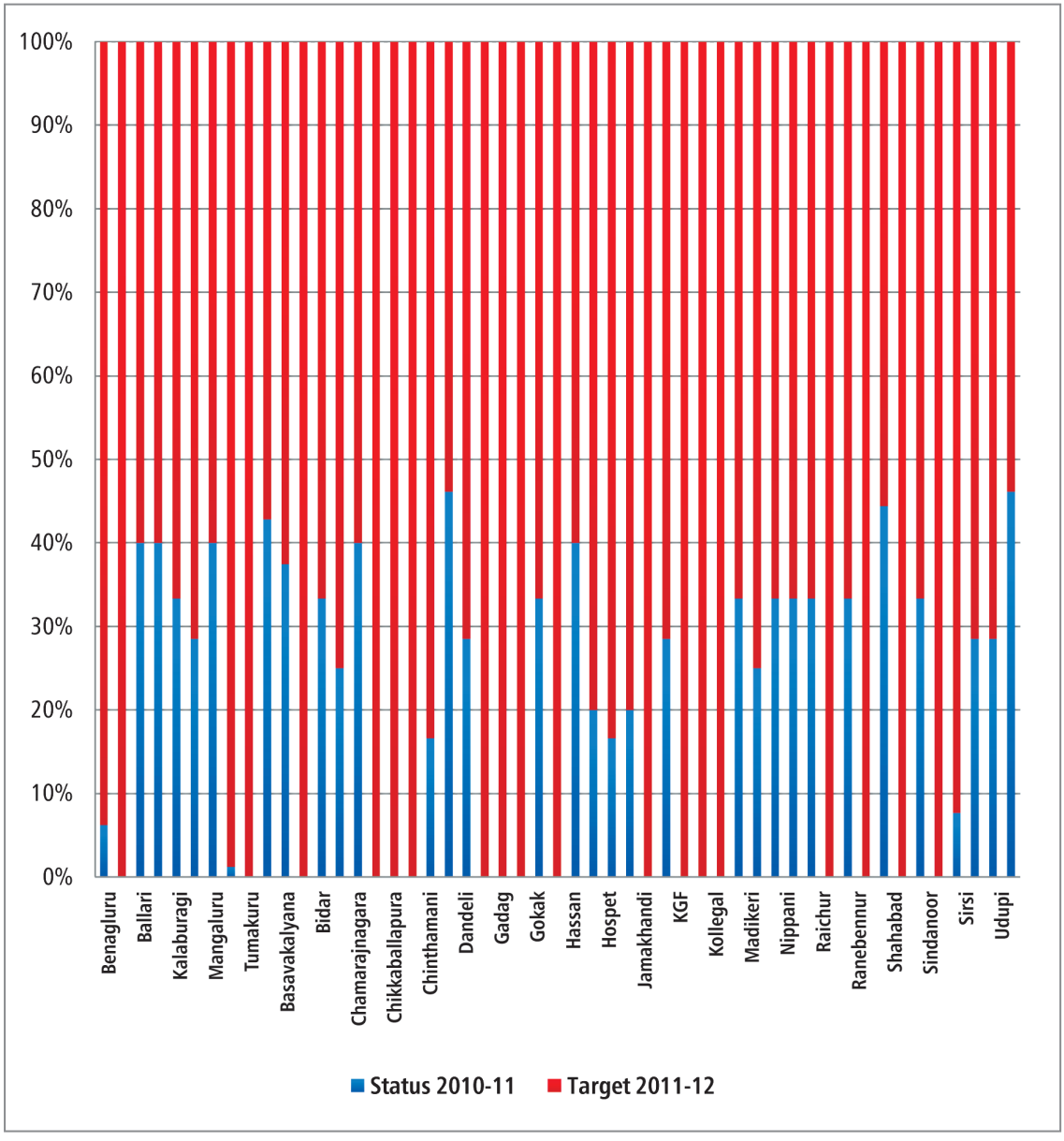
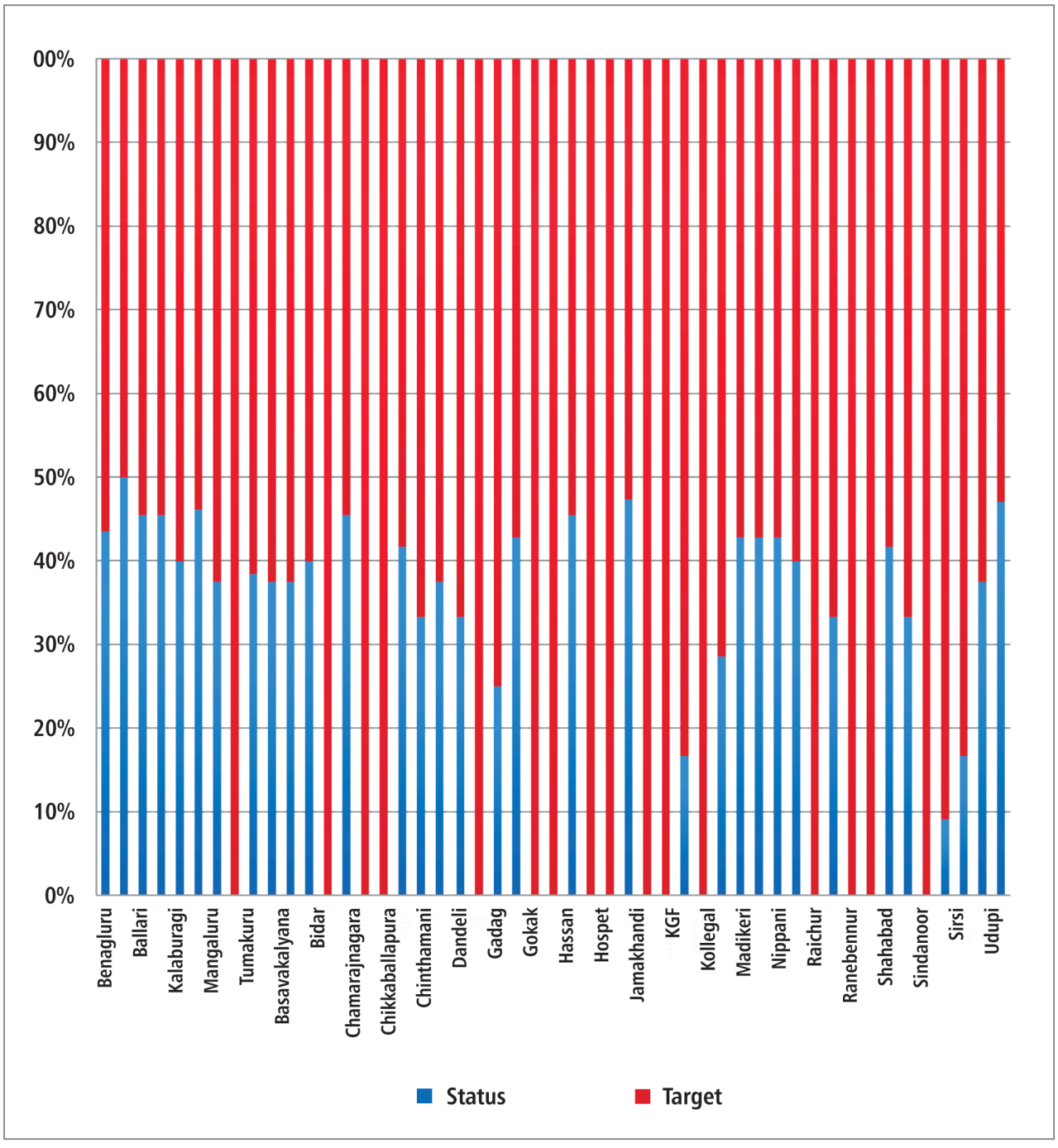


Figure 11.28
Extent of Scientific Management of Waste (Status and Target), Karnataka 2011-12



Source: MoUD, 2012

The concerns from the perspective of human development for urban citizens extends not only to households producing waste who need effective city systems to dispose of waste but also to those who do this work, i.e. the waste pickers who keep city streets and households clean. Lack of public systems does not imply that households do not rid their waste or waste goes untreated, rather the informal and private sector step in to do this work.

Indian cities like many other cities of the global South have active informal sector recycling, reuse and repair systems which are efficient for achieving recycling rates. Informal sector waste management and recycling saves cities up to 20% of their waste management budget but does so at the cost of quality livelihoods and rights of informal sector workers. As with other informal sector work, waste workers do not have access to safe working conditions, they lack financial support from public institutions forcing them to clean city streets and sewers in deplorable conditions, and have no access to forms of social security.

It is estimated that in Bengaluru the per capita generation of waste is half a kilogram per person, the city is home to approximately 11.5 million people who generate almost six thousand tons of waste per day. This overwhelming volume of mixed waste overloaded the city's unscientific landfills early 2011 and in 2012, protests broke out (The Hindu, 2014). This rendered the city's garbage collection dysfunctional leaving the city's streets lined with garbage.

Action of civil society has been key in pushing public policy to understand the issues of solid waste management. Judicial action has framed much of the move forward, including instigating the Municipal Solid Waste Management rules of 2000. In Bengaluru[25], initiatives such as the Solid Waste Management Round Table (SWMRT) was formed in 2009, with the vision of bringing the MSW rules to life in Bengaluru.

Judicial action has been supportive of civil society's efforts to create and implement solid waste management regulations in the city. In July of 2012, a PIL was filed in Bengaluru High Court around the issues of solid waste management with the Solid Waste Management Round table as a core supporter of the petitioner giving research, technical knowledge and solutions to frame relevant submissions to the High Court. Bengaluru is the first city in India to have judicial orders implemented in the field of solid waste management (Environment Support Group, 2014), with the High Court ordering decentralization of Solid Waste Management, opening of dry waste collection centres in each ward, and as well as mandating segregation at source by citizens.

Way Forward

This chapter's intent has been to summarize the state of human development in urban areas in Karnataka. While it is beyond the scope to suggest detailed recommendations, this section summarizes key approaches or ways forward to tackle the inequities

Bengaluru is the first city in India to have judicial orders implemented in the field of solid waste management (Environment Support Group, 2014), with the High Court ordering decentralization of Solid Waste Management, opening of dry waste collection centres in each ward, and as well as mandating segregation at source by citizens.

[25]Information on Bengaluru's citizen movements around solid waste management has been contributed by Shyamala Suresh, a solid waste management expert who is both associated with civil society organizations in Bengaluru and working with the Indian Institute for Human Settlements.

highlighted.

- Building an urban entitlements framework: Residence in urban areas is fraught precisely for those who are most vulnerable in terms of their urban development. Income poor residents both work without protections in the informal sector, and often live with insecurity of tenure in precarious housing conditions. This uncertainty of residence compromises even a basic protection of citizenship rights, and prevents an effective urban welfare regime from meeting key human development goals.

  Yet even affirming urban residence will not fully address the issue as long as their remains an unclear rights and entitlement framework for urban residence. While the rights to education and food have gained ground in urban areas, the rights to work, water, health and housing remain absent. Without clear entitlements to basic needs, it is difficult to ensure adequate economic, social and political attention to their delivery. Creating a clear entitlement framework to basic needs must, therefore, be the first step to making universal human development a reality.

- Spatialising approaches to Human Development: This chapter has argued that it is essential to understand the urban nature of human development challenges. Urban and rural areas are inter-related yet the ways in which human development challenges manifest themselves, the way residents experience them, and the coping strategies used differ within urban and rural areas. It is necessary to emphasize both the inter-linkages as well as the autonomous nature of these challenges.

  Within the urban, the chapter has shown how smaller urban centres have particular challenges, be it in greater degrees of infrastructural deprivations or access to services; or in gender differentials in literacy or workforce participation. The absence of adequate data on smaller urban centres further exacerbates this situation. Correcting this emphasis is essential so that greater deprivations of urban human development can be accorded the priority that they need.

- Universal Access to Basic Services: It is clear that substantial inequalities still exist in basic services like access to water supply and sanitation. These differentially impact smaller urban centres and poorer residents within in bigger urban centres. Addressing these requires both urgent public action and resources as well as a commitment to universal access regardless of tenure or legality of settlement. Universal access must take into account both de jure and de facto exclusions that currently mark access to services in Indian cities, including economic and spatial informality and contestations on residence. Further, as argued earlier, approaches that seek to focus and operationalize through working in the "slum" will exclude a significant number of non-slum households in need.

  Karnataka was one of the first States to adopt the National Urban Sanitation Policy. It has begun to prepare City Sanitation Plans for Mysuru, Belagavi, Shivamogga, Kalburagi, Hubli-Dharwad, Mangalore, Tumakuru and Ballari. Pilot projects on 24/7 water and sewerage have also been undertaken and shown results. The trends, therefore, are welcome and positive, but must be scaled with a strong discourse of universal access and rights in order to

reach the last mile.

- Improving Existing but Inadequate Housing: The extent of Karnataka's urban housing shortage is such that it cannot be addressed by the State or market actors alone. Further, given the history of these actors, adequate new housing cannot be built to satisfy demand. The way forward, then, is to work with existing but inadequate housing. Most urban households that suffer housing poverty are not homeless – they live in housing they have built which often lacks tenure, is inadequate, or lacks services. Improving this housing – often within slums – by extending tenure, services and improving units can address housing shortage cheaply and at scale.

  The universalisation of services will already go some way to improving housing once we remember that housing is not the dwelling unit but the services attached to it as well. Improving and upgrading thus, must be the core of a new housing strategy even as new affordable housing units are built to address future demand. We have argued this in detail elsewhere (IIHS 2014).

- Strengthening Public Systems in Urban Areas: It is argued that for both health and education, urban areas tended to access non-State, unregulated private actors have This can lead, especially at the lower cost end of this provision, to uncertain quality of care but also to high financial consequences for households and a medical poverty trap. It is imperative that regulation for the provision of education and health services – at least at the primary level – be strengthened in urban areas. The Right to Education has made this effort stronger but its main gains have been rural. It is important to recognise persistent urban enrollment differentials, and the catastrophic cost of health care access.

  Health and Education in cities has to be included from the beginning of urban planning so that cities are prepared to prevent rather than simply redress exclusions. Here, integrations are key: better housing and access to services increase health and education outcomes as much as they are valuable ends unto themselves, showing the possibility of virtuous cycles in urban improvement.

  These systems will have to be linked to new mechanisms of social security so that vulnerable households can survive shocks like disasters, marriage, accidents or illness and not lead them result in drop-outs or catastrophic debt. Insurance systems, access to credit, and public provision are all means to protect vulnerable households against welfare shocks and the responsibility of a well functioning urban welfare State that promotes human development.

- Targeting Specific Exclusions: Patterns of exclusion that come up across sectors highlight : (a) gender-based differentials; (b) youth unemployment; and (c) exclusion of migrants. For the former, it is imperative not just to mainstream but to urgently prioritise interventions that seek to close gender differentials particularly in employment, health and education. The absence of women in the workforce at younger and older ages impacts women's economic independence, agency and decision-making ability in their households. This also has

These systems will have to be linked to new mechanisms of social security so that vulnerable households can survive shocks like disasters, marriage, accidents or illness and not lead them result in drop-outs or catastrophic debt.

This will require a rethinking of the roles of the State and the centre, explore alternate funding mechanisms, approach to city planning by the ULBs and integrating neighborhood level stakeholders into the process of city governance.

significant externalities on the health of other members of their households and on children. Recognising gender differentials as a main concern is the first step.

Youth unemployment presents similar dangers and points to a strong gap between education, skills and market demand. Wages and work are vital for young people to feel accepted in society as work is a progressive step into self-dependence and adulthood. Not having secure work can cause economic, cultural and social isolation. This can have great impact on the State and nation's levels of economic growth and productivity. The risk of losing talent, innovation is immense given that a great amount of graduates are unable to find a job and to put their knowledge and capabilities into producing innovation and contributing to economic growth.

Finally, last mile exclusions in housing, access to education and health, as well as the conditions of employment particularly impact migrants. De jure exclusions due to lack of fixed address or de facto exclusions due to their voluntary and involuntary mobility means that these are precisely the children out of school, the adult workers without contracts, security, protection or fair wages; and the communities with low health and nutrition outcomes. Commitments to universal access will need more innovative and dynamic service mechanisms and policy frames to accommodate migrant populations.

- Building City Resilience: to preparedness. Currently the focus of the State is on setting up processes to access funds from the NDMF (National Disaster Management Fund) (Government of Karnataka, 2015). The Karnataka Disaster Management Authority has conducted district level surveys to profile district-wise hazards. Such surveys at the city level would enable urban local bodies to better plan and govern these regions. It is through risk reduction and preparedness that urban communities, especially the poor, can be made resilient to the unexpected stresses and shocks. In this context, city resilience describes the capacity of cities to function so that the people living and working in cities survive and thrive no matter what stresses or shocks they encounter. This is again integrated with the need for effective urban social security systems as outlined above. This will require a rethinking of the roles of the State and the centre, explore alternate funding mechanisms, approach to city planning by the ULBs and integrating neighborhood level stakeholders into the process of city governance.
- Strengthening Civil Liberties and Protections: While social and political inclusion have no magic wand that can wish away conflict, strong State support to protect civil and political liberties – legally and discursively – is indeed a first step. The presence of anti-discrimination laws (currently absent across India) would be a welcome first step as would public protection of minority rights, and a concerted campaign to underscore that cities are meant to be home for all and that their diversity is perhaps their biggest strength.

Natural resources, Climate change and Human Development

Chapter-12

Natural resources, Climate change and Human Development

Introduction

Growing population and its ever-increasing demand for resources, is leading to increased pressure on natural resources. Natural resources such as forests, grasslands, rivers, oceans and air are subjected to over exploitation or pollution leading to degradation or loss, with adverse implications on human development. Land degradation, loss of forests, depletion of groundwater, air and water pollution, loss of biodiversity and climate change are some of the major environmental challenges facing humanity. Adverse human activity, particularly burning of fossil fuels and deforestation is driving climate change by increasing atmospheric concentrations of carbon dioxide and other greenhouse gases. As a result, the world is experiencing greater weather extremes, changes in rainfall patterns, heat and cold waves, and increasing droughts and floods. This climate change phenomena will have a negative impact on the environment and human livelihoods and development, specifically affecting the poorest and the marginalized people living in the most vulnerable areas. This chapter will focus mainly on the status, trends and drivers of: land use, change in land use, water, air and forest resources of Karnataka State; assess their implications for human development. The chapter will also present case studies of some of the environmental challenges facing Karnataka, affecting the livelihoods and the quality of life.

Land - various forms of land use and land use trends in Karnataka

Land use analysis provides the systematic study of the existing pattern of land utilization. The analysis reveals that the area under fallow land has increased from 11.99 lakh hectares in 2010-11 to 17.00 lakh hectares in 2013-14 showing a 41.78% increase (KSDA, 2013; DES, 2016)due to untimely and insufficient rainfall or lack of profitability in agriculture, or lack of proximity to the market or shortage in availability of labour (FICCI, 2015; Deshpande and Arora, 2011). The land area under tree crops/groves, cultivable waste lands and barren/uncultivable land shows a declining trend. The analysis shows an increase in the land area under non-agricultural uses, which is mainly due to urbanization, industrialization, housing development and expansion of infrastructure facilities. The observed trend in the area under current fallow shows, that an increasing area is kept fallow. Despite growing population,

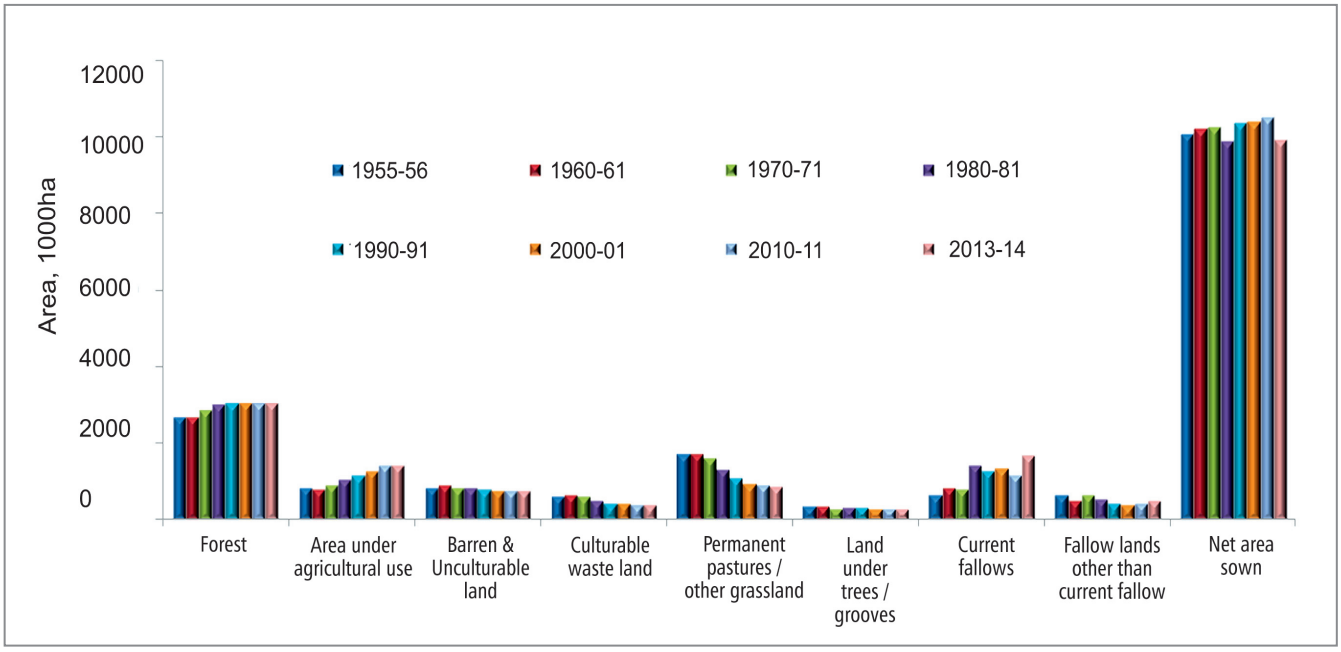
This climate change phenomena will have a negative impact on the environment and human livelihoods and development, specifically affecting the poorest and the marginalized people living in the most vulnerable areas.

In Karnataka, 9.39 Mha of land is affected by soil erosion (2010), 0.15 Mha of land is salt affected (sodic and saline soils during 1986-87), 8.09 Mha of land is affected by one or the other form of degradation and are classified as waste/degraded land

with average decadal growth rate of 15.67% and average annual exponential growth rate of 1.46% (Census 2011), the net area sown has not showed an increasing trend. This is due to increase in productivity due to the intensification in the use of high yielding variety seeds, insecticides/pesticides, chemical fertilizers, in addition to the several irrigation projects and policies introduced in the State.

In Karnataka, about 50% of the area is irrigated by surface water and another 50% by groundwater and the contribution of groundwater irrigation is increasing faster than that of surface water (Chandrakanth, 2009). The area under forests has stabilized over the recent decades (a total of 13% increase in area under forests from 1960 to 2012) due to effective forest conservation policies and rigorous plantation activities. However,, the degradation processes caused due to both natural and anthropogenic activities like soil erosion, overgrazing, incorrect agronomic practices, salinization of arable lands, water logging, flooding and drought have constantly affected the land quality and productivity. In Karnataka, 9.39 Mha of land is affected by soil erosion (2010), 0.15 Mha of land is salt affected (sodic and saline soils during 1986-87), 8.09 Mha of land is affected by one or the other form of degradation and are classified as waste/degraded land (ICAR, 2010). Belagavi, Kalaburagi, Vijayapura, Koppal and Bagalkote districts show higher proportion of area under degradation (mainly soil erosion). Land degradation adversely impacts food production, grass productivity and groundwater recharge.

Figure 12.1
Land use classification between 1955-56 to 2013-14 (area in 1000 ha)



Source: Directorate of Economics and Statistics (DES), 2012 and 2016

Water
river basins of Karnataka

Water resources constitute mainly surface and groundwater, with precipitation being the primary source. Quality of human lives depend on reliable supply of clean drinking water and adequate water supply for agriculture, energy production, navigation, recreation, and manufacturing. Rivers are the main source of water supply in Karnataka. The two main river systems of Karnataka are: (i) Krishna and its tributaries, namely, the Bhima, Ghataprabha, Vedavathi, Malaprabha and Tungabhadra in the north accounting for 59.48% of drainage area, (ii) Cauvery and its tributaries, namely, the Hemavathi, Shimsha, Arkavati, Lakshmanathirtha, and Kabini in the south accounting for 17.99% of the drainage area. Additionally, there are nine west-flowing rivers that drain into the Arabian Sea accounting for 12.73% of drainage area. The total availability of water from all the river basins is estimated to be 7,663 thousand million cft/year (TMC/yr) of which 45% (3,475 TMC/yr) can be economically utilised. The State can utilise only 40% of the potential (1,690 TMC/yr) (DFEE, 2011) because, the west flowing rivers cannot be harnessed due to topographical limitations and requirement for fishery. Karnataka also has about 37,000 traditional tanks with a potential command area of 685,000 ha. However, the importance of tank irrigation is drastically reducing due to siltation as also reduction in water spread area due to low frequency of tank fills(Chandrakanth, 2009).Tables 12.1 and 12.2 show the estimated yield (TMC) of water from river basins of Karnataka and the sectoral utilization of water from three major river systems (TMC) for 2003.

Rivers are the main source of water supply in Karnataka. The two main river systems of Karnataka are: (i) Krishna and its tributaries, Cauvery and its tributaries

Table 12.1
Estimated yield (TMC) of water from river basins of Karnataka

River system	Economically available	Utilization
Godavari	49.97	22.37
Krishna	969.44	1156.00
Cauvery	425.00	408.62
West Flowing Rivers	1998.83	-
North Pennar	32.00	103.31
South Pennar		
Palar		
Total	**3475.24**	**1690.30**

Source: Water Resources Department (WRD), 2009-10

Table12. 2
Sectoral utilization of water from three major river systems (TMC)

Purpose	Krishna	Cauvery	West flowing rivers
Irrigation	443.9	320.9	42.7
Domestic use	4.3	15.4	3.8
Industrial use	0.3	1.4	3.6
Power generation	-	-	389
Evaporation losses	27.7	20.5	-

Source: Department of Forest, Ecology and Environment (DFEE), 2003

The increasing dependence on groundwater in the State has already led to 70% of groundwater utilisation against 58% nationally.

In addition to surface water, groundwater availability is estimated to be around 485 TMC. Exploitation of groundwater in the dry regions of North and South Karnataka is much higher than the coastal, malnad and irrigation command areas. Wells irrigate a net area of 1.70Mha, contributing 50% of the State's net irrigated area. The replenishable groundwater is 562 TMC and annual groundwater availability is 541 TMC (DPPMS, 2012). The increasing dependence on groundwater in the State has already led to 70% of groundwater utilisation against 58% nationally. In Karnataka, it has been estimated that the cost of groundwater irrigation formed around 15% to 30% of the cost of cultivation of crops (Chandrakanth, 2015). Since the method used for collecting cost of cultivation of crops does not explicitly or implicitly include the cost of recharging groundwater, the net returns obtained by groundwater irrigated farmers is over estimated to that extent. Hence, efforts should be made to create awareness in all stakeholders of water to include the cost of water in the cost of cultivation of irrigated crops, towards achieving water use efficiency and wise use of irrigation water. Irrigation is also an important source for raising productivity in agricultural sector. Expansion of both the groundwater and surface water resources has contributed to increase in cultivated area under irrigation. The net irrigated area has increased considerably from 1.36 Mha in 1980-81 to 2.64 Mha in 2000-01 and to 3.56Mha in 2013-14. Table 12.3 shows source-wise irrigation during 2013-14.

Table-12.3
Source-wise irrigation during 2013-14 (1000 ha)

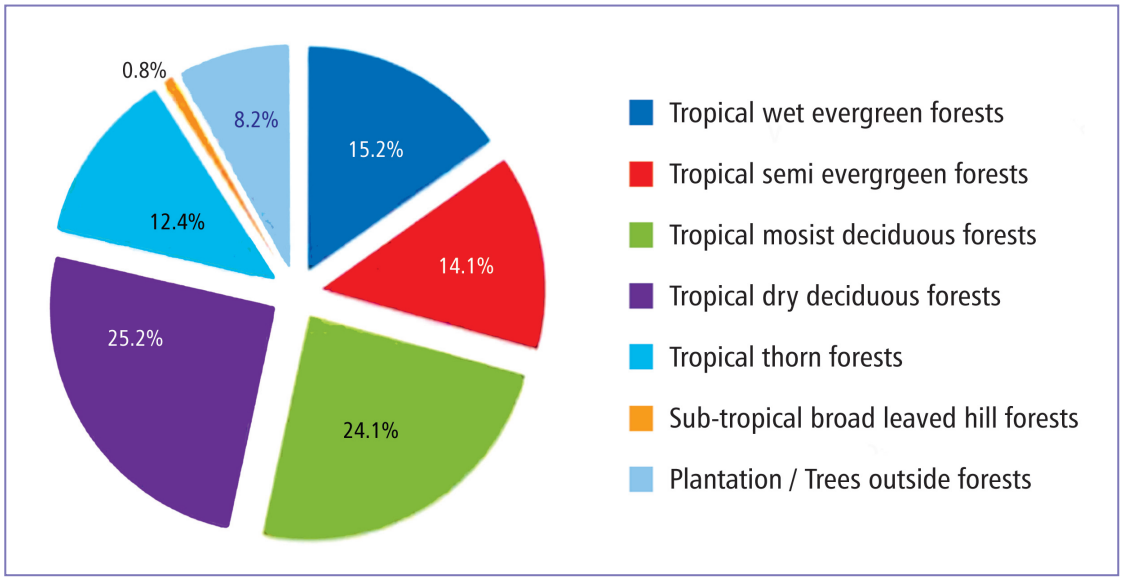
Source	Irrigated area		% share to net irrigated area
	Gross	Net	
Canals	1469.1	1253.1	35.24
Tanks	166.06	153.97	4.33
Open / dug wells	461.38	411.45	11.57
Tube / bore wells	1558.6	1321.6	37.17
Lift Irrigation	104.69	93.356	2.63
Other sources	352.12	322.17	9.06

Source: Directorate of Economics & Statistics (DES), 2015

Forests: types of forest

The total recorded forest area of the State is 3.6Mha constituting 19% of the geographical area, of which 12% of the forest is notified (FSI, 2015). The Western Ghats covers about 60% of forest area of Karnataka and is recognized as one of the 18-mega bio-diversity hotspots of the world. Figure 12.2 shows the forest types in Karnataka.

Figure 12.2
Prevalence of forest types in Karnataka



Source: Department of Forest, Ecology and Environment (DFEE), 2011

Table 12.4
Forest cover trend during 1987 to 2015 (area, km²)

Year	Very dense forest	Moderately dense forest	Open forest	Scrub
1987	16394*		15870	-
2001	26156*		10835	3245
2003	431	22030	13988	3141
2005	1772	20196	14232	3173
2009	1777	20181	14232	3176
2011	1777	20179	14238	3175
2013	1777	20179	14176	3216
2015	1781	20063	14577	3191

*Source: FSI (1987 to 2015)Note: *Composite value comprising both categories*

Air: quality of ambient air

The Transport Department reports that Bengaluru has about 6.5 million registered vehicles as in October, 2016

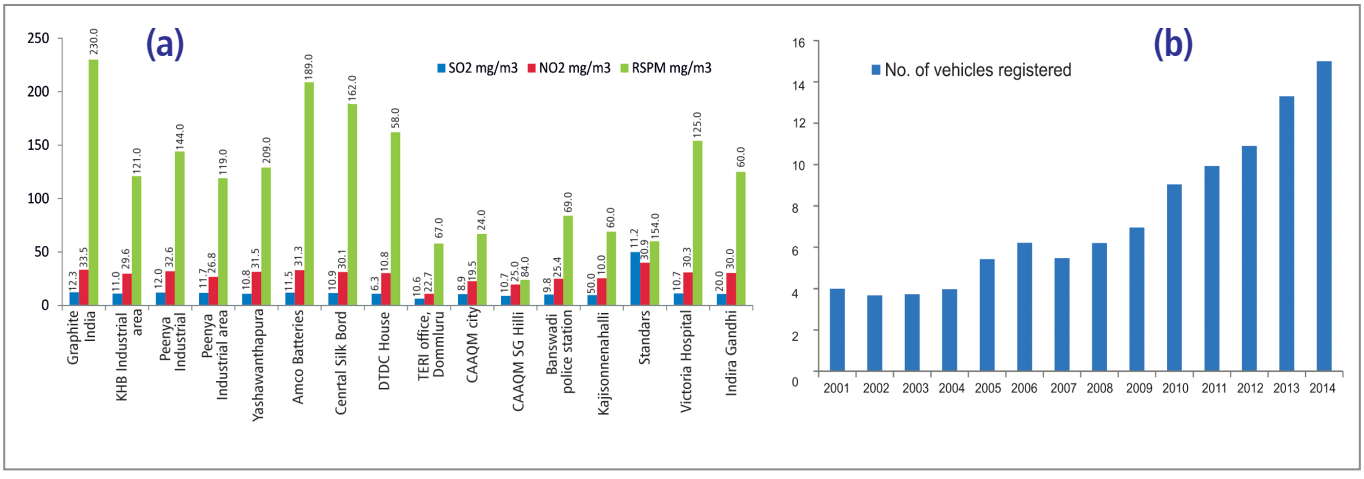
Air Pollutant, as defined by the Air (Prevention and Control of Pollution) Act, 1981, is any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or the environment. Some of the common pollutants and their sources are as follows: **(i)** Carbon monoxide (CO) from vehicular exhaust, kerosene and wood-burning stoves, **(ii)** Sulphur dioxide (SO_2) from coal fired power plants, petroleum refineries, other industries, **(iii)** Nitrous oxides (NO) from electric utilities, vehicular exhaust, fuel burning, **(iv)** Particulate Matter (PM) from diesel engines, power plants, industries, windblown dust, **(v)** Volatile Organic Compounds (VOCs) from vehicular exhaust, solvents, biomass emissions, foam and other synthetic materials, **(vi)** Lead and other metals from refineries, processing industries, and vehicular exhaust.

The National Air Monitoring Programme (NAMP) provides data on the air quality of different cities across India. The Karnataka State Pollution control Board (KSPCB) is the regulatory authority in Karnataka. Respirable Suspended Particulate Matter (RSPM) is of highest concern as currently, NOx and SO_2 levels are within stipulated standards (Figure 12.3a). In the urban context, there is a growing concern about vehicle exhausts as population in cities is increasing, along with an alarming increase in the number of automobiles and changes in lifestyle (Figure 12.3b). The Transport Department reports that Bengaluru has about 6.5 million registered vehicles as in October, 2016 (Transport Department, 2016).

With increasing dependence on coal-based power generation, SO_2 emissions are likely to grow by around five times to about 2,730 tpd in 2030. Commensurately, emissions of noxious gases could increase by around five times. The rise in overall energy demand coupled with an increasing share of coal in energy supply would result in a near four-fold increase in the GHG emissions to over 300 Mt CO_{2e} by 2030. This will translate to per capita emissions of 5 tCO_{2e} per person in 2030 as compared to 1.3 tCO_{2e} per person in 2010 (Goyal, et al. 2014).

Figure 12.3

(a) Annual Average values of air pollutants in Bengaluru City of Karnataka for the 2014-15 and (b) Growth trend in Registered vehicles in Bengaluru City 2001-2015



Source: CPCB, 2011-2012 DPPMS, 2016

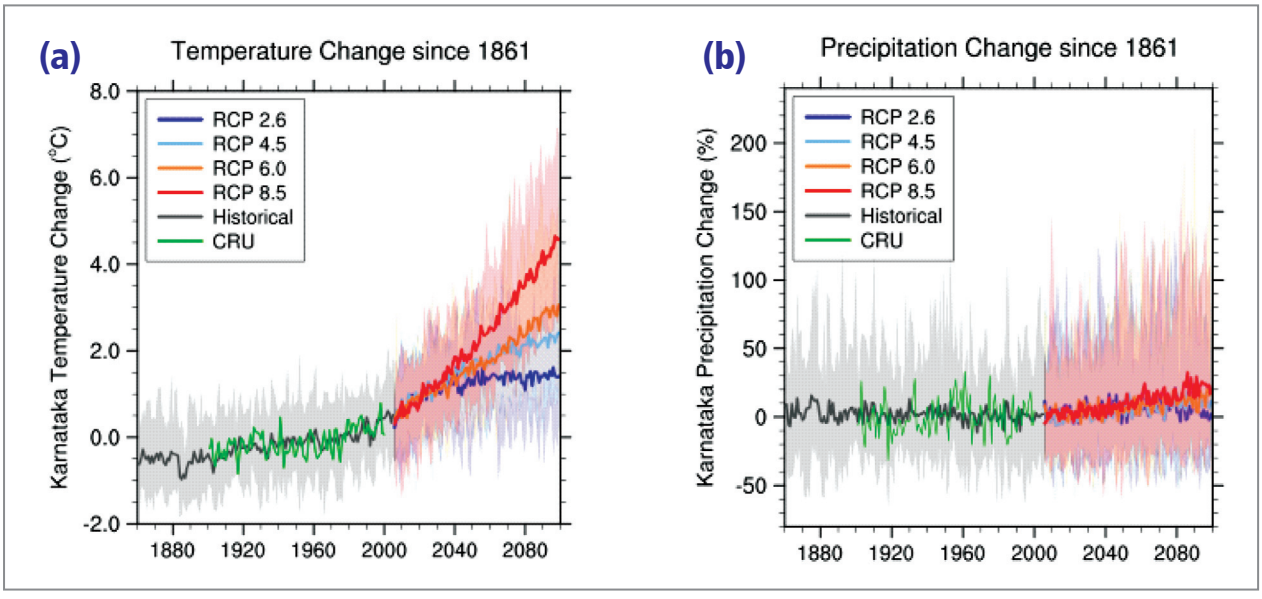
Climate change projections (temperature and precipitation) for Karnataka

The climate of Karnataka, like elsewhere, is changing rapidly, especially in the recent decades. Inter-annual and intra-seasonal variability of rainfall pattern adversely impacts agricultural production. Climate change in the coming decades is projected to adversely impact all aspects of human development.

Historical climate trend

Temperature trends over the last century suggest that Karnataka has warmed by about 0.4°C (Figure 12.4a). Minimum temperature in northern Karnataka (Bidar, Vijayapura, Kalburagi, Raichur, and Yadgir districts) increased by ≥ 0.6°C over the same period, and so did the maximum temperature in these districts (except Bidar) and all over southern Karnataka. Rainfall trends over the last century indicate an overall decrease in annual rainfall in Karnataka by 10% (Figure 12.4b). The decrease is more than 10% in Chikkamagaluru, Dakshina Kannada, Kodagu, Shivamogga, Uttara Kannada, and Udupi. Rainfall has also declined significantly in the northern districts of Bidar, Vijayapura, Kalaburagi and Yadgir (IISc, 2014).

Figure 12.4
Historical Climate Change



Climate change projections

The projected mean warming for Karnataka relative to that in the pre-industrial period (1880s) could be in the range of 1.0–3.0 °C by the 2030s. In the short term (2030s), temperature is projected to increase by about 1.7 °C relative to that in pre-industrial period (1880s) according to the moderate-emissions scenario-RCP 4.5 (MES). Chitradurga, Koppal, Raichur, and Tumakuru are projected to experience the highest warming (2.0 °C and above) even by the 2030s under high-emissions scenario-RCP 8.5 (HES) In the long term (2080s), the mean temperature increase for Karnataka could be as high as 5.0 °C by the end of the century under the HES (RCP 8.5) relative to that in the pre-industrial period Most districts other than the coastal districts show a higher warming of above 4.0 °C by the 2080s. The annual mean

The annual mean temperature is projected to increase by 2.0–3.0 °C even according to the MES (RCP 4.5) (Figure 12.5c). Most parts of the State are projected to experience a warming of 3.0–5.0 °C

temperature is projected to increase by 2.0–3.0 °C even according to the MES (RCP 4.5). Most parts of the State are projected to experience a warming of 3.0–5.0 °C according to the HES (RCP 8.5). Model-based projections for rainfall show a wide range in percentage change for Karnataka (Figures 12.4b). In the short term (2030s), rainfall is likely to be marginally higher (4%–8%) in Bidar, Vijayapura, Kalaburagi, Kolar, and Yadgir districts even under the MES (RCP 4.5) relative to that in the pre-industrial period (1880s). A similar increase in rainfall is likely in northern districts such as Bagalkote, Belagavi, Ballari, Bidar, Vijayapura, Dharwad, Gadag, Kalaburagi, Koppal, Raichur, and Yadgir by the 2030s under RCP 8.5. In the long term (2080s), a moderate increase (8%–12%) is likely in almost all the northern districts under the moderate-emissions scenario (RCP 4.5) relative to that in the pre-industrial period (1880s). Northern districts such as Bagalkote, Belagavi, Bidar, Vijayapura, Dharwad, Gadag, Kalburagi, Koppal, Raichur, and Yadgir and south-eastern districts such as Bengaluru, Chikballapur, and Kolar are projected to experience a higher than 16% increase in rainfall under the HES-RCP 8.5).However, it should be understood that precipitation projections based on coarse-resolution models are not very reliable for regional applications. In this context, Box12.1 explains the declining monsoon specifically over the Western Ghats and it also documents some of the high resolution based precipitation projections for the Western Ghats in Karnataka in the 21stcentury.

Box 12.1
Declining monsoon over the Western Ghats

Indian summer monsoon has largely remained stable over the last century. India Meteorological Department (2014) concludes that "for the country as a whole, the all-India annual and monsoon rainfall for the period 1901-2014 does not show any significant trend". However, in a recent paper Kulkarni et al. (2012) argue that though over a century long period, the Indian summer monsoon rainfall (ISMR) series has been stable, it does depict a decreasing tendency during the last three decades of the 20th century. Krishnan et al. (2013) also report a decreasing monsoon rainfall trend over the Western Ghats including the parts lying in Karnataka. Rainfall trends analysis by Indian Institute of Science over the last century indicates an overall decrease in annual rainfall in Karnataka by 10%. The decrease is more than 10% in Chikmagalur, Dakshina Kannada, Kodagu, Shivamogga, Uttara Kannada, and Udupi. Another study by Rajendran et al (2013) suggests that over the Western Ghats, there is a substantial reduction in rainfall and a significant decreasing trend in seasonal mean rainfall particularly over the last half century.

Looking forward based on the simulations of high resolution regional climate models, Rajendran et al (2012) and Krishnan et al (2013) project reduced orographic precipitation especially over the Southern parts of the Western Ghats under future climate scenario, by the end of the twenty-first century.

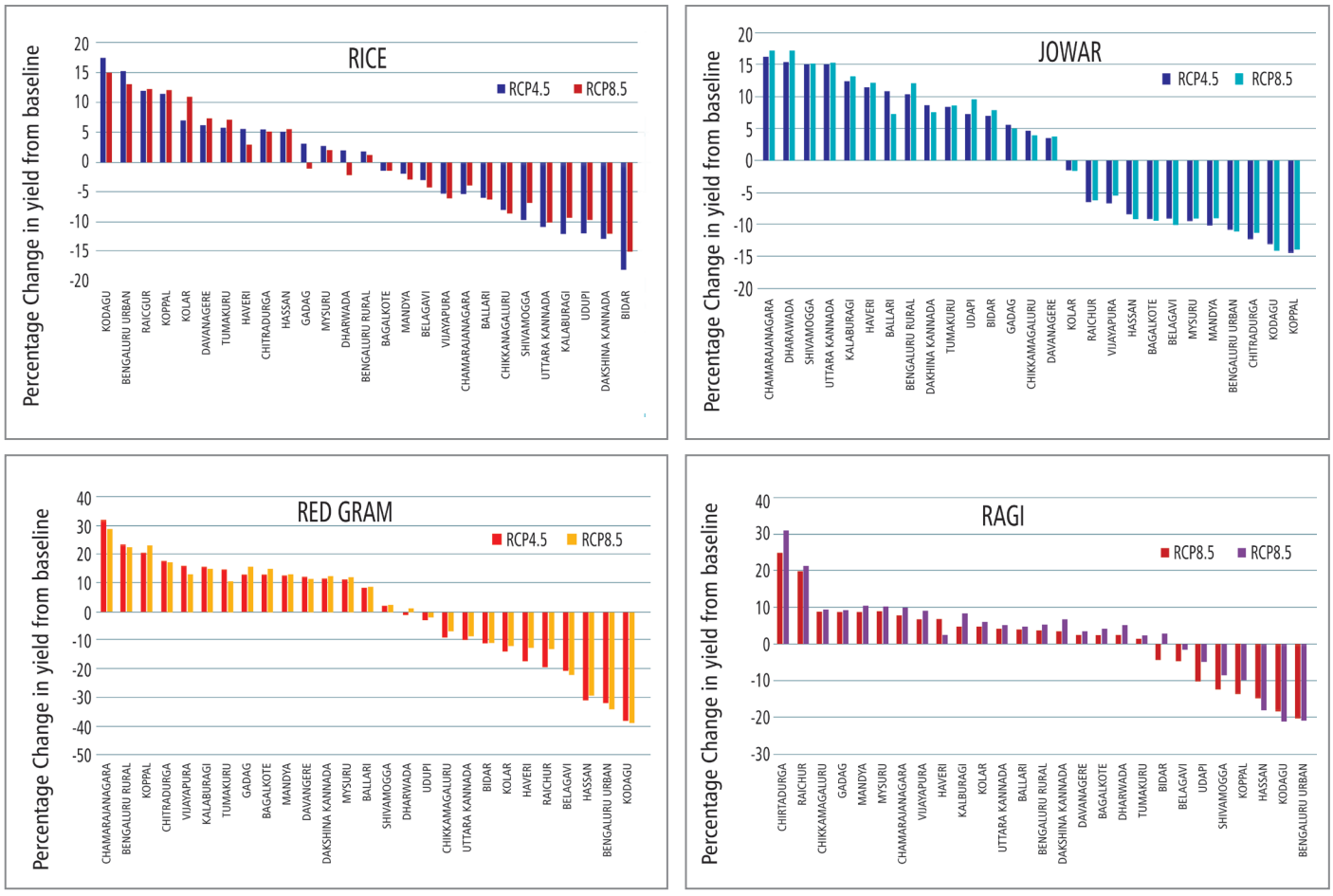
United Nations agreements at the global level have emphasized the need to stabilize global warming at 1.5–2.0°C to avoid dangerous consequences of climate change for sustainable food production and ecosystem services. Global Climate Models used in this study have coarse resolutions (grids of about 200 km × 200 km); therefore, large uncertainties in projections are likely at the district level. Further, the occurrence of climate extremes such as floods and droughts will increase according to IPCC (IPCC, 2014). Karnataka is already subjected to frequent occurrence of floods and in particular, droughts.

In Karnataka, nearly 68% of the total cultivated area is rainfed. In view of the limited water available for irrigation and uncertain and irregular distribution of rainfall, crop productivity is highly variable(IISc, 2014). Total food production in the State is about 11.5 Mt as against a requirement of 10.6 Mt (cereals). The higher temperatures and altered patterns of precipitation – the likely results of increased climate variability and climate change – could lower water supplies and increase water demand. The overall duration of the rainy season and, in turn, the length of the growing season is expected to change. This alters the sowing window and the length of the growing period. As a result, several crops are likely to be affected. By the 2030s, crop yields are likely to decline in many districts: in 12 districts for maize and sorghum; in nine for rice; in eight for ragi (Figure 12.5). Major rice-growing districts like Ballari, Mandya, Belagavi, Bagalkote, the coastal districts, and Shivamogga will witness a decline in yields by 1% to 18%. Haveri and Raichur will see sorghum yields decline by 6% to 10%; and yields of red gram will decline by 10% to 38% and those of ragi by 10% to 20% in six districts.

Thus, both irrigated and rainfed crop yields may decline in many districts. It is quite likely that yields may increase in some districts, initially due to CO2 fertilization effect, but with increased warming, in the long term all crops and all regions will suffer. This could threaten food security especially for the poor, impacting human development.

Thus, both irrigated and rainfed crop yields may decline in many districts. It is quite likely that yields may increase in some districts, initially due to CO2 fertilization effect, but with increased warming, in the long term all crops and all regions will suffer. This could threaten food security especially for the poor, impacting human development.

Figure 12.5
Percentage change in yields of major crops by the 2030s under RCP 4.5 and 8.5



Impact of climate change on forest sector:

Climate is one of the most important determinants of vegetation patterns globally and has significant influence on the distribution, structure and ecology of forests. It is therefore logical to assume that changes in climate would alter the forest ecosystems. According to Dynamic Vegetation Modelling study (IISc, 2014) in Karnataka, about a third of the grids are projected to undergo change in forest type even by the 2030s, which means that the future climate may not be suitable for the existing forest types and biodiversity. The grids that are projected to experience vegetation shifts by 2030s currently support tropical evergreen and moist and dry deciduous forests.

Similarly, in the long term, change in forest type is projected for 57% and 62% of the grids under moderate (RCP 4.5) and high emissions (RCP 8.5) scenarios, respectively by the 2080s. The tropical evergreen and deciduous forests of Chikkamagaluru, Dakshina Kannada, Shivamogga, and Uttara Kannada are projected to undergo changes in forest types by the 2080s. The impacts could

include impaired forest regeneration and establishment and disturbance to physiological functions such as fruiting, flowering and pollination, leading to large-scale mortality and loss of existing biodiversity. This could mean that in the next 30 to 50 years, bulk of the species that provide multiple forest products are likely to suffer from dieback or will die altogether, with serious consequences for the flow of ecosystem services and biodiversity. Given that many communities in the Western Ghats districts are highly dependent on forests for livelihood, nutrition, and as a source of raw material for household use and for a range of commercial purposes, climate change is likely to adversely affect the flow of forest products to forest-dependent households and communities and ultimately impacting their livelihoods and human development. Box 12.2 shows the inherent vulnerability of the forests in Western Ghats part of Karnataka.

The impacts could include impaired forest regeneration and establishment and disturbance to physiological functions such as fruiting, flowering and pollination, leading to large-scale mortality and loss of existing biodiversity.

Box 12.2
Inherent vulnerability of the forests of Karnataka within Western Ghats landscape

Assessment of vulnerability to climate risks is an important step in conserving the forests and the forest ecosystem services in the long term. Sharma et al (2015) carried out the inherent forest vulnerability analysis at the landscape level. The choice of assessment at landscape level is guided by the understanding that to preserve forests, the whole landscape should be considered as a conservation unit. Sharma et al (2015) collected spatially disaggregated information on the following four vulnerability indicators: biological richness, disturbance index, canopy cover, and slope, for the analysis. The study concludes that "forests having high and very high inherent vulnerability are located largely towards the eastern boundary of the landscape in dry deciduous forests and plantations".

Further the authors argue that "among the various forest-types found in the landscape, the inherent vulnerability varies in the following order: semi-evergreen<evergreen<moist deciduous<dry deciduous forests<plantation forests". The study finds that among the forests of Western Ghats Karnataka landscape, the biodiversity rich natural forests are less vulnerable than manmade plantation forests. Sharma et al (2015) further suggest that forests with open canopy cover (<40 %) have higher inherent vulnerability compared to those with dense canopy cover (>40 %) and the spatial profile of inherent vulnerability of forests in the Western Ghats Karnataka landscape suggests that the forests in the central and southern part of the landscape have comparatively higher inherent vulnerability.

Similarly, climate change is projected to impact water resources, health, fisheries, coastal communities and infrastructure. The Paris Agreement in December, 2015 provided a significant prospect to address climate change. Implications of Paris Agreement for Karnataka are provided in Box 12.3.

Box 12.3
The Paris Agreement: Implications for Karnataka

Paris Agreement provides a historic opportunity to address climate change. The Agreement adopted an ambitious goal of limiting warming to below 2°C. To achieve this ambitious temperature target, the Agreement aims for a net zero emission of greenhouse gases in the second half of the century, which means balancing CO2 emissions from fossil fuels with carbon sequestration in forests and oceans. The Paris Agreement is at a global level and only contains the broad agreements reached on temperature targets, mitigation actions, highlighting the need for adaptation, potential level of funding for migration-adaptation, role for forestry (REDD+), monitoring and periodic reporting, etc. However,, the detailed guidelines, procedures and rules have to be worked out in the coming year or two. While the Paris Agreement is not directly linked to Karnataka or any other State, indirectly it may translate in to a number of opportunities for the State of Karnataka in the coming years. What is more relevant for Karnataka is the INDC (Intended Nationally Determined Contributions), prepared by the Government of India and submitted to the United Nations (UNFCCC). Under the INDC, India has committed to the following:

- To reduce the greenhouse gas emissions intensity of its GDP by 33 to 35 percent by 2030 from 2005 level.
- To achieve about 40% cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030 with the help of transfer of technology and low cost international finance (GCF).
- To create an additional carbon sink of 2.5 to 3 billion tonnes of CO2 equivalent through additional forest and tree cover by 2030.
- To better adapt to climate change by enhancing investments in development programmes in sectors vulnerable to climate change, particularly agriculture, water resources, Himalayan region, coastal regions, health and disaster management.
- To mobilize domestic and new and additional funds from developed countries to implement the above mitigation and adaptation actions in view of the resource required and the resource gap.
- To build capacities, create domestic framework and international architecture for quick diffusion of cutting edge climate technology in India and for joint collaborative R&D for such future technologies.

Some of the potential opportunities under the Paris Agreement for Karnataka, and more importantly the INDCs are as follows:

- Prepare plans to reduce the energy and carbon intensity of production of goods and services, based on adoption of energy efficient technologies and shift to renewable energy.
- India has pledged to bring 40% of its installed power capacity under renewables in the next 15 years, which provides a big opportunity for Karnataka to prepare ambitious plans for increasing the installed capacity of renewable energy technologies such as solar, wind and biomass.

- Municipalities and corporations in Karnataka can prepare plans for reducing the carbon foot print, through shift to renewable energy and energy efficient systems; in lighting, transportation, air conditioning, waste management, etc.
- India also has an ambitious plan to sequester 2.5 to 3 billion tonnes of CO2 in forest sector by 2030. Thus, Karnataka could prepare an ambitious plan for afforestation and reforestation of degraded or wastelands and enhancing carbon stocks in the existing low carbon density forests.
- INDC as well as the Paris Agreement strongly promote adaptation and resilience enhancement measures to reduce vulnerability to climate risks. Karnataka being one of the most vulnerable States in India should prepare plans for promoting resilience in agriculture, water management, forests and fishery systems.

India estimates that implementation of its climate pledges is likely to cost $2.5 trillion over the next 15 years.It is quite likely that about US$ 100 billion could become annually available for mitigation and adaptation actions, starting 2020. Thus, Karnataka should create enabling policies and institutions, to benefit from this large mitigation-adaptation finance.The accord could also drive Research and Development in green energy technologies, for example Bill Gates announced an Energy Research Initiative drawing on billions of dollars in investments from private investors, individuals, Universities and 20 governments — including the US, China and India. Incorporation of forestry mechanisms in the legal part of the Paris agreement and promotion of synergy between mitigation and adaptation, which is possible in forest sector, can boost investments aimed at forest and biodiversity conservation and flow of ecosystem services in India and Karnataka.Apart from the direct government funding under GCF, the Paris agreement opens doors for funding from multiple non-Government sources such as a whole host of global corporates, mayors of global cities, and bilateral and multilateral agencies such as the World Bank and UN. Besides, the accord has a provision for carbon pricing mechanism in which Indian companies can participate. Thus, there are clear opportunities for implementing strong Renewable Energy and Energy Efficiency programmes in Karnataka under India's INDC as well as with financing from GCF, GEF etc.

While Paris agreement is generally considered a giant leap towards global sustainability still the voluntary pledges currently agreed are inadequate to limit warming below 2°C goal, and could lead the world to a warming path of 3°C or more. Thus, Karnataka with a large population depending on climate sensitive sectors such as dry land agriculture, fisheries, horticulture etc. may witness the adverse impacts of climate change. Thus,, Karnataka will urgently require a strategy to build adaptive capacity in the short term and resilience in ecosystems and food production systems in long-term. Further, Karnataka should be well prepared institutionally and technically to benefit from the Global Climate Change mechanisms, to enable transformation to sustainable energy and resilient development.

Impact of climate change on livestock

Climate change could impact livestock production, due to changes in crop biomass availability and quality through changes in feed supplies. Dairy cattle will be affected by climate change more adversely than others. Heat stress to animals is of primary concern, which can result in numerous changes in the animal health. These include: elevated body temperature, increased respiration rates and increased maintenance energy requirement (may increase by 20-30% under heat stress). There is a decrease in milk production in cows under heat stress which could be either short-term or long-term depending on the duration and severity of the stress. Heat stress induced by climate change is also reported to decrease reproductive performance in dairy cows. Environmental conditions induced by climate change directly affect mechanisms and rates of heat gain or loss by all animals. Since ingestion of feed is directly associated to heat production, any alteration in voluntary feed intake will change the amount of heat produced by the animal (Mader et al., 1999). Other intensive livestock production systems such as poultry and piggery are also susceptible to heat stress. Some responses include reduced feed intake, laying performance (chickens), fertility levels, decreased activity, and in the worst cases, increased mortality. Increase in temperature and humidity is likely to cause an increase in incidence of animal diseases (bacterial, protozoan and viral) that are spread by insects and vectors. Frequency and incidence of mastitis and foot diseases affecting crossbred cows and other high milk producers may increase due to increase in the number of stressful days.

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The State of Karnataka has a livestock population of 29 million and poultry population of 53.4 million. Karnataka is ranked at 11th and 7th position in the country in milk and egg production respectively (KAPPEC, 2015). About 38% of the rural households have livestock and or poultry, contributing significantly to their livelihood. The indigenous cattle breeds have unique genetic structure that helped them to adapt to local environment, cope with heat, and resist various diseases. But over the last decade , a declining trend in the population of indigenous breeds is seen in the State putting the livestock population at risk. There are no Karnataka specific studies on impact of climate change on livestock.

Impact of climate change on fishery

Fisheries play an important role in food supply and livelihood security of fishermen communities living in coastal areas. The State of Karnataka has rich fishery resources with a continental shelf of 27,000 km^2, about 300 km^2 of coastline and 5.20 lakh ha of inland water area. Additionally,8,000 ha of brackish water area provide ample opportunities for shrimp farming. The total fisher-folk population of the State is 9.61 lakh comprising of 3.28 lakh marine and 6.33 lakh inland areas. A total of 2.96 lakh people are in the dynamic category implying that fishing is not their permanent occupation throughout the year. The fish production in Karnataka was around 2 lakh tonnes in early 80s, grew to 3 lakh tonnes in mid 90s, further increased to 3.61 lakh tonnes in 2008- 2009 and reached 4.08 lakh tonnes in 2009-10, contributing to about 4.8% of India's total fish production. This number grew to 6.13 lakh Mt in 2014-15 and slightly reduced to 5.80 lakh Mt in 2015-16 according to the State Fisheries Department. The marine sector contributes 60% while the remaining 40% comes from inland sector (DES, 2010 and 2011).

Climate change is also likely to have impacts on aquaculture. The effects can be felt through multiple pathways in terms of weather variables, extreme weather events, ocean acidification, loss of supportive coral reef and mangrove habitats and favouring some species over the others. Sea surface temperature has increased by 0.2-0.3°C along the Indian coast in the last 45 years, and is projected to increase by 2.0-3.5°C by 2099 (NAAS, 2013). The projected sea level rise is about 30 cm in 50 years. A study by Dwarakish et al (2009) to calculate the coastal vulnerability index (CVI) of the Udupi coastline revealed that out of the 95 km stretch coastline, 59% was at very high risk, 7% high, 4% moderate and 30% in the low vulnerable category, due to Sea Level Rise. Results of the inundation analysis indicated that 42.19 km2 and 372.08 km2 of the land area will be submerged by flooding at 1m and 10m inundation levels. If small-sized, low-value fish species with rapid turnover of generations are able to cope up with changing climate, they may replace large-sized high-value species. Such distributional changes would lead to novel mixes of organisms in a region and result in considerable changes in ecosystem structure and function. The sensitivity of small-scale fisheries to climate change threat is very high while adaptive capacity is low. This is expected to adversely affect the overall production of fish and the livelihood of the fishermen communities.

1. Links and conflicts between human and environmental development

Human development is a process of enlarging people's freedom and opportunities and improving their well-being. It is about the real freedom as ordinary people have to decide who to be, what to do and how to live (UNDP, 1990). The Human Development Index (HDI) is a composite statistic used to rank countries by the level of "human development" according to three dimensions: health, education, and living standards; providing a frame of reference for both social and economic development of a country/ region. The first Human Development Report did not explicitly consider the role of the natural environment in enhancing people's choices but in the more recent editions, the environment and more broadly, sustainable development have been progressively introduced (UNDP, 1996). The definition of the Millennium Development Goals of 2000 and the Sustainable Development Goals of 2015 by the United Nations definitively recognize the full integration of human development and the environment as mutually reinforcing development goals. Over the last few years, a great deal of attention has been given to the role of natural resources and the environment as fundamental to human well-being and the quality of life. However, the ever increasing population, unplanned cultivation, overgrazing, mining, deforestation, excessive irrigation, excessive use of pesticide, and burning of fossil fuel are few of the human induced drivers adversely impacting the natural resources or the environment. In addition, flooding, sea level rise, landslides, erosion, forest fire, salinity, and alkalinity also cause degradation of natural resources. These drivers not only deplete the natural resources but also cause global changes such as climate change and biodiversity loss that in turn affect human development.

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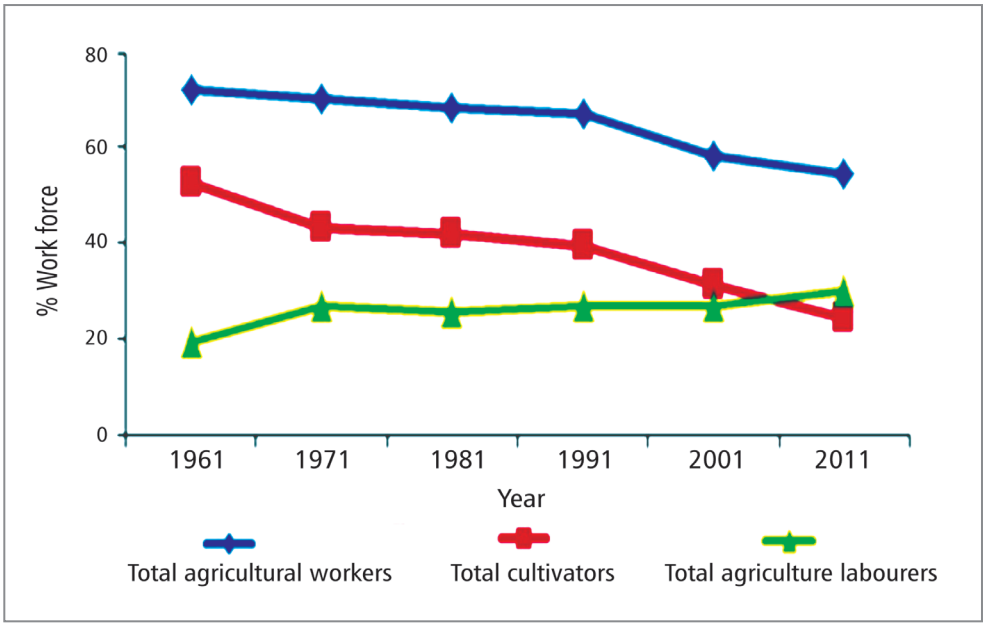
Environment and livelihood linkages

A livelihood comprises of the capabilities, assets (including both material and social resources) and activities required for a means of living (FAO, 2005). Factors that determine the State of livelihood are economy, demography, environment, technology and security. HDI can be thought as a proxy for the overall livelihood capital.

However, due to the recurrent droughts in several regions of Karnataka, some farmers are reported to have abandoned farming and taken to alternative livelihood, which is likely to exacerbate the environmental degradation in the long run

Agriculture is still by far the largest single source of livelihood in rural Karnataka. Also, the rural poor derive a significant portion of their livelihood from their natural ecosystem. Income from crops, livestock, forests and fisheries is the primary source of income. But programmes to reduce poverty often fail to account for the linkages between the environment and the livelihoods of the rural poor. Income (livelihood) derived through such kind of dependence on the natural environment can be termed as environmental income. Because of their dependence on environmental income, the livelihoods of the poor are especially vulnerable to environmental or ecosystem degradation. As identified earlier, the majority of the population practices agriculture and work as farm labourers (Figure 12.6). They constitute nearly 50% of the total population (Census, 2011). However, due to the recurrent droughts in several regions of Karnataka, some farmers are reported to have abandoned farming and taken to alternative livelihood, which is likely to exacerbate the environmental degradation in the long run (DFEE, 2011). Further, it can be observed from Figure 12.6 that the total number of cultivators is decreasing, indicating abandonment of farming, due to erratic rainfall and land degradation.Farmers and farm labourers have been deriving alternative income from non-farm sources such as brick making, bullock renting, sand mining, leaf plate making, petty business, construction, transport and so on, business, remittances, rental, interest, etc. With structural transformation in the economy, and rise of non-farm wages, there is a shift of labour from agriculture to non-agriculture. Small size of holding for a large number of households is unable to provide full time employment and an income level which will satisfy the aspiration level of youth (Nagaraj, et al., 2013).

Figure 12.6
Distribution of agricultural workforce in Karnataka during 1961 to 2011



Source: Adapted from Census, 1961 to 2011

Livelihoods for the landless families and people living in the forest area and in the fringes of the forest area usually includes collection of edible fruits, flowers, tubers, roots and leaves for food and medicines; firewood for cooking (some also sell in the market); materials for agricultural implements, house construction and fencing; fodder (grass and leave) for livestock and grazing of livestock in the forests; and collection of a range of marketable non-timber forest products; pottery; making cane /bamboo furniture, contributing to meeting the livelihood demands of the family. Those living in around the forests are dependent on forest labour and forest produce for their livelihood. To promote income generation among these people, the State has created 21 Large-scale Adivasi Multi-Purpose Societies(LAMPS) which help farmers who gather NTFPs from forests allotted to them and market them at a token fee. Forests are not only a source of subsistence income for millions of poor households but also provide employment to poor in these remote areas. This makes forests an important contributor to the rural economy in the forested landscapes.

NTFPs are being collected in different forest zones. A study in Uttara Kannada by Murthy et al., (2005) shows the diversity; However, it varies with availability and local knowledge, with communities gathering about 50% of the species available in the evergreen zone to about 40% in the semi evergreen and dry deciduous zones and 13% in the moist deciduous zone. Significant quantities of NTFPs are gathered in all the four zones and the estimated value of NTFPs (at 2004 prices) realized per household varies between Rs. 3445/household in the evergreen zone and Rs. 1233/

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household in the dry deciduous zone. Considering the per capita income of household in Karnataka at around Rs. 60,000 per year, and considering the per capita agriculture income of about 13% of the SDP, which amounts to Rs. 7,800 per year, the contribution of NTFP is around 10% of the income. Similarly, the financial value realized per hectare also varies across the four forest zones studied in the Western Ghats region and it ranged from Rs. 634 in the semi deciduous, Rs. 797 in the dry deciduous, Rs. 1,404 moist deciduous and Rs. 1,801 in the evergreen zone, with a mean of Rs. 1,159/ha/yr.

The coastal region of Karnataka represents a landscape of highly dynamic ecosystems. Karnataka is in the 6th position in marine fish production and 8th position in inland fish production when compared to fish production in the country

The coastal region of Karnataka represents a landscape of highly dynamic ecosystems. Both landmass and wetland regions support enormous biodiversity due to unique ecological conditions. The coastline stretches across nearly 300 km, consisting of 22 urban agglomerations and 1,044 villages. Karnataka is in the 6th position in marine fish production and 8th position in inland fish production when compared to fish production in the country (DPPMS, 2016). The occupations in the region include fishing, agricultural activities, aqua culture, fish landing and processing, port maintenance, mining for lime shell, bauxite and silica sand, coir retting, etc. This region encompasses 191 fishing villages with 275,976 fishing community population (DFEE, 2011). In addition to the coastal region, an area of about 565,000 ha, of various inland water resources exits in the State and has vast scope for fisheries development. The annual fish production in Karnataka has shown a considerable increase from 2.51 lakh metric tonnes in 2004-05 to 5.55 lakh metric tonnes in 2013-14 (DPPMS, 2012) grew to 6.13 lakh Mt in 2014-15 and slightly reduced to 5.80 lakh Mt in 2015-16 according to the State Fisheries Department. There are about 961,000 fishermen in the State of which 328,000 fish in marine ecosystems and about 633,000 fish in inland areas. The average fish production in the last five years is about three lakh tonnes with the contribution of marine sector being 68% and inland sector being 32% for the year.

History of linkages between human development and environment

Forest areas are considered as first target for development schemes. In the early post-independence period, food scarcity led to the 'grow more food campaign', when forests were released for agriculture. In addition to this, there is a tremendous pressure on forests in terms of diversions of land for mining and hydropower, besides encroachment, grazing, fire, etc., that has led to degradation of the forest, fragmentation of habitats and loss of biodiversity. The extent of forestland approved for various activities and uses in Karnataka upto 2016 is shown in Table 12.5.

Another example of adverse impacts on forests of Karnataka is cultivation of exotic tree species in the degraded forest lands. Although the speciessuch as Leucaenaleucocephala (subabul), Jatropha curcas, Prosopisjuliflora, Gliricidiasepiumare exotic, they are often recommended for their multi-purpose use and fast growing nature and higher biomass production (Daniel, 2005). When compared to the

native species, in many cases, these species invade the natural ecosystems and have an impact on the services that those ecosystems provide to native local communities. The area of plantation established by the forest department increased from 36,480 ha during 2004-05 to 64,055 ha in 2015-16. Conversion of forest land and farmlands to plantation for increasing the income is another significant change which can be found typically in hilly regions of Karnataka, where the slopes are converted into coffee, tea or rubber plantations (area under coffee plantation has risen from 2,01,775 ha during 2001-02 to 2,30,444 ha during 2014-15).

Table 12.5
Extent of foresland approved for various activities and uses in Karnataka (upto March, 2016).

Nature of project	Extent, ha
Irrigation	1952.46
Hydro and wind power	7397.10
Mining and Quarrying	9043.41
Roads	208.95
Railways	398.77
Transmission lines	1327.65
Others	8474.04
Total	**28802.38**

Source: Karnataka Forest Department (KFD), 2016

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Many mining leases have not been renewed after notification of the Forest Conservation Act, 1980. The latest closure is the lease of Kudremukh Iron Ore Company Limited in 2005. Still, 103 mining leases in forest areas remain operational, covering 7,363 hectares, the majority of which are in Ballari and Chitradurga districts.The Central Empowered Committee (CEC), an advisory body to the Supreme Court of India on issues pertaining to forest diversions, says that nearly 45% of the green cover around Ballari may have been lost. The recorded forest area in Ballari was 138,000 ha (ICFRE, 2011). However, the Forest Survey of India could find only 77,200 ha in forest cover in the district in its 2011 report (FSI, 2011). The forest area in Ballari has marginally improved in the recent times as the latest report of FSI (FSI, 2015) reports about 78,500 ha in forest cover. The encroached land was used not only for mining but also for dumping waste and other uses like buildings (Sambhav, et al., 2011).

The movement of heavy machinery, blasting, power drilling, excavation, benching and dumping of tailings are responsible for destabilising soils, slopes and massive ingresses into watercourses. Environmental damage is significantly enlarged because of the fact that conditions stipulated

for soil and moisture conservation, rehabilitation of mined areas and planting of stabilizing vegetation were inadequately followed. Mines positioned higher on the ridges and upper slope of hills cause more damage to flora and fauna not only in leased areas but also downhill, in watercourses and reservoirs. Large-scale mining of iron ore has caused extensive damage to forests in the hills of Sandur and Hospet forests. Another common case of linkage between human development and environmental degradation is encroachment. Encroachment of the animal corridor as human settlements has raised the number of human-animal conflicts and causalities of either man or the animal is seen. Similarly, encroachment of lakes/small catchments in the cities for human settlement is causing flooding/ waterlogging of the houses built in these areas.

Drinking water supply is significantly better in urban areas where 78% of households have access to tap water compared to 48% of rural households (PSD, 2006). It is estimated that 35% of the approximately 27,000 villages in the State are served by wells, 9% by mini-water supply schemes and 56% by a mix of piped water supply and hand pump schemes.

Nexus between environment and human development

High population density, growing demand for land and natural resources is leading to exploitation of natural resources, potentially undermining sustainable human development. Some of the examples of environmental crises impacting human development such as sustained water supply and sanitation, declining groundwater, air and water pollution and health are discussed in the following sections.

Water scarcity and hardship to women and children

Agriculture, the State's largest livelihood provider, continues to dominate the demand for water characterized by consumptive use. At the same time, demand from other sectors characterized by non-consumptive use is also rising persistently. Domestic per capita supplies are already falling short of requirements even though they account for only a small portion of the demand. Of the 208 cities and townships in the State, 54% receive 200 LPCD (Litres per Capita per Day). Drinking water supply is significantly better in urban areas where 78% of households have access to tap water compared to 48% of rural households (PSD, 2006). It is estimated that 35% of the approximately 27,000 villages in the State are served by wells, 9% by mini-water supply schemes and 56% by a mix of piped water supply and hand pump schemes.

Drying up of open wells, declining groundwater and silting up of water bodies has led to shortages of drinking water to especially rural communities. The probability of failure of wells is around 0.5 in dry agro-climatic zones of the State (Nagaraj, 1994). Over exploitation of groundwater for irrigation has contributed to water scarcity in rural areas. Consequently, rural women and children have to walk long distances to fetch water for daily needs from wells and streams. Water scarcity and drudgery in collection of water for domestic use will lead to low quality of life and adverse implications for health. Water scarcity in rural areas and even in many urban centers is far worse than what the State level statistics suggests. However, due to the implementation of Karnataka rural water supply schemes, such as National Rural Drinking Water Program, the average time spent to fetch water is only 30 minutes per household. Under this scheme, one of the norms for a

habitation to be considered as 'Fully Covered' is the availability of water source within the habitation or within a radius of 500 m(MRD, 2016).

Groundwater exploitation

Due to uneven distribution of surface water sources, water needs of rural and even small urban centres are largely met through exploitation of groundwater. Overdraft of groundwater for irrigation has resulted in a decline in water levels making it increasingly difficult and expensive for people to have continued access to water even for drinking. The overuse of groundwater can have a serious effect on the base flow of rivers, especially during dry periods, which is so vital for aquatic ecosystems. The net annual groundwater availability was about 523 TMC during 2011.The replenishable groundwater resources have increased 540 TMC in 2004 to 600.87 TMC in 2011 (DPPMS, 2012; CGWB, 2016). This is due to the several artificial recharge schemes adopted in the State. The bore wells irrigate a net area of 1.25 Mha, contributing to 37% of the State's net irrigated area. The State has 860,000 irrigation wells (dug, shallow and deep-wells) of which 94% have electric pumps to draw groundwater. Seven districts namely, Bengaluru rural, Ramanagar, Bengaluru urban, Chitradurga, Kolar, Chikkaballarura and Shivamogga draw groundwater beyond replenishment. About 63 of Karnataka's 177 taluks have reached over exploitation levels of ground water, causing severe impacts on the environmental balance of the region (CGWB, 2016). Table 12.6 reveals the position and dynamic groundwater resources of Karnataka State during 2011. The net availability of groundwater declined from 575.12 TMC annually to 539.83 TMC annually between 1992 and 2004 and further down to 523 TMC in 2011due to over exploitation (CGWB, 2016). The Depth of water in the bore wells of Bengaluru rural has increased over years with Depth ranging between 150-250 feet during 1970-80, 200–250 feet during 1981-90, 250–500 feet during 1991-2000, 500–700 feet during 2001-04 and 700-950 feet during 2004-06 and to 108-945 feet during 2012(Nagaraj et al., 2007; CGWB, 2013).

Over exploitation of groundwater exacerbates the concentration of pollutants such as hardness, iron, pH, nitrate and total dissolved solids (TDS). Rapid depletion of groundwater in 63 taluks of the State is observed by Central Ground Water Board(CGWB, 2016).Over exploitation has resulted in three lakh dug wells drying up (Chandrakanth, 2009). Moreover, shallow bore wells have failed and the water yield in deep bore wells are also declining. In the above context, the State of the Environment Report (2011) cautions that the groundwater depletion and deteriorating groundwater quality in the State needs urgent attention. This problem poses a severe threat to public health, vulnerable groups, food production, causes loss of biodiversity and destabilises the ecosystems. Inefficient use of water leads to production loss and cripples ecosystem services in the State (Anantha, 2009).

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Table 12.6
Assessment of dynamic groundwater resources of the State (2011)

Category	Taluks
Safe	59
Semi Critical	34
Critical	21
over exploited	63
Total	176
Groundwater development (%)	64

Source: CGWB, 2016

About 30% of Karnataka's population is consuming non-potable water, putting their health at risk(DFEE, 2011). About 37% of habitations suffer from groundwater contamination including excess fluoride (10.3%), brackishness (7.87%), excess nitrate (7.2%) and excess iron (11.7%).

Problems of water pollution

Surface and groundwater of the State is subjected to rising contamination levels of biological, toxic, organic and inorganic pollutants. The main sources of pollution are industrial and domestic effluent (point sources) and non-point sources such as agricultural run-off carrying agro-chemicals, municipal waste and human faeces from open defecation. Surface and groundwater has been widely rendered unsafe for human consumption, in some cases even unsuitable for irrigation and industrial uses. The damages of water pollution are pervasive in nature and include damage to land, biodiversity, agricultural crops and above all with enormous losses in terms of human health, livelihoods and increasing health costs, thereby reducing the effective water availability (FAO, 2011; Fleiner et al., 2013).

Only about 80% of the domestic sewage generated in major cities is collected and much less is treated before letting it into the river or other outlets. It is found that a number of industries fail to comply with water treatment standards. Untreated or insufficiently treated effluents appear to find their way into adjoining rivers or lakes as pollution levels indicate. It is further suspected that some industries release effluents through dried up bore wells directly into the ground. Mines and ore processing units were found to discharge water contaminated with toxic substances causing widespread land, surface and groundwater pollution in Ballari and Kemmangundi. Mining industries have discharged tailings in Ballari, Chitradurga, Chikkamagalur, Tumakuru, Belagavi, Bagalkot and Vijayapura districts(DFEE, 2011; Murugesha, and Veerabhadrappa, 2013).

About 64 of the 234 watersheds have serious water quality problems according to the recent groundwater analysis (DPPMS, 2012). Groundwater is polluted with excess concentration of fluoride, arsenic, iron, nitrate and salinity due to both anthropogenic and natural factors. Nitrate pollution mainly originates from agricultural fertiliser use and discharge of faecal material. Over-exploitation of groundwater along with the infiltration of brackish water has caused salinity in groundwater aquifers. Arsenic, which is considered as a source of skin cancer and skin pigmentation, is found in areas where gold mining has

been prevalent or Excessive fluoride in groundwater can cause fluorosis leading to tooth decay and crippled bones.

About 30% of Karnataka's population is consuming non-potable water, putting their health at risk(DFEE, 2011). About 37% of habitations suffer from groundwater contamination including excess fluoride (10.3%), brackishness (7.87%), excess nitrate (7.2%) and excess iron (11.7%). Groundwater in these villages is contaminated with fluoride above 1.5 mg/litre, total dissolved groundwater salts above 1,500 mg/L, nitrate above 100 mg/L or iron above 1 mg/L in excess of limits defined. Findings reveal that in many rural areas high salt levels were found while fluoride levels were found to be five times above permissible limits. Urban groundwater samples were found to be contaminated predominantly by various chemicals(DFEE, 2011).

A study of the groundwater quality in and around Bengaluru city by the Department of Mines & Geology (DoMG, 2011) drew attention to the fact that a range of toxic pollutants associated with industrial activities are present in Bengaluru's groundwater. Hexavalent chromium content above the limit was detected in 51% of sampling sites around industrial areas and excess zinc in as many as 96%. These alarming findings firmly point at the possibility that untreated industrial effluent from metal surface coating industries enters the groundwater.

Health benefits of improving access to water and sanitation

The actual meaning of the term sanitation includes everything that controls the environment with a view to prevent disease and promote health. Water supply, sanitation, hygiene and health are closely related. Inadequate quantities and quality of drinking water, lack of sanitation facilities and poor hygiene causes millions of poor people globally to die from preventable (primarily diarrheal) diseases every year. Women and children are the main victims. Sanitation in both rural and urban areas is precarious, with 32% of households having no access to tap water from treated source and 15% of the population having no access to toilets. Disparities in access to toilet are evident, with northern part of Karnataka having lower level of access (66%) than the State average. The eastern region has the lowest access to piped sewer systems (38%) and 10% households without latrine facilities within premises. Open defecation is highest in northern region (25%), followed by eastern region (8%). Direct discharge of wastewater from toilets into open drains is more in the inland northern region, followed by the southern region (ADB, 2012). A morbidity study was conducted in Bengaluru focusing on waterborne diseases (diarrhoea, poliomyelitis, enteric fever and hepatitis A and E). Differences in the availability of latrines for houses and handling of drinking water were found to have a significant impact on the incidence of water borne diseases(Tina, 2010).

Disparities in access to toilet are evident, with northern part of Karnataka having lower level of access (66%) than the State average.

Increasing access to; improved and safe water supply and sanitation facilities, in-house piped drinking water and sewerage connection have a major positive health impact. Improving access to safe drinking water and sanitation services can reduce the number of episodes of waterborne diseases and accordingly, a proportionate reduction

in the number of deaths. Construction of latrines in the premises of the house and hygiene about cleaning hands after use of toilets can prevent spreading of vector-borne diseases in addition to providing social security to the vulnerable women and children and protecting them from animal attacks (Routray et al., 2015). Number of cases registered from diarrhoea in Karnataka has reduced from 674,805 during 1998 to 3,21,267 during 2015 (up to May). Similarly, 14 cases of cholera were registered during 2015 (up to October) compared to 725 cases during 1998. 9,401 cases of malaria were registered during 2015 (up to October) when compared to 118,712 cases during 1998 (MHFW, 1998; MHFW, 2015). Thus, there is improvement in the case of some diseases, due to urbanization and improved economic conditions.

89.3% of households in Karnataka have kitchen facilities with 87.6% within the premises and 1.7% outside the premises, 60.7% of the households are using firewood/ crop residue, cowdung and cake/ coal, etc. and 5.4% households use kerosene.

Air pollution and health

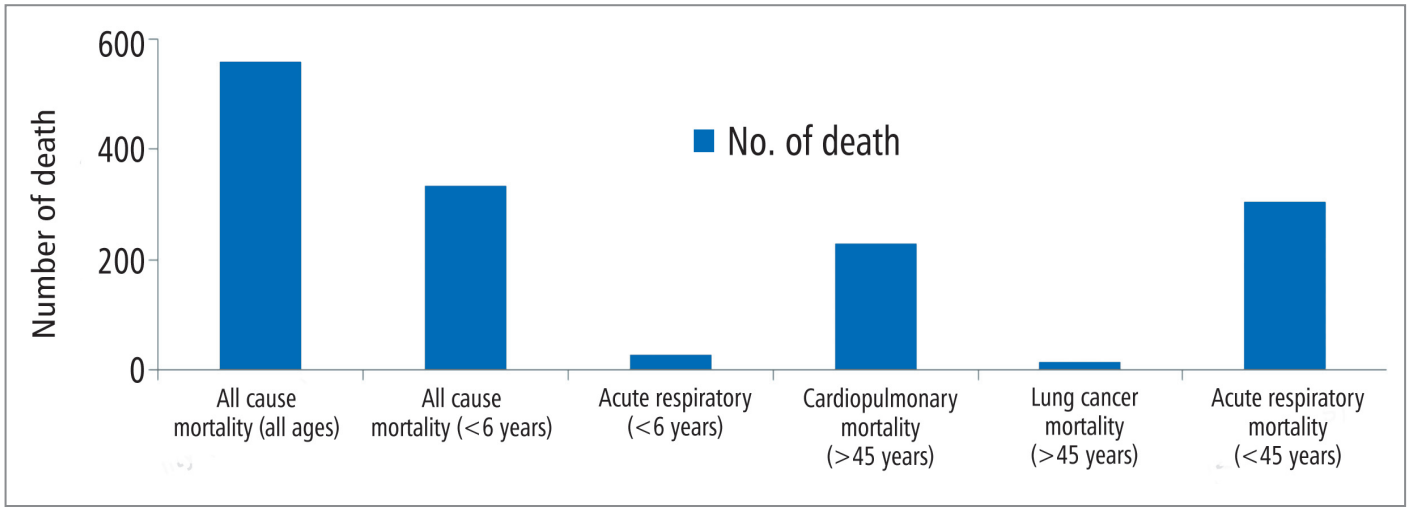
In the recent decades, air pollution has become one of the most important problems of mega cities. The main sources of air pollution are vehicular emissions, industrial emissions, open burning of waste in the public place, and biomass/ firewood / animal dung / stubble burning. The common pollutants released are photochemical smog, Oxides of nitrogen, Carbon monoxide, compounds of Sulphur, heavy metals, particulate matter that are induced primarily from traffic, industrial activities, power generation, etc. The annual average concentration of pollutants in Karnataka State are: 10 $\pm$6 μg/m3 for SO_2, 22 $\pm$5 μg/m3 for NO_2, 70 $\pm$35 μg/m3 for PM10 (CPCB, 2012).

In rural Karnataka, 82% of the rural population depends on wood and crop residue alone for cooking and 93% cook indoors while in urban areas 64% use LPG and 21% depend on wood (Census, 2011). The Census of 2011 also reveals that 89.3% of households in Karnataka have kitchen facilities with 87.6% within the premises and 1.7% outside the premises, 60.7% of the households are using firewood/crop residue, cowdung and cake/coal, etc. and 5.4% households use kerosene. The Census 2011 revealed that 64.33% of households in urban areas are using LPG/PNG for cooking followed by firewood(21.23%), Kerosene (11.67%) and the remaining Households use the other sources such as Crop residue(0.91%), Biogas (0.80%), Electricity (0.21%), Coal/Lignite (0.11%), Cowpat (0.10%) and other sources (0.11%) (DPPMS, 2016). Hence, high levels of Respirable Suspended Particulate Matter (RSPM) and CO are of great concern in rural areas while in urban areas, aerosols, VOCs, and tobacco smoke are major pollutants. Diseases due to environmental risks seems to decrease with economic development (Ravi and Nanjundaiah, 2012).

Particulate Matter is at a critical level in big cities like Bengaluru, Hubli, Dharwad and Kalaburagi. 47% cities in the State exceed the NAAQS in this category. The probability of exposure obtained sheds light on the health condition of a city (Hosamane and Desai, 2014). RSPM concentration exceeding 4.5 times than the acceptable limit was observed in the ambient air of six sampling stations that were selected in Bengaluru for establishing ambient air quality during 2014. Out of these six sampling stations, 2 were residential, 1 was sensitive area (hospital) and 3 were industrial areas. Moderate air quality condition was detected at industrial areas in Bengaluru (Kamath. and Lokeshappa., 2014). It

is observed that the concentration of NOx is showing an increasing trend by 100% over the last five years. The reason may be an increase in vehicular population by 1072% (DPPMS, 2016). The mortality rate and number of deaths due to air pollution induced attributable factor is shown in Figure12.7.

Figure 12.7
Mortality rate and number of deaths/lakh population due to air pollution in Bengaluru city



Source: Ravi and Nanjundiah, 2012

Indoor air pollution and gender

People spend a substantial amount of time in indoor environment. The indoor air concentrations of pollutants can be greater than those found outdoors, especially for the poor. Hence, poor indoor air quality has been ranked as one of the greatest health risk concerns. Indoor pollutants' emissions originate not only from building materials or furnishing, but also from common household activities such as cooking, smoking and burning of incense and candles and also from various consumer products which people use at their homes in their day to day activities. An exposure atlas for household air pollution (HAP) in India, prepared by Sri Ramachandra University (SRU), Chennai, showed that even States that fare better in terms of HAP concentration are beyond the safe limits recommended by WHO. For instance, Karnataka had a HAP exposure of 150-200 μg/m3 of PM 2.5 - almost five times the WHO's guideline range of 10-35 μg/m3. The HAP exposure was measured over a 24-hour concentration of Particulate Matter in households using solid cook fuels, which ranged from values of 163 (in living areas) to 609 g/m3 of PM 2.5 in the kitchen area.

A study was conducted by Mahesh et al. (2013)to identify the threshold of biomass exposure index (air pollution due to combustion of biomass fuels) for women to develop chronic bronchitis in an urban environment (Mysuru city) and a rural environment (a village in Nanjangud), where biomass fuels are used as the primary source of fuel

Karnataka had a HAP exposure of 150-200 μg/m3 of PM 2.5 - almost five times the WHO's guideline range of 10-35 μg/m3. The HAP exposure was measured over a 24-hour concentration of Particulate Matter in households using solid cook fuels, which ranged from values of 163 (in living areas) to 609 g/m3 of PM 2.5 in the kitchen area.

for cooking. The minimum threshold of biomass exposure index of 60 is necessary to have a significant risk of developing chronic bronchitis in women. Women residing in rural Nanjangud have a higher risk of developing chronic bronchitis as compared to women in Mysuru. However, the biomass exposure index needed to develop chronic bronchitis in women in Nanjangud was much lower than for women in Mysuru, for the same degree of exposure. This could be related to poor ventilation in houses which leads to higher exposure to indoor air pollutants; or could be due to the presence of large industries in Nanjangud that is contributing to higher outdoor air pollution.

To improve indoor air quality in poorer households it is necessary to improve the housing, kitchen characteristics and change the fuel or the cooking device. This can be achieved in the form of improving the building materials of the house or by giving space for chimneys in kitchen as smoke outlets. Most of the rural households use two or three pan traditional wood cook stoves, which are characterized by low thermal efficiency and smoke emission in to the kitchen(TERI, 2015).The incomplete combustion of biomass in stoves releases complex toxic hazardous pollutants such as NMVOCs (Non-methane volatile organic Compounds (Sloss, 2001). Most of these traditional stoves use only 2-10% of energy generated by the fuel, one of the major reasons being the lack of control on the air supply (Kumari et al., 2014). Usage of improved and smokeless stoves can drastically decrease the smoke content in the kitchen, in addition to reducing the harmful pollutants' concentration. The efficient and smokeless stove called "Astra ole" developed by Indian Institute of Science is shown to have reduced the cooking fuel use and removed smoke from the kitchen (Shastri, 2002).There are alternate options such provision of biogas or LPG cylinders at subsidized price to rural households to improve the quality of life and health of rural women. Government has such programmes, but its reach is still very small (UNDP and WB, 2004).

Climate change and health impacts

Climate change is a significant and emerging threat to public health in India. Although no specific study on health impacts due to climate change is available in Karnataka, a general review on the health impacts are described below. Epidemics of weather and climate-sensitive infectious diseases such as, malaria and meningitis have a devastating effect on human health (Kumar and Nandini, 2013). The rate of warming, the length of hot periods, and the increase in higher night time temperatures can all contribute to physiological heat stress. The number of deaths due to heat stroke in Karnataka was nine during 2009, 21 during 2011,two during 2012 and one during 2016 (MHA, 2009; MHA, 2011; MHA, 2012).

Rates of diarrhoea, cholera and other bacterial diseases are set to rise with warming and water quality issues increase. Bacterial infection from contamination of water is expected to increase as heavy rainfall and rising temperature leads to pollution of drinking and recreational water. The occurrence of Salmonella and E. coli, amongst other food poisoning bacteria is further known to be associated with rise in ambient air

temperature (Fleury et al., 2006).

Drought has been known to encourage crop pests such as aphids, locusts, and whiteflies. Agronomists are also concerned that climate change-based increases in a variety of blasts, rusts, blights, and rots will further devaState already stressed crops, and thereby exacerbate malnutrition, poverty, and the need for human migration (Kumar and Nandini, 2013). The spread of agricultural pests and weeds may lead to the need for greater use of toxic chemical herbicides, fungicides, and insecticides, resulting in potential immediate health hazards to farm workers and their families, as well as longer-term hazards to consumers, particularly children. Various diseases transmitted by mosquitoes or ticks are climate-sensitive and can increase due to climate change. Mosquito-borne diseases, for example, malaria, are likely to be affected by various combinations of changing temperatures, humidity and rainfall. With climate change, geographical ranges and survival of species bearing diseases will vary. Warmer weather zones particularly during breeding seasons could enable malarial mosquitoes to spread their range and survive longer leading to increased rates of dengue fever and schistosmiasis(Battacharya, 2006). Indicator diseases reported in Karnataka in the recent past and the number of deaths is presented in Table 12.7.

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Table 12.7
Indicator diseases and the number of deaths reported in Karnataka

Year	2008		2009		2010		2011		2012		2015	
Diseases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases
Malaria	8	47344	0	36859	11	44319	0	24237	0	16466	0	9401
Denguej	3	339	8	1764	5	2285	7	405	21	3924	9	4691
Chikungunya	-	46510	-	41230	-	8740	-	1941	-	2382	-	-
Cholera	1	117	0	254	3	143	0	301	1	166	2	14
Diarrhoea	80	828026	84	723128	81	787179	62	583103	49	591989	8	321267
Typhoid	5	61610	16	54572	11	50434	6	34296	2	38727	1	64566

Source: National Vector-borne Disease Control Programme and National Health Profile of India

The India's Initial National Communication to UNFCCC (INC, 2004) suggests that currently Central and Eastern regions of India (Madhya Pradesh, Jharkhand, Chhatisgarh, Orissa, West Bengal and Assam) are the most endemic malaria regions in the country. But under the climate change projections of HadRM2, the study suggests that it may shift from the central Indian region to the South Western coastal States of Maharashtra, Karnataka and Kerala. According to IPCC (2014), climate change related impacts on human health include: greater likelihood of injury, disease,

and death due to more intense heat waves and fires; increased likelihood of under nutrition resulting from diminished food production in poor regions; and increased risks from food- and water -borne diseases and vector borne diseases.

Growth of slums and urbanization

Urbanization in India is accompanied by a number of challenges arising from high population concentration in metropolitan cities; environmental degradation such as deteriorating water quality, air pollution, problems of solid waste and hazardous waste disposal and others. These cities are confronted with mushrooming of slums and have become an inevitable part of the major metropolises. Poverty in rural areas coupled with environmental degradation, and weather extremes lead to migration of poor to urban slums. Karnataka has about 3,491 slums out of which 1,987 are authorized or declared as slums and 1,504 are unauthorized (KSDB, 2015). Declared slums are entitled to land rights and certain benefits, including infrastructure services like water, electricity, toilets, street lighting, drains, storm water channels, and community bathrooms. The total population of the slums in Karnataka during 2011 was 3,291,434 with Bengaluru city having highest slum population (722,290) (Census, 2011). Bengaluru slums account for about 22% of population of the city. Slums exist in all major urban centers of Karnataka, accompanied by all the associated environmental problems at different scales.

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Overall, quality of life and general health scores are very low for all the slums. The living conditions of slums are extremely dehumanizing. Their dwellings are quite uncomfortable and suffocating where sub-human living conditions prevail. Women and children face greater hazards as they are expected to stay indoors(Govindraju, 2012). In a study conducted in Bengaluru, out of 310 slumdwellers, 52.67% were migrants, 90.67% were from other parts of Karnataka. Almost 68.35% Stated that their reason for migration was because of prevailing conditions of poverty in their native areas. Only 30% lived in "Pucca" houses and about 73.67% lived in single-room structures. 73% used kerosene for cooking. Another surprising point to note was that although 80-82% owned mobile and television sets, only 56% had access to sanitary latrines and 98% depended on public taps for drinking water.

Solid waste

Increase in incomes accompanied by increase in resources consumption leads to massive production of waste. Various forms of solid wastes generated come from varied environments: municipal solid waste (MSW), dry waste, biomedical waste and industrial waste. As per the annual report submitted by the local bodies including the BBMP for the year up to 2013-14, Karnataka State generates about 8,784 tonnes/day, of which Bengaluru city alone generates 3,500 T/day and collects 3,000T/D (85%); Other 218 local bodies generate 5,284 T/day and collect 4,602 T/day (87%) (KSPCB, 2014). Karnataka Urban Infrastructure Development has framed Karnataka State Policy on Integrated Solid Waste Management and normative standards and procedure for collection, storage and transportation of MSW.

The BBMP is carrying out collection,

street sweeping, transportation, processing and disposal of the MSW that is generated by Bengaluru city as per the MSW Rules 2000. Only 49% of the present bins are covered and only 17.5% of the commercial areas have community bins and 94% of the residential areas have adopted the door-to-door method (collection has commenced in 36% of urban areas). With these methods of collection, only 3% of waste segregation has been achieved. There are no transfer stations present and out of the trucks present, only 41.43% have polythene covering. Recycling is carried out mainly by the informal sector achieving a high level of efficiency. 3.14% of waste reduction is achieved through composting and 60.71% of the waste is disposed in dump yards and 21.14% is disposed in open quarry sites (Ramachandra and Shruthi, 2007). Table 12.8 presents the details of the solid waste generated in the selected Urban Local Bodies and collection efficiency. To encourage segregation at source, the BBMP has established 170 dry waste collection centres, which collect only dry waste from wards. Bulk generators of waste like hotels, restaurants, kalyanmantaps, apartments etc., have been notified to establish a system to handle MSW generated in their premises or through empanelled service providers.

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Table 12.8
Waste generation and collection 2013-14

Type of ULB	Quantity of waste generated	Quantity of waste collected	Collection efficiency
BBMP	3500	3000	85
Other 218 local bodies	5284	4602	87
Total	8784	7602	86

Source: KSPCB, 2015

About 3708 operating industries are found to be generating Hazardous Waste of about 2.51 Lakh Metric Tons Annually (Lakh MTPA) in the State. Out of this 1.2 Lakhs MTPA is recyclable. The remaining waste of around 0.66 Lakh MTPA are incinerated and 0.65 Lakh MTPA are sent to landfills (DPPMS, 2016). Karnataka's health care establishments generate about 73 tonnes of potentially infectious biomedical waste per day. 14 common treatment facilities are in operation covering 28 of the 30 districts. Access to these, however, is constrained in rural areas and consequently 82% primary health centres have adopted disposal through deep burial. With respect to biomedical waste, KSPCB has identified29 Common Bio-Medical Waste Treatment Facilities (CBMWTF) throughout the State and all the health care establishments, Government and private hospitals including clinics of less than 1000 patients are handing over the biomedical waste to the authorized CBMWTF (KSPCB, 2014), to avoid littering or mixing of treated/ untreated biomedical waste in the garbage. However,, the biomedical

waste generated from the households like syringe, sanitary napkins, expired medicine, bandages etc., need to be handled separately. Hence, the local bodies were asked to provide a separate collection system from the households so that CBMWTFs can directly lift and transport for its treatment.

Dry waste collection centres are also expected to contain separate collection system for e-waste and also waste categorized under EPR (extended producer responsibility) like biscuit packets, other covers and harmful products and household hazardous waste. Bengaluru generates about 125 tonnes of e-waste per year, according to a partial estimate limited to TVs, computers and mobile phones. The actual number could be ten times higher and estimates for Karnataka as a whole are not available.

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Landfill development has been completed in only 7 ULBs, while 203 have acquired land for the same and its development is underway (KSPCB, 2014). BBMP is also setting 13 decentralized Bio-methanation Plants, out of which four have been made functional. So far, all the MSW is dumped in the landfill sites and therefore the life of the land filled sites (LFS) are becoming short. The land available for landfills is very limited and also the local communities around the land fill sites are opposed due to health hazards from landfills. In this background, all the local bodies and the BBMP are directed to come up with proposals, so that 80% of the wastes are re-used/recycled/re-processed. Only 15-20% of inert wastes which cannot be either used / recycled are to be disposed into the LFS. The MSW processing and disposal is still a very big challenge even in Bengaluru despite all the publicity and Judicial interventions, and other towns are yet to realize the magnitude of the problem.

Institutions, policies and governance

The five critical ingredients for addressing the developmental and environmental challenges include; technologies, finance, enabling policies, institutions and governance. Here, some of the policies and institutional aspects relevant to environmental concerns are discussed. The policy formulation, regulation and enforcement are administered at various levels. Institutions in the form of law, policy or procedure; or as informal norms, standard operating practices or habits (Vatn, 2007), have recognised the potential to either facilitate or hinder development. Policy makers must be aware of poverty alleviation strategies, livelihoods of the vulnerable population, and the importance of natural resources in rural livelihoods while furthering sustainabile development. The thrust of the policies should be in addressing illiteracy, poverty, unemployment, disease, saving lives of mothers and children, and addressing the inequities caused by gender and class/caste (UNDP, 1991), without compromising on sutainability.

Why institutions and what policy changes?

Developed countries are often characterised by strong government, judiciary and civil society institutions. The poor and vulnerable population in those countries tend to have liberal access to these institutions and the services they provide. Economic policy and policy reform over the last few decades have been motivated by the need to accelerate

growth and equity to eradicate poverty. Institutions are the formal mechanisms for political rule-making and enforcement. The efficiency and quality of an institution also determines its interaction with policy reform. Policy formulation should look at policy drivers at micro level to understand their impacts in diverse socio-economic situations. This decentralized understanding of impacts should prelude policy changes so as to address specific local problems as opposed to the comprehensive changes in any policy in practice today. Karnataka has a fairly long and impressive history of decentralisation. Democratically elected local government structures were institutionalised and political space created for marginalised groups long before the 1992 amendment that made Panchayati Raj Institutions (PRIs) constitutionally mandatory.

The administration in Karnataka has maintained greater autonomy, institutional capacity and potential for constructive action than in most other States. This has enabled successive Karnataka governments to develop more intelligently crafted policies than most other governments– including policies that affect the rural sector. When a new government comes to administer in Karnataka, it tends to sustain most of its predecessor's policies – with some adjustments with little uprooting. This has ensured broad policy continuity thereby enabling incremental changes by all governments over time – a considerable cumulative effect that has often been felt at the village level (Manor, 2007).

Environmental challenges that impact human development require policy making and institutions at different levels. Addressing climate change and ocean biodiversity loss requires policy making at a global level. Forest conservation and river valley projects require policy making at the national level. Soil and water conservation and watershed protection requires policy making at State and district level. Implementing programmes such as MGNERGA will require decision making and institutions at village or Panchayat level. Environmental policies and regulations require effective institutions which should enforce, regulate and punish any failures. Karnataka has several agencies such as Pollution Control Board, City Municipal Corporations, and many Government Departments with regulatory powers such as the Forest Department. Overall degradation of environment in Karnataka shows the inadequacies of the existing policies and in particular, the institutions.

Water scarcity, quality and hardship

Scarcity of water due to depletion, pollution, degradation and poor management of water resources led to the formation of Karnataka State Water Policy, 2002. This Policy envisages the creation of an ultimate irrigation potential of 4.5 Mha under major, medium and minor irrigation projects; provision of drinking water at the rate of 55 LPCD in rural areas, 70 LPCD in towns, and 100 LPCD in the city municipal council areas and 135 LPCD in city corporation areas; and to provide a legislative, administrative and infrastructural environment, which will ensure fair, just and equitable distribution and utilisation of water resources of the State to the benefit of all. The State has given impetus to rainwater harvesting (RWH).

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RWH is promoted as the best method of conserving water especially in public buildings such as schools, colleges, offices and even in residences.

Two-thirds of the geographical area of Karnataka is in the semi-arid zone receiving less than 750 mm of rainfall and is subjected to frequent droughts. As agriculture is the largest water consuming sector, the State is promoting the adoption of water efficient technologies such as drip and sprinkler irrigation in order to enhance water productivity. The progressive farmers in dry land began using drip system in the late 1970s without any support from the State. Later, due to policy support, use of drip irrigation system has spread primarily to irrigate high value dry land agriculture/ horticultural crops. Under the National Horticultural Mission, farmers in 25 out of the 27 districts in Karnataka get a 75% subsidy for installing drip irrigation equipment, while those in Vijayapura and Kolar districts get 100% subsidy. Karnataka ranks third in the installation of drip irrigation in India. These policies motivate farmers to adopt drip irrigation. It is also, essential to promote irrigation literacy to enable farmers to use water efficiently. However,, in addition to demand side policies such as use of efficient irrigation systems, the supply side policies of augmenting groundwater resource such as direct borewell recharge should also be included in the policy.

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While surface water is not monitored routinely, its quality is assessed in cases of complaints; the groundwater quality is monitored by the Department of Mines and Geology, through a network of laboratories in all districts of Karnataka. It is important to regulate the use of groundwater and protect the sources of drinking water. This has led to the implementation of the newly enacted Karnataka Groundwater (Regulation and Control of Development and Management) Act 2011. In Karnataka groundwater (regulation for protection of sources of drinking water) Act of 1999 prohibits drilling of borewells within 500 meters of public supplies of drinking water. However, the Acts are not being properly implemented.

Karnataka Groundwater Act, 2011 is a key instrument for curbing indiscriminate exploitation of groundwater. With the land holdings getting fragmented and subdivided, it is difficult to control extraction of groundwater. In addition, the question of equity both intra- and inter-generational equity are crucial. The Act also needs to be consistent with economic reforms. Accordingly, permission is required for drilling borewell and drawing groundwater for water intensive crops in notified areas. It is not immediately clear whether the policy would have any impact on the one lakh existing borewells, some 50% of which are estimated to be operating. The Act needs to deal with groundwater sales or marketing since this influences groundwater extraction of neighbouring users and may violate the provisions of the Act. Selling groundwater by extracting groundwater in urban areas should be banned, since (i) there are no recharge areas in urban areas to bear with huge extractions and (ii) such extractions are resulting in large scale failures of domestic water wells in urban areas, which increase the pressure on urban water supplies. Instead the Act can provide for extraction of groundwater from rural areas for sale in urban areas, which not only reduces the pressure on the recharge poor urban areas, but also

results in transfer of income from urban to rural areas (Chandrakanth, 2015). Karnataka is seriously tackling the issue of quality of drinking water in rural areas, resulting from contamination and pollution by setting up more than 7000 drinking water purification plants in rural areas since 2013. Many large scale drinking water projects have been completed or near completion for increasing drinking water supply to urban and rural areas.

Livelihood linkages with forests and biomass

The National Forest Policy of 1988 envisages creating a massive peoples' movement with the involvement of women to achieve its objectives and minimise pressure on existing forests. The Government of India encouraged the States to involve local communities in and around the forests as partners in forest conservation, through a programme called Joint Forest Planning and Management (JFPM). Since 1993, Government of Karnataka has been implementing JFPM by involving rural communities through the formation of village forest committees (VFCs) in protection, planning and restoration of tree cover in open forests (<25% of tree cover). As of 2011, about 25% of assigned degraded forests have benefited from the programme so far. Afforestation is implemented through National Afforestation Programme, watershed development, the National Bamboo Mission (NBM), MGNREGA and other schemes. However, communities tend to look for immediate benefits, which is limited to certain entry point activities. There is also limited trust between the communities and Forest Department, often resulting in indifference in respect of the relationship and participation in forest protection and development. Extraction of forest biomass in the forests of Karnataka is limited to salvaging of dead and fallen material, as there is a ban on felling of naturally growing green trees. Extraction of green trees is permissible only from plantations for thinning or on completion of rotation periods. Extraction is done through the Karnataka State Forest Industries Corporation Limited, forest labour cooperative societies or Karnataka Forest Department.

The Biological Diversity Act, 2002, aims at promoting conservation, sustainable use and equitable sharing of benefits of a region's biodiversity resources. With this in view, it provides for the establishment of a National Biodiversity Authority, State Biodiversity Boards and Biodiversity Management Committees at the level of panchayats and municipalities. The Karnataka Biodiversity Board was established in 2003 and has been further amended by two more Karnataka Biological Diversity rules in 2004 and 2005. The Karnataka Biodiversity Board under the advice of Government of India in 2013 declared 20,668 km2 of Karnataka's Western Ghats as Ecologically Sensitive Area (ESA). The local communities and political parties are opposing the idea of ESAs as it may affect the livelihoods of the local communities who are directly dependent on forest and its products. Further this may also stop all the developmental activities within the ESAs (which will include hospitals, schools, food storage units, etc.). The prime objective of the Board is to foster an institutional setup for documentation, sustainable use and development of the rich biodiversity of the State. The

Karnataka is seriously tackling the issue of quality of drinking water in rural areas, resulting from contamination and pollution by setting up more than 7000 drinking water purification plants in rural areas since 2013.

Board has formed several Committees in different districts and conducted training programmes. The People's Biodiversity Register (PBR) is one such initiative that contains comprehensive information on availability, knowledge of local biological resources, their medicinal or any other use and traditional knowledge associated with them. The number of PBRs published in association with panchayats and other institutes is more than 200. Budgets are allocated for Bioparks (Kuvempu park, Shivamogga), capacity building and maintenance of heritage sites (KBB, 2013).

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Though there are adequate policies, institutions and programmes such as Forest Conservation Act, JFPM, Biodiversity Act, Village Forest Committees, Biodiversity Management Committees, National Afforestation Programmes, MGNREGA, fuelwood conservation programme etc., forest loss and degradation continues. No serious attempts are being made to enhance the livelihoods of forest dependent communities, through promotion of sustainable harvest of Non Timber Forest Products, sustainable grazing practices, value addition in processing of forest products and marketing of processed products. Developmental activities like mining can be sustainable and sensitive only if the overall planning and decision-making process is oriented towards the twin objectives of ecological security (including conservation of ecosystems and species) and livelihood security (especially of the most under-privileged sections of the society who are dependent on natural resources). It is also essential to identify and prioritise mine-affected areas in biodiversity rich areas for ecological restoration and evolve a clear framework for this purpose (Vagholikar and Kalpavriks, 2004).

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act-2006, concerns the rights of forest-dwelling communities or the people living in the periphery of the forests to land and other resources, denied to them over decades as a result of the continuance of colonial forest laws in India. The implementation of the Act in recognition of rights involves many departments, such as revenue department, tribal welfare department and forest department, so it becomes more difficult to have desired result in time. Although, several guidelines for interpretation of the provisions of the Act are provided, many of these have not reached the implementing authorities thereby creating confusion at the ground level. In view of these difficulties, even the rules i.e., Forest Dwelling (Recognition of Forest Rights) Rules, 2008 has been amended in 2012 as Forest dwelling (Recognition of Forest Rights) Amendment Rules, 2012. It has been noticed that there has been an emphasis on implementation of only a few provisions of the Act rather than the whole Act in its complete sense. The thrust on implementation in most parts of the country has been on claiming individual rights over the forest lands while rights over community forest resources have been largely ignored (Suman, 2006). Table 12.9 shows the idetails of claims received, titles distributed and the extent of forest land for which titles were distributed (individual and community, as on 31.05.2016).

Table 12.9

Claims received, titles distributed and the extent of forest land for which titles distributed (individual and community), as on 31.05.2016 - Karnataka and India

Region	No. of claims received	No of titles distributed	Extent of forest land for which titles distributed (in acres)
Karnataka	372,248 (366,040 individual and 6,208 community)	8,303(8,159 individual and 144 community)	37,440.79
India	4,427,613	1,746,338	10,980,513.95

Source: KFD (2016)

Better urban quality of life

Urban quality of life is a concept that has the challenge to solve the problems of urban areas, to control urban sprawl and to prevent environmental deterioration. It has the objective to restore existing urban areas and control the development of new communities (Din et al., 2013). The State of Karnataka has observed a rapid economic growth in the last two decades accompanied by fast urbanization levels declaring it as the third most urbanized state in India. The Urban Development Department (UDD) of Government of Karnataka was established to foster, equip, and empower the governing statutory bodies with required capacities, human resources, policies, funds, legislative and administrative tools to the improve quality of life of the citizens. In addition to this, it will also roll out policies and schemes aiming for betterment and improvement of urban poor, women, unemployed or under employed youths and general citizens.

Air pollution due to urbanization (transport sector) is a complicated phenomenon that depends on factors inter alia number of automobiles, vehicle age, fuel composition, engine maintenance, type of vehicle (petrol / diesel). CO is the single biggest pollutant emitted by automobiles. The transportation department has intervened with several regulations so as to improve air quality in urban centers. There is a 2001 Government order prohibiting commercial vehicles older than 15 years (but has been poorly implemented). Across Karnataka, the department has licensed 708 emission test centres, 335 (47%) of which are in Bengaluru alone (CTRS, 2015). While this network is currently being expanded, it is unclear what exactly is being done with the data collected. Particulate matter, which has its source in two - stroke and diesel engines apart from ordinary dust, is not covered by emission tests because the substance is not covered by the Central Motor Vehicle Act. The Government recognizes the importance of biofuels as extremely critical to sustainable energy security and environment protection with creation of employment and further economic growth. However,, the biofuel policy of India does not encourage generation of bioethanol from sugarcane, but permits extraction from molasses, which will grossly reduce the scope to increase

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act-2006, concerns the rights of forest-dwelling communities or the people living in the periphery of the forests to land and other resources,

biofuel production. BMTC and KSRTC have introduced the usage of biofuel.

In Karnataka, policies such as the Karnataka State Policy for Integrated Waste Management mainly focus on creating awareness among the public and minimizing multiple and manual handling of waste, defining the roles and responsibility of various stakeholders, developing systems for effective resources utilization and deployment, promoting recovery of value from MSW, primary and secondary collection of waste and transportation of waste, treatment and land filling of the waste. The Karnataka Municipalities Act, 1964 is applicable to all municipalities in the State. The provisions relating to solid waste provide for "cleaning of public streets, places, sewers and all spaces not being private property, removing noxious vegetation, etc." However, the waste segregation at household level is yet to take off even in some areas of Bengaluru city. This Act prohibits disposal of rubbish and filth in public places, streets, drains, water courses, etc. The Karnataka Municipal Corporations Act, 1976 imposes a nominal penalty for violating the provisions mentioned in the Act. Karnataka Urban Infrastructure Development and Finance Corporation have undertaken various activities for effective implementation of SWM action plan. BBMP is developing engineered sanitary landfills with private participation. These integrated waste processing and landfill facilities at Kannahalli and Mavallipura are being implemented under a build-operatetransfer concession framework. A waste-to-energy plant is also being developed by the private developer.

The transportation department has intervened with several regulations so as to improve air quality in urban centers.

Improving quality of life in urban areas requires good public and mass transport such as Metro, traffic management, reliable water and electricity supply, sanitation and waste treatment, air quality control, green cover, regulation of growth or expansion, etc. There are many agencies, laws and regulations, but the unregulated expansion and low quality of life in urban areas, indicate the absence of institutions, poor enforcement of regulations, lack of coordination among agencies and lack of capacity.

Management of industrial environment

Karnataka figures among the top industrialized States in India and is home to over 11,000 registered industries spanning across different categories. Industries are the major contributors to environmental degradation in urban and industrial areas. Release of noxious gases, high noise levels, release of effluents into local water bodies, storage and disposal of hazardous solid waste, procurement of energy and raw materials, etc., all adversely affect the environment. Although the Karnataka Industrial Policy 2009–2014, States to protect the ecosystem by integrated environment management plan, limited enforcement of regulations, lack of monitoring, manipulation of data and public apathy, is adversely impacting natural resources and human health.

The Karnataka State Pollution Control Board (KSPCB) is the regulatory authority whom industries have to report to concerning their pollution control measures. Accordingly, the unit has to adhere to corresponding standards and regulations (CPCB and MoEF) and report to the KSPCB. The Department of Industries and Commerce is the State-level legal authority which formulates

policies, monitors projects, and provides guidelines on Occupational Safety and Health Aspects (OSHA) and coordinates between different institutions established under it. The Karnataka Industrial Policy is regularly revised by the Karnataka Industrial Area Development Board (KIADB), which acquires land for industrial projects. The policy provides incentives for energy efficiency, CETPs (Common Effluent Treatment Plants) and other measures like the usage of renewable energy and clean technology.

The Karnataka State Industrial and Infrastructure Development Corporation (KSIIDC) is instrumental in the industrialisation of the State, especially in the large and medium sector. It funds ventures and allocates funds for Corporate Social Responsibility (CSR). The Karnataka Small Scale Industries Association (KASSIA) is a voluntary State level Institution of Small Scale Industrialists. It is primarily responsible for policy formulation and imparting guidance and direction to the affairs of the association. The Environmental Management and Policy Research Institute (EMPRI) is an autonomous institution conducting applied research on environmental issues and providing training and advisory services to government, industry and civil society. EMPRI needs to be strengthened with adequate technical capacity to be effective in managing the industrial environment, in coordination with other regulatory agencies, by being the knowledge partner. The main cause of degradation in industrial environment is not due to lack of regulations, but due to limitations of existing regulatory agencies.

Disaster management

Realising the importance of disaster management as a national priority, Government of India legislated the Disaster Management Act that prescribed the creation of an apex body for disaster management in India: the National Disaster Management Authority (NDMA). Its purpose is to create an enabling environment for institutional mechanisms at the State and district levels. Government of Karnataka developed an institutional framework to deal with natural disasters forming several important bodies. The Karnataka State Disaster Management Authority lays down the policies and prepares plans at the State level. It is entrusted with finalizing and implementing a comprehensive disaster management plan. The State Executive Committee coordinates and monitors the implementation of the national policy, the national plan and the State plan and acts as coordinating and monitoring body for the disaster response in the State. The Calamity Relief Committee (CRC) provides guidelines for calamity relief work and monitors and supervises the relief and takes actions on a priority basis. The Empowered Committee reviews and monitors the flood situation and the implementation of relief measures, rehabilitation plans in flood affected areas, approval and releases of funds for the purpose. The District Level Implementation Committee plans and supervises relief and rehabilitation programmes for the flood affected areas in the district. The District Disaster Management Authorities are the district planning, coordination and implementation body for disaster management

Although the Karnataka Industrial Policy 2009–2014, States to protect the ecosystem by integrated environment management plan, limited enforcement of regulations, lack of monitoring, manipulation of data and public apathy, is adversely impacting natural resources and human health.

Karnataka also has the distinction of being the first State in the country to establish a Drought Monitoring Cell (DMC). Since 1988, it has been monitoring drought conditions in the State.

Karnataka has set up the Centre for Disaster Management in 2001, even before NDMA came into existence. It has published the first ever Disaster Management Plan, 2010 for Karnataka. Every district now is believed to have prepared its Disaster Management Plan. Risk assessments for these were carried out using multi-hazard mapping, including flood and drought vulnerabilities, with the help of resource inventories from the National Disaster Management Plan. Karnataka also has the distinction of being the first State in the country to establish a Drought Monitoring Cell (DMC). Since 1988, it has been monitoring drought conditions in the State. Realising the importance of monitoring other natural disasters such as floods and cyclones, the mandate of the cell was expanded in 2007, this change reflected in its new name Karnataka State Natural Disaster Monitoring Centre (KSNDMC). The Centre monitors weather conditions such as rainfall, reservoir levels, flood levels, groundwater levels and other surface water in several monitoring stations located in 5,978 telemetric rain gauges at Gram Panchayath level & BBMP area along with 747 Telemetric Weather Stations at Hobli level and data is transmitted every 15 minutes to Bengaluru (KSNDMC, 2016). Severe weather conditions are transmitted in real-time as and when certain parameters exceed certain thresholds. In its weekly briefing to the Weather Watch Committee, the Centre provides a detailed picture of weather conditions in different parts of the State and advises higher level decision making bodies about appropriate action required. The Centre also provides the intelligence input for a weather-based disaster risk reduction for farmers and an early warning system of weather related hazards for the crop insurance.

Thus,, there is no dearth of organizations for disaster management, but often coordination across so many agencies and multiple guidelines is a challenge. Further, technical capacity of some of these agencies may be a limiting factor. The massive data generated is made accessible to the public on the website of KSNDMC on a real time basis.

Environmental governance and livelihood issues

Environmental governance comprises of the rules, practices, policies and institutions that shape how human society interacts with and manages the environment. The Ministry of Environment and Forests and Climate Change has taken active steps to establish National Environment Assessment and Monitoring Authority (NEAMA) with a view to strengthen the regulatory framework and to improve the environmental governance in the country. Department of Ecology and Environment (DEE), GoK administers protection and conservation in accordance with central acts and rules. Some of the major institutions in the State of Karnataka that manage and regulate the environment are: Department of Forest Ecology and Environment, Karnataka State Pollution Control Board, Environmental Management and Policy Research Institute, Karnataka Forest Department, Karnataka State Coastal Management Authority, Karnataka Renewable Energy Development Limited, etc. The State government using such institutions has introduced various policies that included measures to encourage efficient natural resource management with emphasis on balancing ecology and livelihoods of the people. Some of the governance pattern adopted by the State for such policies is outlined below.

The State government is aware that increased dependence on irrigation and fertilisers would render agriculture less sustainable, jeopardising Karnataka's long term food security and livelihoods especially for the rural populations. Hence, the Government of Karnataka introduced the organic farming policy in 2004, officially known as Karnataka State Policy on Organic Farming – 2004 (KSPOF). The policy was considered as a path breaking effort by the State government to shift the focus from commercial farming to organic farming, by involving local farming communities in both drafting and implementing the policy. Since 2006, the number of farmers registered under the organic farming policy has grown five-fold. A 'Karnataka State Organic Farming Mission' with considerable budgetary allocation is aimed at reducing indiscriminate use of chemical fertilisers and pesticides and to provide healthy food to the people. Bhoo chethana program for micro-nutrient enrichment and integrated farm practices has been successfully implemented in the State. The most ambitious and far-reaching objective of the above mentioned policies with varying governance mechanisms is to revive the rural economy that is intricately linked to agriculture, by offering rural youth an alternative to migrate to cities.

The Department of Fisheries was set up in 1957 to promote the development of fisheries and fishermen through developmental schemes for marine and in inland waters. But, coastal zones require special protection. Government of India issued the first Coastal Regulation Zone (CRZ) notification in 1991 and further in 2005 under powers vested by the Environment (Protection) Act. It regulated landuse in coastal areas and provided safeguards and vested institutional responsibilities. This Act did not find favour with the fishermen's unions nor NGOs and environmentalists. Government permitted the draft notification to lapse and, after extensive consultations, issued a fresh CRZ notification in 2011 superseding the 1991 notification. Under the CRZ notification, at the State level, the Karnataka State Coastal Zone Management Authority (KSCZMA) has been constituted to take measures for protecting and improving the quality of the coastal environment.

Karnataka Renewable Energy Development Limited (KREDL) is the nodal agency for promotion of renewable energy and energy efficiency in the State. Renewable energy plays multiple roles by reducing pollution, tackling climate change while also improving energy access and energy security. It is a part of the solution to address climate change. Karnataka has large renewable energy potential estimated at 28,686 MW, primarily from wind, small hydro, co-generation and biomass sectors. Of this, the installed capacity in the State is only 11.5% of the full potential, implying a large potential remaining to be tapped (KREDL, 2014). The formation of the new Karnataka Renewable Energy Policy 2009-14 has set forth nearly tripling renewable energy generation capacity within this period, by increasing the energy generation from 2,400 MW in 2009 to 6,600 MW in 2014. The policy lays emphasis on rapid expansion of particularly wind power capacity, since Karnataka is placed fourth after Tamil Nadu, Maharashtra and Gujarat. In 2009, the exploitation of Karnataka's wind potential was estimated to be around 11%.

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Conclusion

The natural resources are under stress and are subjected to over exploitation and degradation. With climate change occurring at a faster rate, specifically temperature and rainfall, impacts are likely to be severe on water availability, food production, forests, biodiversity and clean air. Hence there is a need for developing coping strategies (INDC, Paris agreement) to reduce the impact of climate change on the natural resources and people reliant on them and in turn the livelihood of human beings. Karnataka has large number of environment related acts, policies and regulations but the institutions and effective implementation are lacking. There are multiple agencies and authorities who are supposed to monitor and enforce these regulations and policies. Finally, there is a strong judiciary to enforce some of the regulations. There are many civil society organizations, which often complain to Regulatory Authorities and even to the Judiciary. A detailed assessment and evaluation of the existing policies, regulations and institutions are necessary to identify the barriers to enforcement of the policies and regulations before recommending any new policies, regulations and institutions. Despite the preponderance of policies, regulations and institutions, overall the natural resources in Karnataka are subject to degradation and loss, adversely impacting food production, fresh water supply, clean air, biodiversity and health. Thus, in addition to embarking on new policies and regulations, there is also a need for a thorough review and analysis of existing policies, regulations and institutions to identify the barriers and limitations.

Governance and Human Development

Chapter-13

Governance and Human Development

I.Conceptualizing Governance

A. An Overview

The term 'Governance' emerged within the broader context of greater democratization of the political system of countries across the globe and the concerns of globalization. In the initial years, the term `Governance` acquired varied resonances. It would be useful to contextualize the use of the term in the wider context of this Chapter on `Governance and Human Development`, in Karnataka.

The first usage of the term `governance` was guided by the demands of the Cold War in the context of the unequal relationship between donors and recipients of aid. The West sought to promote its notion of democracy and market reforms as an alternative to the Soviet model. As donor agencies the World Bank, IMF, APRM, UNDP, CIDA, DFID, USAID were mainly interested in utilization of their money in a rightful manner and thus, they set their own benchmarks and standards. Their indicators were more focused on economic freedom and included transparency, accountability, responsiveness, efficiency and so on. Nevertheless, in the 1990s, the earlier focus of social and economic issues shifted and it also started addressing protection of human rights as an important indicator of good governance. Later, the World Bank also began to get involved in initiatives that promoted social accountability. A Mechanism of social accountability[1] is argued to be competent in improving governance through better service delivery and empowerment (Malena, 2004).

In post cold war period, where the idea of nation State has challenged both from within and outside, with expansion of international trade and commerce in globalising economy, the State was seen more as a problem than a solution and there was call for restructuring the State (Pierre, 2000). This led to an increase in the interest in governance as a strategy to redefine its role in society. In the era of private investment, `governance` became the scale for evaluating investment friendly destinations.

Instability, lack of protection for property, absence of rule of law, and dysfunctional judicial system became major signposts that guided private capital. International credit rating agencies[2] evaluated `governance` keeping in mind the risk factor in involved in investment. Development economists like Hirst (2000) and Public Administration scholars like Peters (2000) drew attention to the institutional framework of laws, social institutions and values besides

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markets. They challenged the classical liberal model of good governance which was limited to government and where free elections and multi-party competition was seen necessary just to prevent `cronyism and corruption` and to build support for development strategies.

The idea of Voice and Accountability, conception of direct democracy and social capital also enabled the term governance to acquire new meanings and indicators.[3] Shaun Bowler and Todd Donovan (2002) showed that more frequent exposure to State-level direct democracy can cause citizens to have more positive attitudes about their abilities to influence the political system, and to have more positive attitudes about how government responds to them. Pierce and others (2002) too found in their study of twenty American cities demonstrated that greater levels of social capital had an independent impact on the quality of government performance. Malena and others (2004) defined social accountability as an approach towards building accountability that relies on civic engagement, i.e., in which it is ordinary citizens and/or civil society organizations that participate directly or indirectly in exacting accountability. The mechanisms of social accountability include participatory budgeting, public expenditure tracking, monitoring of public service delivery, public commissions and citizen advisory boards. The authors argued that social accountability mechanisms could improve governance through better service delivery and empowerment.

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However, Hirst (2000) sees these new practices of coordinating activities through networks, partnerships and deliberative forums as encouraging from a democratic perspective but points out that the problem with this form is that they have proliferated in diverse forms, they are predominantly local and given their newness it is difficult to judge them.

B. Challenges in existing Indicators of Governance

However, many of the studies mentioned above faced major limitations in the existing indicators as they were mostly based on the experiences of the West and there seems to be an attempt to push a particular kind of agenda on countries through the use of these measurement devices. Koelble and Lipuma (2008) for instance, noted that the current approaches to measuring democracy are both a-historical and a-cultural and call for an alternative interpretation for post-colonial societies. Evaluation of these studies highlight the governance measurement has often been guided by the donor's own political and institutional incentives or on their own political frameworks they promoted their own country-specific democratic model with hidden agendas (Crawford, 2000). Serious Measurement Problems (Kaufman and Kray, 2008) and definitional ambiguities with regard to terms like `democratic accountability`, `governmental effectiveness', `rule of law`, `corruption` and so on (Thomas, 2009) have been pointed out by scholars. Thomas (2009) also highlights the mismatch between the way concepts are defined in literature and how they are used by measurement indices.[4] Similarly, Canache (2001)and others show that certain survey items

could tap multiple dimensions of a particular issue and this can often vary not only across individuals but also nations. Moreover, measuring 'access' to governance must also take into account the quality of governance . The idea must take into account the speed and efficiency of the services being delivered; whether it is insulated from corruption, whether there is efficiency in service delivery in terms of time taken and outcome achieved, is the citizen satisfied with the kind of governance offered and the like. Canache argued that the multi-dimensional aspect needs to be accounted for during analysis. Munck and Verkuilen highlight the major problems under three broad areas, conceptualisation, measurement and aggregation.

Ideological biases, disconnect between data collected and its usage (Kristian S. Gleditsch and Michael D. Ward 1997), lack of transparency in many of the steps and the process of the creation of indicators, including questionnaire design, training, administering, coding and assessment and even in analysis, failure in regularly updating the indicators and thus, leaving little space for comparison indeed deeply effect the quality of measurement. Scientific public opinion polling has definitely added a new dimension to democratic governance as it gave the representatives an opportunity to discern public opinion on any issue (Michael Margolis, 1994), Citizen surveys may have an effect of personal experience and symbolic attitudes (Marion Orr and Darrell M. West, 2007) and would thus, have serious policy implications (Kelly, 2003). Often these surveys are based on expert/elite perceptions and do not necessarily gauge the real level and systematically overestimate or underestimate the phenomenon under study (Mireille Razafindrako and François Roubaud, 2006). Thus, Governance indicators despite of having many virtues also face distinct challenges (Daniel Kaufmann and AartKraay, 2008).

C. Recent Attempts at Measuring Governance

Attempts at developing governance measures from a non-western perspective have increasingly gained currency. The Asian Development Bank for instance has its own definition of governance and similarly, Sub-Saharan Africa also has its own Ibrahim Index to ensure governance quality.[5] Though the assessors in both these cases are different in the sense that they are not – western, the measures, methodology and the values guiding the exercise are clearly guided by the same goals and demands dominant in the western world.

Attempts are being made to respond to the criticisms and limitations in the existing indicators. International IDEA's Assessing the Quality of Democracy: A Practical Guide is methodologically and conceptually refreshing. By bringing into account the background history and culture and understanding Democracy as `a shifting continuum`, it attempts to go beyond existing measurement indicators. By involving the citizens of the country in assessing the quality of democracy it is trying to democratise the assessment procedures. The ODI directed World Governance Survey which claims to be a holistic assessment of governance takes into account the key processes that are relevant. They make

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a distinction between performance and process indicators.[6] They are more concerned not with how a country compares with others but with its own past (Hyden et. al, 2003). The UNDP's pro-poor pro-gender governance indicators are also an example to get over the limitations of the earlier generation of governance indicators.[7] It was based on the recognition that different groups within a society could have competing needs and interests.

Understanding and assessing governance from the prism of the Sustainable Development Goals is of immense importance. The seventeen goals adopted by the United Nations to transform the world into a safe, secure and sustainable space to live in is critical in any dialogue that measures governance initiatives

In many parts of the Global South the political system and its political elite, either by design or by accident side tracked the issues of `delivery`. Similarly, it is a fact that mobilization of large sections of society was taking place without adequate mechanisms being provided to ensure that the system was accountable to these sections of society. In other words, the context in which the term 'governance' emerged certainly contained a challenge, though it sought to address the problem with limited democratic sensibility. Rather, it attempted to rest on the ideological/conceptual premise of the sixties that implicitly believed that once efficiency` is attained and economic reform is on the right and fast track, democracy will logically follow. This act of placing democracy on the backburner was partially corrected by the architects of the term themselves; more so by the UNDP that engaged in the language of 'governance for whom'. This significant shift resulted in the term echoing popular sentiments in more effective ways and shifting the focus from the concerns of the donors to the realities of the population of the Global South.

As a result of the advancement of the instrumentalist concept of governance, the pressure to focus on the real issues of the Global south – in these countries that had arrived, was clearly apparent especially among the narrations that have emerged in these countries. The `instrumental approach` adopted by the UNDP was very much an improvement of the earlier approach though it did not fully situate the idea of governance in a normative framework of why governments should reach the poor. Although the idea of democratic governance, an offshoot of the UNDP exercise, has been gaining in popularity and acceptance in recent years, it was bereft of context. Unlike any category that is contested and does emerge out of contestations, the usage of the concept by UNDP appears to be too synthetic to admit any contestatory lineage.

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D. The Current Assessment

It could be argued that in the `democratic governance` narration the term democratic come almost as a belated afterthought, a minor footnote, in order to cloak the term with a new legitimacy and acceptability. Instead, we argue, it is necessary to revisit the idea of democratic governance by tracing the two concerns not as distinct but as integral to the democratic project- governance is democratic or it is not effective governance. At this moment as one looks at a Human Development

Report for a State, governance has to mean democratic governance. Democracy is not democracy if it does not lead to an efficient management of conflicts and a fair regulation of resources. Thus, speaking of democracy means speaking of governance and speaking of governance means speaking of democracy, But, it is another matter that actually, many of those who speak of democracy do not attend to the issues of governance and those speaking of governance may not actually be talking of democracy. In fact, it is precisely this slippage that justifies the present approach which self-consciously interchanges the terms governance and democracy.

Within this overall context, this chapter seeks to understand governance in a particular way. We consider and argue that `access` is the central theme in governance as understood here. Although dimensions could be diverse, we identify three most important dimensions of access each with various domains that have a bearing on measuring democratic governance. These dimensions include: (a) Ideological dimension - normative acceptance of the right to access; (b) Institutional dimension- the establishment of appropriate organizational structures to ensure access and (c) Empirical dimension- the actual practice of access. Briefly put, we propose that access has to be integrated in the ideological basis of politics and power; elaborate institutional paraphernalia are put in place for access; and that the people must enjoy the experience of accessibility. Access must thus, be a routinely experienced fact. Thus, access is the right theme to integrate the concerns of democracy and governance because access is obtained at the intersection of responsiveness and efficiency.

This chapter has three key elements. After conceptualizing governance, an attempt is made to outline and assess the efforts undertaken in Karnataka to align the governance process to the needs and aspirations of human development. In the third segment, survey data linked to Karnataka, collected over the last decade, is employed to tap popular perceptions of governance from the prism of `access`. Data from a series of representative sample surveys completed over the last decade are analyzed. It permits a time series analysis and provides a platform to link government efforts to popular aspirations and perceptions. It attempts a overall summary of the key issues in the Karnataka governance efforts and its contribution to fostering human development.

II. Karnataka's Governance Record

The State of Karnataka has often been the focus of attention for its initiatives and innovations linked to `citizen-centric` governance that focuses on promoting human development. This paper outlines the Karnataka governance record especially since 2005. The Public Financial Management Reform Action Plan 2014, prepared by the Financial Management Unit of the World Bank India Country Office describes Karnataka as a 'reform oriented State' which is proactive in improving `governance, accountability, and transparency through a mix of reforms in administration, service delivery, and financial management`.[9]

These dimensions include: (a) Ideological dimension - normative acceptance of the right to access; (b) Institutional dimension- the establishment of appropriate organizational structures to ensure access and (c) Empirical dimension- the actual practice of access.

Under Khajane II, the government is attempting to implement as Integrated Financial Management System. It aims at a comprehensive management of the financial transactions of government and is projected as the next generation Integrated Automation initiative towards sound fiscal management.

The Karnataka Guarantee of Services to Citizen Act 2011, has sought to ensure timely service delivery to people just as the Karnataka Fiscal Responsibility Act (KFRA) 2003, has attempted to usher in fiscal consolidation and more effective fiscal management. The State has attempted to make processes and procedures for procurement more transparent by detailing provisions under the Karnataka Transparency in Public Procurement Act, 1999. The initiatives to promote effective, efficient and a transparent citizen friendly process of governance will be analyzed taking into account the progress recorded in the following key areas: a) e-Governance initiatives; b)Local Government Reforms; c) Backward Region Development Priorities; d) Health Sector Reforms; e) Solid Waste Management Initiatives; and f) Telemetric Weather Systems.

A. e-Governance Initiatives

The Karnataka Government has received several international and national awards for its flagship e-Governance initiatives: Bhoomi (Computerisation of Land Records), Khajane I and II (Computerisation of Treasury Offices), Kaveri (Computerisation of Registration processes), Mobile - one (multimode mobile governance platform) and Sakala (Guarantee of Services). During the period under review, several measures were taken by the government to further strengthen these projects.

Efforts to institutionalize Bhoomi have been adopted Manual processes linked to land records have been fully abolished and a range of training programmes were conducted for officials of the revenue department to familiarise them with the finer details linked to computerization of land records. Efforts to ensure that the system faces no challenges on account of down time of equipment were implemented and necessary staff was made available for the purpose across the offices in the State.

Under the Khajane project all the 250 odd treasury offices have been connected through a VSAT network. The government believes that this has permitted a more effective monitoring of receipt and expenditures. Under Khajane II, the government is attempting to implement as Integrated Financial Management System. It aims at a comprehensive management of the financial transactions of government and is projected as the next generation Integrated Automation initiative towards sound fiscal management. Khajane II will facilitate all Chief Controlling Officer's, Controlling Officer's, Drawing and Disbursement Officer's to undertake fiscal functions on behalf of the Government on a single platform.

Under the Kaveri project computerization of the 200 sub registrars and district registrars offices in the State has been completed reducing the time taken to register a document from 30 days to about 30 minutes.

Mobile - one was certified as India's first and world's largest multi-mode mobile governance platform providing multi-track services. It is a unified mobile platform for delivery of citizen services both from the government and the private sector. This anytime, anywhere, anyhow services are available 24x7x365 at any location in

India on a mobile device. Services like payment of taxes, utility bills, traffic violation fines, tracking passport applications, birth certificates can all be accessed through Mobileone. Around 4500 services can be availed through this mobile governance initiative.

Under the provisions of the Central government's National e-Governance plan (NEGP), Karnataka was the first State to implement the State Date Centre (SDC). The SDC provides strong and secure data storage for various government departments that are implementing e-Governance programmes. The State has also started the implementation of the Karnataka State Wide Area Network (KSWAN) project and establishing close to 200 Points of Presence (POP) across the State. This facilitates data connectivity to all government departments. Presently more than 4000 officers of the Departments of the Government of Karnataka including the Governor's and Chief Minister's Office, High Court, Police, Judicial Courts and Prisons have been brought under the umbrella of KSWAN. Video Conferencing facility od extended to all the 177 Taluka Headquarters in addition to all the headquarters of Departments.

The Sakala initiative of the Government as part of its efforts to enable efficient and citizen friendly governance took the form of a legislation termed the Karnataka Sakala Services Act 2011. This Act commits the government to provide to Citizens as a Right, services on time and in a hassle free manner. Under Sakala, 419 services are delivered and it has three major functionalities: a) web portal based data dissemination; b) Online request receipt; and c) processing of the existing heterogenous citizen centric applications of all government departments. If one were to take a snapshot of the Sakala Receipts,Disposals and Pendency Statistics as on 26 May 2016, it is noticed that 18,021 of the 22,984 (78%) receipts received during the said day were disposed off. For the month of May 2016, 17,04,365 of the 17,88,391(95%) receipts has been disposed off. There were 19549 pendencies beyond the due date. This Initiative was conferred the Silver Award in the category of `Outstanding Performance in Citizen Centric Service Delivery` in the National e-Governance Awards for 2013-14.

Most government departments have published websites which permit citizens to access information about the departments. Computerisation of the Road Transport Organisation (RTO), Human Management Resource System of the State Government and Public Distribution System (PDS) are the priorities to transform processes and forms of interaction with the general public. Some e-Governance initiatives are specifically discussed under the other themes of analysis.

A key area of reforms has been in the area of e-Markets. Efforts to try and harness the potential of Information Technology for marketing agricultural products has been the focus of a lot of attention. The environment in which markets for agricultural product operate and the factors and forces that determine pricing of agricultural goods need to be taken into account in any discussion on application of modern technology to this sector. An enabling legislation was passed by the State by

The Karnataka Sakala Services Act 2011. This Act commits the government to provide to Citizens as a Right, services on time and in a hassle free manner.

A Property Tax Information System (PTIS) also referred to as Aasthi was one such reform. PTIS aimed at enhancing the revenues of ULBs through effective taxation of property – both buildings and land.

amending the Karnataka Agricultural Produce Marketing (Regulation and Development) Act in 2007. This amendment aimed at allowing direct purchase centres, establishment of private markets, farmers-consumers markets, contract farming, establishment of spot exchanges and the like.

The government took the decision to create the Rashtriya e Market Services Private limited (ReMS) as a joint venture with NCDEX Spot Exchange Limited., both being equal share holders. It aimed at implementing its Agricultural Marketing Policy and ensured greater efficiency and transparency in the process. ReMS hopes to provide an electronic auction system across the State for transparency price determination. Launched in February 2014, within two years the initiative had achieved 7.5 lakhs lots of trading with 45 lakh bids being made. Transaction on the platform in this period have been over Rs. 15,000 crores. It has accommodated lakhs of farmers, 31,473 traders, 17,149 commission agents for all the 92 registered commodities.

The above reforms speak of the multi-track efforts made by the government to encourage and sustain e-initiatives. An important dimension which also needs to be underscored is the human element. At the end of the day any effort to try and harness the impact of information technology involves people. The next section highlights responses of citizens to several government initiatives where some of the challenges on account of the inability of those on the ground to implement the pace of reforms has whittled the impact of the reforms. While it is important to connect to information technology it is equally important to reconnect to human technology.

B. Local Government Reforms

Given the fact that local governments are the ones that operate closest to the people, the reforms at this level are likely to impact the citizens in a direct manner. An attempt is made to distinguish between reforms and initiatives in urban local bodies (ULBs) and rural local bodies – Panchayati Raj Institutions (PRIs).

The Government of Karnataka initiated a set of Municipal Reforms in 2004, to transform the way in which the 213 ULBs functioned. The most important among the reforms are outlined and their progress tracked. A Property Tax Information System (PTIS) also referred to as Aasthi was one such reform. PTIS aimed at enhancing the revenues of ULBs through effective taxation of property – both buildings and land. The Government brought in a Self Assessment Scheme (SAS)for filing of property taxes. The progress in implementing this scheme has been hampered by the massive `re-engineering` that it entails.

The establishment of a Public Grievance and Redressal Cell in all ULBs is yet another innovation attempted. Non-governmental organizations (NGOs) have been involved for the maintenance and management of these cells. Complaints can be registered and are escalated to the relevant levels and complaint redressal is tracked by the cell. Initiated in 2002-03, this programme was implemented from

2005-6. It is live in all 213 ULBs and data for the first part of 2012 showed that 97% of the complaints were redressed.

The computerization of birth and death registrations and records is yet another initiative of the government. Entrusted to ULBs, the government has initiated the process of online registration of births and deaths and issue of computerised certificates. The mandate for the ULB's is to issue the same within 72 hours and it is hoped that over time it would be reduced to 5 to 10 minutes.

The Fund Based Double Entry Accrual Accounting System (FBDEAAS) introduced by the government requires ULBs to capture in real time its revenue collection and expenditure incurred. This allows for a more objective preparation of the financial Statement.

To manage the e-governance initiatives of the ULBs, the government established the Karnataka Municipal Data Society in 2007 as a Registered body. It provides data hosting and maintenance support and helps in developing and implementing new e-Governance applications.

The Karnataka Slum Mapping and Socio Economic Survey (Asha Kiran Mahiti) helps map all the slums (notified and non-notified) in urban areas along with GIS mapping and urban data. The State has also implemented the Centrally Sponsored Interest Subsidy Scheme for Housing the Urban Poor (Namme Mane) to help the poor realize their dream of building a home by providing loans at a subsidized rate of interest.

The 'Jalanidhi' scheme is another innovation developed to computerise the process of collecting property and water tap connection details for ULBs except those maintained by the Karnataka Urban Water Supply and Drainage Board (KUWS&DB). It aims at ushering in greater transparency in the process on the one hand and ensuring greater generation of revenues to the government on the other.

Prior to switching track to Panchayati Raj Institutions(PRIs) in rural Karnataka, it may be useful to highlight two important studies that appeared on local government in the early years of this century. Besley et.al. in their study of Politics of Public Goods Provisions in local government in the States of South India concluded that the social justice aims of reservations for dalits and scheduled tribes appears to have had an impact. They went on to argue that in spite of the Panchayati Raj Institutions being in place, the customary village councils continue to be prominent. These councils include the traditional bodies including `Caste Panchayats, Street Panchayats and Nyaya Panchayats'.[10] They also drew attention in their study to the politicization of local bodies and their being sensitive to the political cues of higher level politicians. In another study Inbanathan and Gopalappa argued that an important category of people who wield power in the local government system are the `fixers`[11]. These `fixers` role is to assist in manipulating and capturing the system to serve special interests. The side lining of the `Gram Sabhas` has been yet another focus of attention.

In the light of the above, it would be useful to track developments in the State in the organization and functioning of rural local bodies in

The computerization of birth and death registrations and records is yet another initiative of the government. The mandate for the ULB's is to issue the same within 72 hours and it is hoped that over time it would be reduced to 5 to 10 minutes.

the last decade. With the Karnataka Panchayati Raj (Amendment) Bill 2015 coming into effect, a few changes have come into place. While enhancing reservations for women to fifty percent, the new legislation fixes the terms of the chairperson and deputy chairperson of the local bodies to five years. It also provides for compulsory voting and outlines the duties and responsibilities of an elected member of a local body. It seeks to ensure greater transparency through a mandatory declaration of assets and liabilities for all elected members and the setting up of a grievance redressal authority to bring in a time bound and effective mechanism for service delivery. It also envisages the creation of a Panchayat Administrative Service.

Yet another initiative of the government in the State is its move to introduce the `Right to Sanitation`. The government launched a `crusade for toilet construction` (Shouchalayakkagi Samara) During the period 2013-15, as many as 10.13 lakh toilets were constructed. The government has also proposed an action plan to make Karnataka Open Defecation Free by 2018.

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A range of initiatives linked to both urban and rural local governments that have been taken by the State have been highlighted. Several of these reforms outlined, strengthen the resources and processes available to the State, in their effort to effectively deliver public services. An important issue that assumes relevance in this dialogue is the visible impact of these reforms on the citizens. If governance is to be viewed as access, do these reforms respond to the aspirations and expectations of the citizens and what is public perception in this regard? This issue is addressed in the next section.

C. Backward Region Development Priorities

A major development that gave a boost to the development of backward regions in the State was the passing of the 118th Constitution Amendment Bill in December 2012. A special development status was conferred to six districts of the Hyderabad-Karnataka region through Article 371(J) of the Constitution. The six districts are Kalaburagi, Raichur, Yadgir, Bidar, Ballari and Koppal. The criteria chosen for the inclusion of these six districts was the sharp disparity with regard to their development index as compared to the rest of the districts in the State. With a focus on targeted development activities, the new constitutional provision envisages reservations for those hailing from the six districts in educational institutions and government jobs. The new measure specifically aims at reducing inter-region and inter-district disparity.

The provisions of Article 371(J) permit the President to allow the Governor to take the following steps for the development of the region: a) setting up of a development board for the region; b) ensure equitable allocation of funds for development of the region; c) provide for reservation in educational institutions and vocational training institutions, and State government positions in the region for persons of the region.

Subsequent to the Constitution Amendment, the Karnataka Government issued the Karnataka Public Employment (Reservation in Appointment for Hyderabad-Karnataka Region) Order,

2013, which States that a person will be eligible for reservation under the region quota if they are born in the region or if either parent was born in the region prior to 1 January 2013. The person will also be eligible if either of their parents lived in the region for more than ten years prior to 1 January 2013 and had their name registered in the electoral rolls. A person who owned immovable property in the local area before 1 January 2013 was also eligible.

If minimum educational qualification has been prescribed for recruitment to a post, then a candidate becomes eligible if he has studied in an educational institution in the local area for not less than ten consecutive years. A women (from outside the six districts) who marries a local person also becomes eligible for the benefits.

Subsequent to the Constitutional amendment, the government has set aside 75 percent of the posts belonging to Group`A` Junior and Group`B`, 80 percent of the posts in Group `C` and 85 percent of Group`D` posts for the local population. The quota for local candidates in districts outside the six in the Hyderabad-Karnataka region has been fixed at eight percent.

It is too early to speak of the impact of the Constitutional amendment on the lives of people in the region. By passing the constitutional amendment a long standing demand of the people of this backward region has been met and the anticipation is that a proactiveapproach on the part of the administration at Bengaluru and in the six districts will help to fulfil the aspirations for which the constitutional amendment was passed.

D. Health Sector Reforms

At the core of human development is the focus on issues relating to the health and physical well-being of people. This section focuses on the reforms initiated in the healthcare sector by the State Government. During the last two decades three important health insurance schemes have been sponsored and implemented by the State government. Each of them merits a detailed discussion and analysis.

The 'Yeshaswini Plan' for Health Insurance was introduced in the State in 2003. A scheme owned by the Yeshaswini Cooperative Farmers Health Care Trust, is managed by a Board of Trustees half of whom hail from the Department of Cooperation, including the Principal Secretary who is the Chair of the Trust and the Director of the Karnataka Health Department with the other half of the trustees being appointed from among medical professionals. The Board governs the schemes, approves claims, maps the progress of the scheme, identifies targets to be achieved and approves inclusion of new hospitals and the nature of oversight. A suggestion that has often been made is that for the more effective functioning of the scheme, the proportion of Trustees from the Cooperation Department could be reduced and elected representatives from the Cooperatives could take their place as these cooperative societies are mainly responsible for the operation of the scheme. A review of the working of the scheme indicated that most of the beneficiaries were those who underwent major surgery and would not have survived if they did not have the opportunity to be benefitted under the scheme. The increased enrollment in the scheme is an indicator of its popularity and acceptance by the people. Yet

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another positive dimension of the scheme is its transparency with data on enrolment, utilization and fiscal performance of the scheme being uploaded on the website. It must be noted that the insurance co-contribution of the government to the scheme has increased substantially from Rs 28 to Rs 110 . Many have raised questions on the sustainability of the scheme in the long run given the high dependence on the State as a co-contributor. The increase in the insurance premium is also indicative of the high dependency on private players. The need to stabilize administrative costs too is critical to the success of the scheme. A more nuanced policy framework is considered critical for the success of the scheme in the long run.

The State Government introduced the Vajpayee Arogyasri scheme (VAS) in 2010 for BPL households that focused on seven `catastrophic` illnesses including cardiac problems, paediatric illness, neurological diseases and cancer.

The Arogyasri Health Insurance Scheme was specifically designed to meet the health needs of the Below Poverty Line (BPL) families. This scheme offers protection to the insurer from major surgical intervention as well as outpatient costs. While the use of professional insurance agencies help in curbing costs, the recourse to Third Party Administrators (TPA) has not facilitated in curbing administrative costs. Further, questions have also been raised on the limited focus on enhancing local health care capacities.

The State Government introduced the Vajpayee Arogyasri scheme (VAS) in 2010 for BPL households that focused on seven `catastrophic` illnesses including cardiac problems, paediatric illness, neurological diseases and cancer. The reimbursements in this scheme was done by a State run trust called the Suvarna Arogya Suraksha Trust (SAST). The trust consists of all public health officials from the Department of Health and Family Welfare and many have stressed the need to ensure a much wider spectrum f representation on the Trust. Researchers who have evaluated the progress of the scheme have found that households eligible for the scheme saw a 64 percent fall in the risk of dying from the conditions covered under the scheme as compared to others. The study also reported a 60 percent reduction in out of pocket expenses. There was also evidence to show that age of death rose among the eligible households.[13] A World Bank assessment also found that mortality rates of rich and poor households became similar on account of the implementation of the scheme.[14]

A critical focus of debate has been the financial viability of the health insurance schemes. A sharp rise in the claim's ratios can severely impact the success of the schemes. Such a trend may warrant a hike in premiums. This could have a negative impact as individuals may be forced to exit the schemes. Publically funded health insurance schemes have faced severe fiscal constraints when there is a sharp rise in premium.

E. Solid Waste Management Initiatives

Strategies to manage solid waste have today become critical to protect the environment and public health. Solid waste is defined as non-liquid material that no longer has any value for the person who is responsible for generating it. In urban areas solid waste generally refers to waste from houses, streets and public places, shops, commercial establishments, offices and hospitals.

In India, Solid Waste Management is seen as the responsibility and duty of the government and in urban areas of the municipal authorities. A Municipal Solid Waste (MSW) management system includes: Waste generation and storage; segregation, reuse and recycling at the household level; Primary waste collection and transport to a transfer station or community bin; street sweeping and cleaning of public places; Management of the transfer station or community bin; Secondary collection and transport to the waste disposal site; waste disposal in landfills; collection, transport and treatment of recyclables at all points of the solid waste management pathway (collection, storage, transport and disposal).

The Karnataka Government formulated the State policy for implementation of Integrated Solid Waste Management (ISWM) based on the Municipal Solid Waste (Management and Handling) Rules framed in 2000 by the Government of India under the Environment Protection Act of 1986. The State policy outlined the guidelines for all activities under Municipal Solid Waste Management. It also outlined the role of all the stakeholders – Urban Local Bodies, elected representatives, waste generators and the range of Non-Governmental Organisations (NGOs) involved. To sensitize stakeholders to solid waste management practices material was disseminated and a series of workshops conducted. The government has issued orders for the transfer of government land free of cost to the local bodies for sanitary landfills and also issued guidelines for the purchase of private land for the said purpose.

The management of solid waste has faced huge challenges in urban areas in the State. Given the quantum of solid waste generated especially in the larger cities, the capacity (and some would say efforts) of the urban authorities to manage the waste has been severely limited. Ever since the implementation of ISWM, urban authorities are attempting to identify landfill sites and waste recycling processes. Experience has shown that most dispose the collected waste on private lands situated in the outskirts of the urban area limits. Efforts still need to be made to ensure that all stakeholders act in concert to scientifically dispose waste generated by the community. It would be useful to consider the experience of Bengaluru city in this regard. Efforts have been made by the government to involve NGOs and citizen forums including resident welfare associations to help develop an effective waste management system. A range of initiatives have been taken over the last few years to sensitize urban residents to the urgent need for effective and scientific solid waste management. In 2011, under the join auspices of the Karnataka State Pollution Control Board, Karnataka High Court Legal Services Committee and the Solid Waste Management Round Table Bengaluru a Bengaluru Recycling Habba was held. The principal focus of the event was to sensitize residents to the importance of reducing, reusing and recycling waste. As part of the Habba, Awards were launched in order to spread the message of recycling.

The city generates over 4000 tons of solid waste daily and the same has been dumped at three landfills. Further, garbage has also been dumped by the

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authorities in abandoned quarries. Use of landfills and abandoned quarries for dumping waste has resulted in contamination of ground water and impacted agricultural produce besides posing a health risk. In 2014, the villages of Mandur near Bengaluru, took to a protest against their area being used at the largest landfill. Negotiations led to a temporary resolution of the problem. However, a long term strategy for effective management of solid waste still needs to be developed and implemented.

Bringing together the different stakeholders and ensuring that they work in tandem is one of the most important challenges. Sensitizing people to the need to manage solid waste judiciously and scientifically and allowing people and local communities to take ownership to solve the problem appears to be the long term solution for which a pro active approach adopted by the governmental authorities would go a long way.

F. Telemetric Weather Systems

The State of Karnataka is prone to a range of natural disasters. Over three fourths of the geographical area of the State is prone to drought. Close to one fourth of the geographical area is within the moderate earthquake zone (with the risk of earthquakes of the magnitude of 5 to 6.9). One fourth of the geographical area has the potential to be effected by cyclone and heavy winds. The 359 kilometer long coast line is prone to sea erosion and Tsunami threat. Hailstorms that damage crops are experienced ever so frequently. Lightening, cloud bursts and thunder storms have occurred frequently causing loss to lives and property. In this context the disaster management capacities of the State assume significance.

In 2007, the Karnataka State Natural Disaster Monitoring Centre (KSNDMC) was established and its activites included monitoring natural disasters including drought, seismology and landslide, weather monitoring and forecasting, Remote Sensing and GIS, Coastal Monitoring, Hyrdology, weather based crop Insurance and the like.

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The KSNDMC has a 24x7 help desk, the first of its kind in the country. This help desk has been accessed by farmers and the general public for latest information. The help desk has been sending weather forecasts through SMS to various authorities in government and the concerned public registered with them. The help desk gets an hourly update from the over 2200 sensors located across the State. The help desk is able to provide weather updates every 15 minutes. The Centre has established Telemetric Rain Gauges (TRG) and weather stations across the hoblies and gram panchayats. These carry out web enabled data base management and provide real time information, alerts and early warning

on high intensity rain.

The preparedness of the State to deal with natural disasters is an important indicator of its capacity to meet the governance expectations of the people in the State. A proactive role in this regard becomes imperative and the initiatives in the last decade point out to a reassuring approach in this regard.

G. Wrap Up

Thus, in the decade under review, multi-track initiatives have been launched by the State to streamline the system of governance to meet the aspirations of people and gear the process towards ushering in greater human development. The next segment provides a snap shot of popular perception of the government and its programmes based on a range of surveys. This would provide a basis for analyzing the extent to which the governments initiatives have been felt at the ground by the people. If governance is defined in the language of `access` then the perceptions of citizens assume utmost significance

III. Citizens Perspective - Findings from Surveys undertaken overt the last decade

During the period covered by the present study, several important surveys have been undertaken in the State which help tap the public mood on critical issues of governance. Over the last decade (2005-14), the State has had three State Assembly elections (2004,2008 and 2013) and three Lok Sabha Elections (2004,2009 and 2014). Around the time of each of these elections, Lokniti a Research programme of the prestigious Centre for Study of Developing Societies (CSDS) conducted surveys which aimed at explaining the public mood around the time of elections. It also helped gauge popular sentiment on the performance of the government and popular perceptions of its record on implementation welfare and developmental programmes. At the time of the Lok Sabha elections, the National Election Studies (NES) were conducted and when Karnataka went to a State Assembly poll the Karnataka Election Study (KES) was conducted.[15] All studies had a representative sample that authentically reflected the larger universe they were expected to represent. For the present paper, the Karnataka component of the NES data is analysed. The survey asked a range of questions directly linked to public perceptions on the performance of the State government and their assessment of the different welfare schemes implemented by the State. The analysis of the response in the survey affords an opportunity to map citizens response to the range of programmes implemented by the State to streamline governance and ensure development.

An important question in all the surveys was the level of satisfaction among the people with the performance of their State government.[16]

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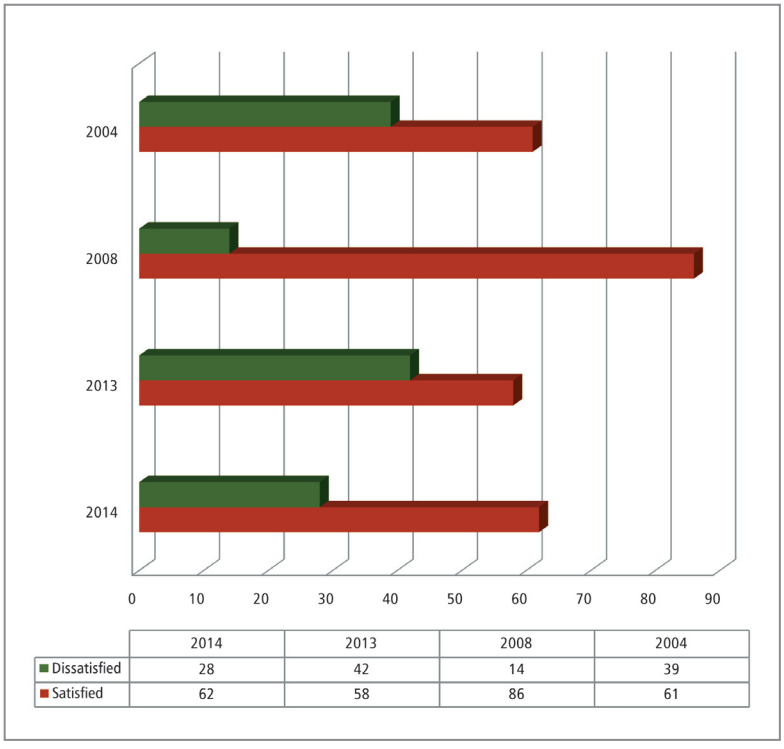
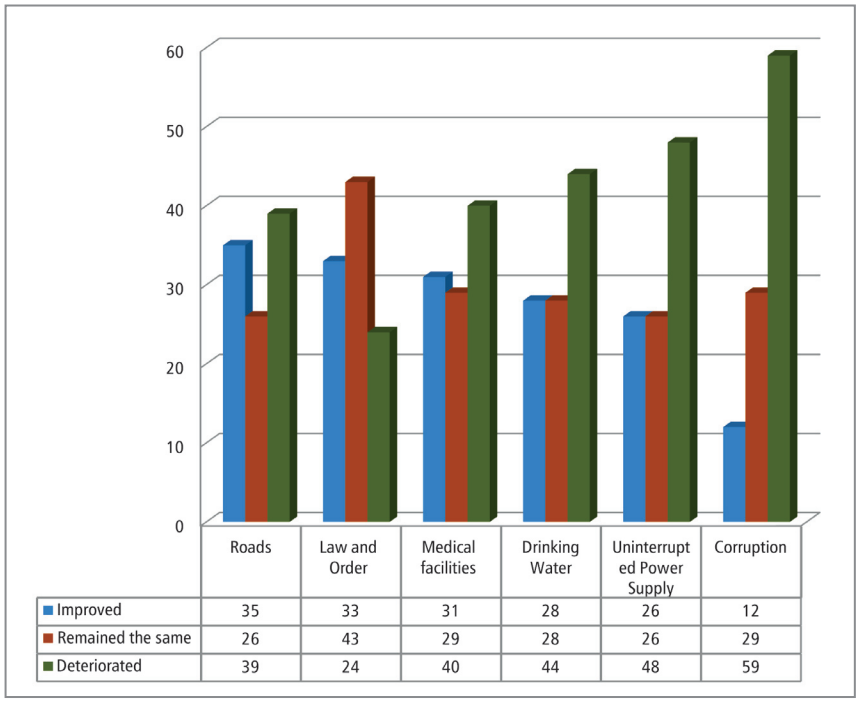
Figure 13.1
Level of Satisfaction with the State Government



	2014	2013	2008	2004
Dissatisfied	28	42	14	39
Satisfied	62	58	86	61

Figure 13.2
Conditions of select public services in the last five years (1999-2004)



	Roads	Law and Order	Medical facilities	Drinking Water	Uninterrupted Power Supply	Corruption
Improved	35	33	31	28	26	12
Remained the same	26	43	29	28	26	29
Deteriorated	39	24	40	44	48	59

The table above clearly indicates that the level of satisfaction with the government has invariably been in the range of 60 percent. This implies that when respondents in the State were asked to evaluate the overall performance of their State government, there generally was a high level of satisfaction with the government.[17] The two moments when respondents were less lukewarm in their praise of the government was in 2004 and 2013 (close to 4 of every 10 respondents expressed dissatisfaction with the functioning of government). In both instances, the government in power lost its majority. The data thus, clearly points out to a reasonably high level of satisfaction with the performance of the State government.

The 2004 study asked respondents to assess whether how certain select public services had performed. This provided an indication of public perception at the start of the period of study of the present report. Among the six services specifically mentioned, public response varied critically.

Close to half the respondents felt that the power supply situation had worsened and close to half felt the same about availability of drinking water. Four of every ten felt the medical facilities and roads had deteriorated while another one fourth lamented on the deteriorating law and order. Close to sixty percent opined that corruption had increased. It is important to record that just one third of the respondents felt that the condition of roads, law and order and medical facilities had improved. This lukewarm assessment of government performance is reflected in the verdict which saw the ruling party lose its majority.

There were important demographic

differences that also merit attention. In towns and cities there is a little higher degree of satisfaction with the conditions of roads while people in the rural areas were much more dissatisfied in this regard. Minorities and dalits were much more uncomfortable with the law and order situation as compared to other social groups. The poor and those living in villages were more pronounced in their expression of unhappiness with the medical facilities they had access to. It was the same segment which expressed greater concern about power supply and availability of drinking water. On corruption, there appeared to be little variation as both urban and rural residents and those from different economic segments expressed their disquiet on its rise.

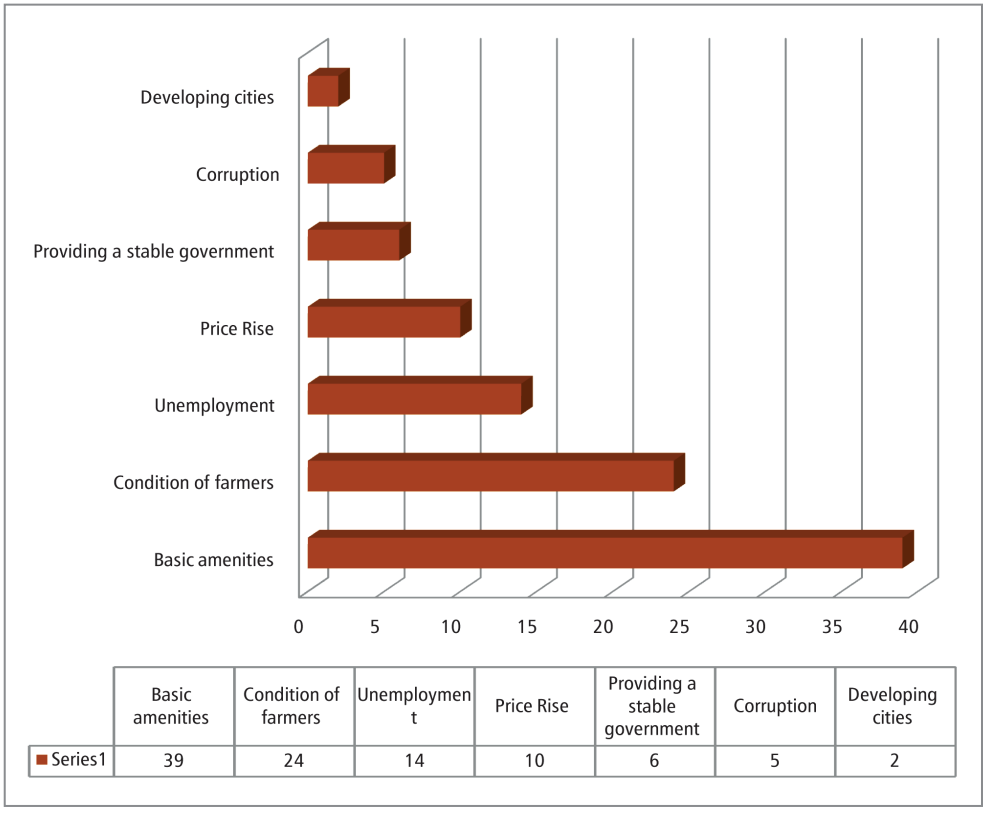
In 2004, there also seemed a more clear urban-rural divide in terms of priority of the government. Nearly three fourths of the respondents across the State felt that the government had not differentiated between rural and urban areas. One fourth felt that towns and cities received more privileged treatment. It is important to record that the feeling that urban areas was given more importance was more strongly felt in rural areas, and there was ten percentage point difference in responses in urban and rural areas. The belief that the government treated rural and urban areas in a similar manner was more pronounced in towns and cities as compared to villages. It is important to record that in the 2004 elections, the ruling party in the State performed poorly in rural areas as compared to urban pockets and the explanation is not far to seek.

In a survey done four years later (in 2008 at the time of the next Assembly elections in the State), respondents were asked what was the most important issue for people like them.[18]

Close to four of every ten respondents asserted that being able to secure basic amenities was the most important issue for them. Another one-fourth said that the conditions of farmers was a matter of concern. One seventh spoke of unemployment as their main concern and one of every ten were worried about price rise.

Minorities and dalits were much more uncomfortable with the law and order situation as compared to other social groups. The poor and those living in villages were more pronounced in their expression of unhappiness with the medical facilities they had access to. It was the same segment which expressed greater concern about power supply and availability of drinking water.

Figure 13.3
Which is the most important issue for people like you (2008)



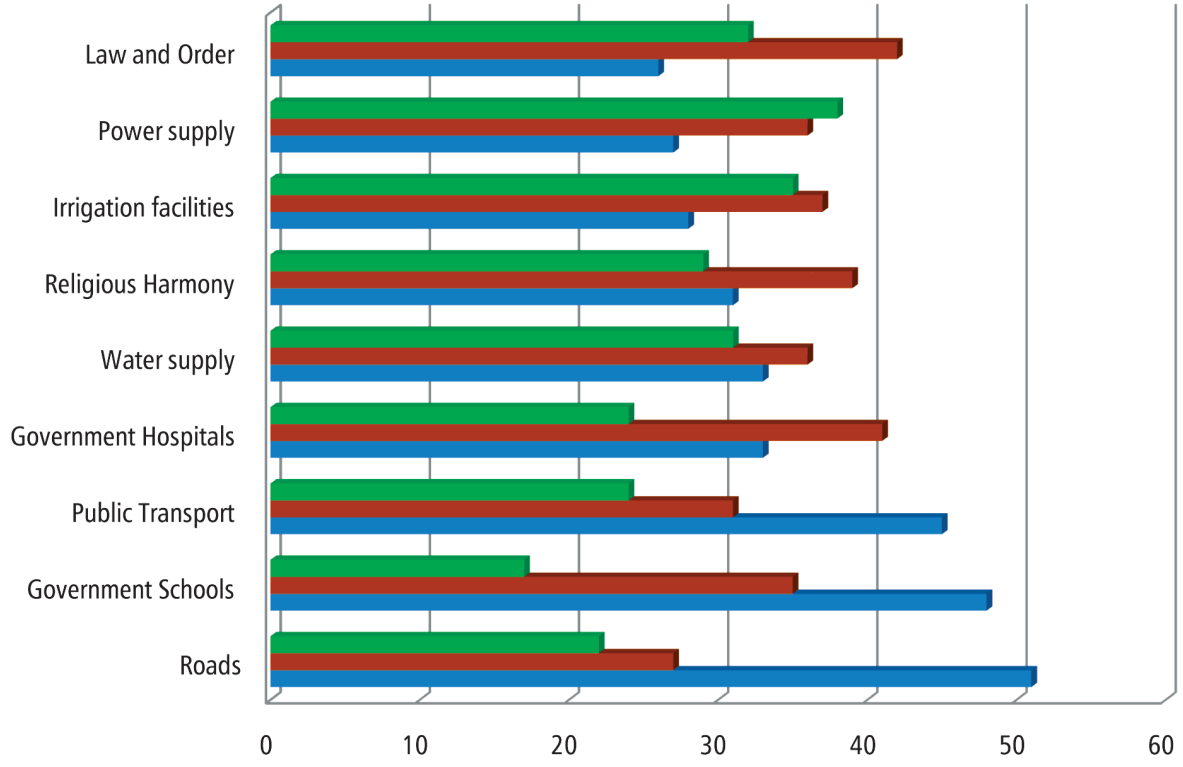
	Basic amenities	Condition of farmers	Unemployment	Price Rise	Providing a stable government	Corruption	Developing cities
Series1	39	24	14	10	6	5	2

For the poor, basic amenities and conditions of farmers was the prime concern while for the middle class and well off class it was unemployment, price rise, government stability and developing cities.

Here too there were critical demographic differences. The concern over non availability of basic amenities and concern for farmers was more pronounced in rural areas. Unemployment and price rise were a matter of alarm in small towns and in big cities the concerns were linked to government stability and price rise. Access to education also appeared to make a difference. Those with limited access to education, highlighted lack of basic amenities and conditions of farmers as their principal concerns. Those who had the benefit of higher education tended to focus more on corruption, unemployment and government instability. Class too appeared to matter. For the poor, basic amenities and conditions of farmers was the prime concern while for the middle class and well off class it was unemployment, price rise, government stability and developing cities.

Yet another snapshot of public perception on the delivery and availability of public services was undertaken as part of the Karnataka Election Study (KES) in 2013. A few public services were identified and respondents were asked whether the conditions of the same had improved, deteriorated or remained the same in the last five years (2008-13)

Figure : 13.4
Condition of select public services in the last five years (2008-13)



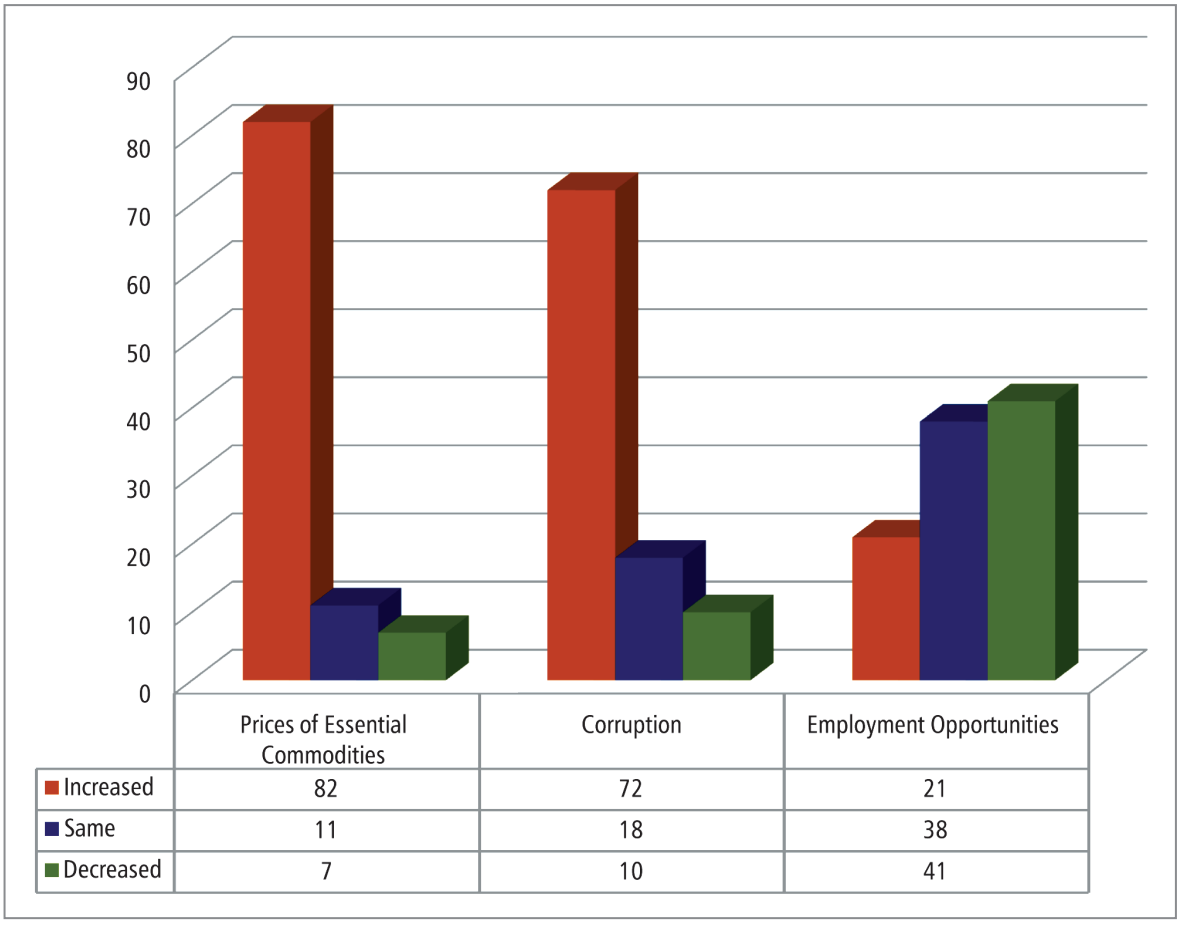
	Roads	Government Schools	Public Transport	Government Hospitals	Water supply	Religious Harmony	Irrigation facilities	Power supply	Law and Order
Deteriortaed	22	17	24	24	31	29	35	38	32
Remained the same	27	35	31	41	36	39	37	36	42
Improved	51	48	45	33	33	31	28	27	26

It is important to stress that more than half the respondents felt that the condition of roads had improved and close to half said government schools and public transport had improved. One third felt that government hospitals and water supply had improved. Three of every ten felt religious harmony was better and one fourth felt that irrigation facilities, power supply and law and order had improved. The greater disquiet was with power supply followed by irrigation facilities, law and order and water supply. In all these cases over three of every ten felt that the conditions had deteriorated.

Another set of questions asked in the same survey provide insights into popular perceptions of what had led to popular dissatisfaction. On three specific issues – prices of essential commodities, employment opportunities and corruption, respondents were asked whether they felt that the conditions have improved, deteriorated or remained the same.

Figure : 13.5

Condition of select issues in the last five years (2008-13)



	Prices of Essential Commodities	Corruption	Employment Opportunities
Increased	82	72	21
Same	11	18	38
Decreased	7	10	41

Table / Figure 13.5 clearly indicates the cause of public unhappiness. Eight of every ten respondents believed that prices of essential commodities had increased. Close to three fourths felt that corruption in government had increased and four of every ten felt that employment opportunities had reduced.

There were critical demographic differences. The concern about rise of prices of essential commodities was much more in villages. Most of those who said it had remained the same lived in towns and cities. Those living in small towns and the poor tended to feel that corruption had registered a sharp increase while urban dwellers may have been more cynical on the issue. Concern about employment opportunities was more pronounced among those who had limited access to education. Those who believed that employment opportunities had improved were more likely to be the rich and the middle class.

The findings from the six surveys that have been quoted above draw attention to the public perception at the ground on the delivery of a range of services by the State. If governance were to viewed as access to those whom it was meant for, the surveys provide a snapshot of the ground reality as perceived by common citizens. In important ways perceptions are linked to access and the accessibility

of the State. The sharp demographic variations in perceptions is also reflective of how different segments of society view the State and its record in terms of delivery of services.

IV. Conclusion

This paper has attempted to trace the Governance record of the Government of Karnataka in the last decade. As Stated in the introductory note, this paper takes the position that `access to citizens` should be the prism through which the success or otherwise of any governance initiative needs to be tested. While it may have argued that the ideal measure of governance is in terms of the policies, priorities and programmes that an administration adopts, this paper asserts that the true measure of governance is in the results and perception of those for whom governance is meant for. It is for this reason that the paper includes two segments on governance initiatives from the perspective of the government and another on citizen perception of governance.

It is beyond a shadow of doubt that the Government of Karnataka has pursued the agenda of good governance with enthusiasm and sincerity The ideological frame of governance appears to be visibly evident. So too does the institutional platform. Being hailed as a `reform oriented State` there have been a range of multi-track reforms that have been initiated. The paper outlines six broad areas in which the governance initiatives have clearly expressed themselves. Under the rubric of e-Governance initiatives, there have been several programmes and initiaitives which have won national and even global attention. The government has clearly been proactive in its efforts to harness the potential of information technology. As stated at the end of the segment, while connecting to information technology is vital, reconnecting to human technology is equally critical to be able to see the real benefits of e-Governance impacting positively on the lives of common people. Empowering local government was one of the traditional strengths of Karnataka. The last decade has seen many more initiatives underway. Given the fact that common people continued to believe that the most important challenges they continue to face are linked to basic amenities, strengthening the efforts of government that is closest to the people is imperative. With regard to Backward Region Development Priorities it could be argued that ambitious schemes have been initiated and a real assessment of the progress would require some time to be given for the initiatives to show results. Health Sector reforms have a clear focus but could face serious challenges in terms of their financial viability. Solid Waste Management especially in urban areas requires a more concerted effort of bringing together all the stakeholders, especially the local communities. More effective regulation of private players in the process may be required to ensure that the expectations of the citizens are met.

A review of the governance initiaitves would indicate the presence of extremely innovative, bold and proactive measures. The slippages in terms of implementation and budgeting for diverse citizen aspirations may help to ensure that the governance goals and actions of the State and fully aligned to public aspirations.

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Human Development Dimensions of Regional Disparities

North Karnataka
- Kannada, Marathi
-Jolada Rotti
-Brinjal curry
-Jubba Dhoti
-Ilakal seere
-Dharwad pedha
-Basavanna
-Hampi, Vijayapura
-Badami, Haihole

Costal Karnataka
- Kannada, Tulu, Konkani
-Neer Dose
-Fish Curry
-Yakshagana
-Paddy, Coconut
-Arecanut, pepper
-Murudeshwara
-Gokarna
-Udupi

Malnad Karnataka
- Kannada, Coorgi
-Kadubu, Pandi Curry
-Coffee, Arracnut, Peppar
-Coorg, Sringeri, Kolluru
-Beluru, Halebidu
-Jog Falls, Banavasi

South Karnataka
- Kannada, Tamil
-Ragi Mudde, Bassaaru
-Mysuru pak
-Mysuru Silk
-Sugarcane, Rice
-Coconut
-Mysuru Palace
-Srirangapatna
-Gomateshwara

Chapter-14

Human Development Dimensions of Regional Disparities

14.1.Introduction

There are two development paradigms which are in vogue today, namely, Economic Development and Human Development. In the former, income matters most, while in the latter, people and their capabilities matter most. Both the paradigms are in practice all over the world. The relationship between them is one of complementary and not competitive. Economic development is necessary for the improvement in people`s capabilities and human development is essential for the improvement in the levels of production and income. Both the paradigms have long history. However, the economic development paradigm assumed greater importance and growth in GDP (Gross Domestic Product) became over riding goal of development. There is a strong but a wrong notion that economic development can take care of the human capabilities and a separate and specific attention to indicators of human development is not necessary. But the empirical evidence shows that growth in GDP alone cannot bring about improvement in the indicators of human development. It needs conscious and concerted actions. Growth in income cannot transform itself into the lives of the people; the connection between growth and human development is neither obvious nor automatic. Moreover, income is only a means to an end and not an end in itself, while the determinants of human development such as literacy, education, health, equality, security not only means to an end but are also ends in themselves. Growth in income is not sufficient and it cannot guarantee the enhancement of human development. Growth may take place but people may continue to remain deprived end backward regions.

Growth in income is not sufficient and it cannot guarantee the enhancement of human development. Growth may take place but people may continue to remain deprived and backward regions.

In practice, regional disparities are measured and addressed in terms of income, production, investment etc. The problem of regional disparity is not merely an issue of low level of income. It is a matter of people including women and their livelihoods. Our understanding of regional disparity is enlarged by analysing it not only in terms of income but also in terms of the indicators of human development such as literacy, education, health including reproductive health, gender, security, dignity, equality etc.

In a geographically diverse, economically hierarchical and socially unequal society, polity and economy like ours, development cannot and does not confer benefits equitably among all the regions and all the

sections of the society. Therefore, Regional Social Justice has to be one of the key objectives of development. It is essential for combating the problem of regional disparities in Karnataka.

In this chapter, it is intended to explore and explain the nature, extent, trends and policy-related aspects of regional disparities in Karnataka. It is our endeavour in this chapter to capture and critique some of the critical dimensions of regional disparities in Karnataka. We would like to argue that it is not merely an economic issue. It is a mixed and vexed issue. It has a historical background. The social, political, economic and cultural factors have a bearing on the nature, extent and effects of regional disparity. Our objective is to focus on the Human Development dimensions of regional disparities in Karnataka. An attempt is also made to assess the performance of the measures initiated by the government during the plan periods to combat and contain the problem of regional disparities. This chapter has the following sections:-

Regional Social Justice has to be one of the key objectives of development. It is essential for combating the problem of regional disparities in Karnataka.

- The Theoretical Dimensions of Regional Social Justice
- Karnataka in the context of India
- Inter- District Disparities in Karnataka:

a) Report of the High Power Committee for the Redressal of Regional Imbalances,

b) Regional Dimensions of Literacy

c) Regional Dimensions of Demography,

d) Per Capita Income and Regional Disparity,

e) Regional Dimensions of Poverty and

f) Regional Dimensions of Human Development

g) Gender Dimensions of Regional Disparities

- Towards Redressal of Regional Disparity in Karnataka
- Critique of Regional Development Policy
- The Way Forward

In the last section, we have recommended a few measures based on the analysis and findings of this study to address and redress the problems in an effective and efficient manner.

The data collected from the census report 2011 as well as the Final Report of High Power Committee for the Redressal of Regional Imbalance (HPCFRRI 2002), District Human Development Reports 2014(all the 30 districts), Economic Survey Reports of Karnataka (Various Years), Karnataka Development Report (Planning Commission 2007), Karnataka Human Development Report 2005, the publications of Directorate of Economics and Statistics, Government of Karnataka relating to income and other reports are used extensively in the analysis. Besides, the data collected from the line departments and other agencies are also used to understand the issue of regional disparities in Karnataka. The Human Development Indices calculated by districts for this report are used to analyse regional disparities. The taluk level HD Indices published in the District Human Development Reports 2014 are used

to analyse the inter-district disparities.

The principal objectives of this chapter are as follows:

1. To understand the theoretical dimensions of Regional Social Justice;
2. To measure the extent of variations in Human Development Indicators among divisions, districts and taluks;
3. To critically examine the measures initiated by the government to combat and contain regional disparities in the State;
4. To suggest measures to combat regional disparities in Karnataka including the problem of intra-regional/divisional development disparities.

14.2.The Theoretical Dimensions of Regional Social Justice

For the purpose of this study, the Regional Social Justice (RSJ) is defined as a process of bringing all people in all the regions within the State or all the people in all the States within a country into the fold of development. It is in fact the extension of the principle of theory of social justice to the geographical regions. Social Justice is a process of advancing justice by remedying redressable injustices. The realization of the objective of social justice becomes meaningless in the absence of the regional balance in development. Without addressing the issues of regional disparities, it is not possible to achieve either the objective of inclusiveness–geographic as well as demographic or social justice. A preferential and differential approach is necessary with regard to backward regions to realize the goal of RSJ in development. John Rawls` second principle of social justice (Difference Principle) says that the socio-economic inequalities have to satisfy two conditions. The second condition is that they must be to the greatest benefits of the least advantaged members of the society (Sen, Amartya 2009, 59). This principle is basically concerned with distributive equity. Regional balance in development is an important component of distributive equity. Rawls argues that justice is to be seen from the perspective of fairness (justice as fairness). In terms of Aristotelian philosophy, a good social arrangement is one where the deprived sections of the society would receive the socio-economic benefits of development in an increasing scale. Dr.Nanjundappa. D.M. (1976) has tried to analyse the issue of regional disparity in terms of social justice. He calls this as 'Regional Social Justice'. There is a strong theoretical basis for Regional Social Justice (RSJ). It is necessary for promoting, protecting and strengthening democracy. It is argued that a democratic country can hardly want to become part California and part sub-Saharan Africa (Jean, Dreze and AmartyaSen, 2013, 40). The implication of this stand is that the coexistence of developed regions and privileged people, on the one hand, and deprived regions and underprivileged people, on the other hand, is neither conducive for, nor compatible with just and equal society. The first article of the Declaration on the Right to Development also speaks of every human person and all peoples are entitled to participate in, contribute to and enjoy economic, social, political

Regional balance in development is an important component of distributive equity. the coexistence of developed regions and privileged people, on the one hand, and deprived regions and underprivileged people, on the other hand, is neither conducive for, nor compatible with just and equal society.

and cultural development.

Gunnar Myrdal has formulated two concepts to explain the phenomenon of regional disparity, namely, 'spread effects' and 'backwash effects'. According to him, if regional disparity is left unaddressed, it would lead to developed regions generating backwash effects. It results in the migration of people and flow of human capital as well as physical capital from other parts of the country to developed regions. This leaves the other areas worse off than before because of out flow of resources—physical and human. The process of flowing of resources from poorer regions to developed regions is described as 'backwash effects'. The backward regions are supposed to experience what he calls the 'spread effects' (trickle down effects). Its effects are centrifugal in nature. It refers to the spread of waves of development from relatively developed regions to adjoining backward areas and as a result of the changes in the relative prices of resources, the backward regions tend to attract resources from the developed regions. However, the experience of many backward regions in general and Karnataka in particular is that the spread effects are not generally strong enough to generate dynamism in the adjoining centre. It is difficult to countervail and neutralize the backwash effects by the spread effects in a relatively underdeveloped nation/state. In this background, both Myrdal and Hirschman argued that the polarization effects can be neutralized and opposed by public policies and political interventions.

The governments have to use their policy instruments such as budgets and special programmes and policies to neutralize the backwash effects. We cannot expect this from the market forces. Some political scientists have drawn our attention to the fact that the political representatives in the backward regions, due to their class character, are not interested in fighting for the RSJ and also in articulating the plights of the backward people in the backward regions.

"The State shall, in particular, strive to minimize the inequalities in income, and endeavour to eliminate inequalities in status, facilities and opportunities, not only amongst individuals but also amongst groups of people residing in different areas or engaged in different vocations'

In our country, regional equality in development and social group equality are the Constitutional Rights. The Article 15 prohibits discrimination, based on, among other things, place of birth. The Clause (2) of the Article 38 of our Constitution has recognised the ideas of Regional Equality and the Social Group Equality. It States that "The State shall, in particular, strive to minimize the inequalities in income, and endeavour to eliminate inequalities in status, facilities and opportunities, not only amongst individuals but also amongst groups of people residing in different areas or engaged in different vocations' (Singh P, Mahendra, 2010). Therefore, maintenance of regional balance is a constitutional obligation. And the objective of social justice is a constitutional principle. It is necessary to keep us reminded from time to time the fact that regional disparity is a violation of both human rights and fundamental rights.

14.3. Karnataka in the Context of India

Whatever the indicators, Karnataka State stands as a middle order economy in the context of development at all-India level. It is neither an advanced state as that of Kerala/Tamil Nadu in terms

of human development nor as rich as that of Punjab/Haryana in terms of income development. It is heartening to note that the nature of its progress is closer to human development than to the income development. It has been successful in sustaining its moderate rates of development during the last two to three decades.

In the Indian context, we can describe it a '5 per cent economy'. The population of Karnataka (6.11crore) constitutes 5.05 per cent of India's population in 2011 (121.06crore). Similarly, its NSDP (Rs. 40,68,216 crore) in 2011-12 (2004-05 series) accounts for 5.52 per cent of India's NNDP (Rs.80,52,996 crore) at current prices (Government of India, Economic Survey of India: 2014-2015). Its geographical area (1.92 lakh sq. Km) accounts for 5.84 per cent of India's geographical area (32.87 lakh sq. Km). It stands above the national average in respect of many human development indicators (Planning Commission (GOI) 406). For instance its literacy rate is 103.28 per cent of India's literacy rate. Similarly its LEB is 101.46 per cent of India's LEB. Its IMR is lower than India's IMR by 26.19 per cent. Its Per Capita Income in 2013-14 at current prices is higher than India's Per Capita Income by 13.88 per cent. Karnataka's growth rate of population in 2001-2011 is lower than India's growth by 11.87 per cent. In the all India context Karnataka is neither a backward State nor a forward State. Even, its politics is known for its moderate and balanced character. In terms of HDI at all India level, its rank at 12th continued between 1999-2000 and 2007-08. However, its HDI value has increased from 0.432 in 1999-2000 to 0.519 in 2007-08 (Government of India 2011). It HDI value has been higher than that of India's HDI both in 1999-2000(0.387) and 2007-08(0.467). The middle order nature of Karnataka`s economy in the Indian context has its own advantages and disadvantages. The advantage is that it can avoid any kind of extreme developments in the polity, economy and society. And the disadvantage is that it is easy for the Union Government to ignore and brush aside the development needs and demands of the State.

14.4. Inter-District Disparities in Karnataka

Regional Disparity is not unique to Karnataka as a state and India as a nation. It is a universal phenomenon. In many states Maharashtra, Odisha, UP etc are facing this problem. Andhra Pradesh could not resolve the problem of regional disparity. In the end, it resulted in the division of the state and the formation of a new state, namely Telangana out of united Andhra Pradesh. The problem of regional disparity in Karnataka has a long history. At the time of reorganization of the State in 1956 there were five different regions in the State [Mysuru Princely State (Nine districts), Bombay Karnataka (Four Districts), Hyderabad Karnataka (Three Districts), Madras Karnataka (Two Districts) and Kodagu (One District)]. All the disparate regions were brought together to form the enlarged State of Karnataka. On the basis of this, we can say that regional disparity is congenital in respect of Karnataka. In this section an attempt is made to give an account of the regional disparity in terms of various indicators of development.

The problem of regional disparity in Karnataka has a long history. On the basis of this, we can say that regional disparity is congenital in respect of Karnataka.

14.4.1 Regional Disparities: High Power Committee for the Redressal of Regional Imbalances in Karnataka (HPCFRRI)

in Karnataka, Kalaburagi Division is the extremely backward division. The share of Bengaluru and Mysuru Divisions in the 39 Most Backward Taluks, is 13. Of the 13, 11 belong to the former and two to the latter. Mysuru division emerges as the most prosperous region in the State.

An account of regional disparities in Karnataka is presented in Table 14.1 based on the findings of the HPCFRRI in 2002. The HPC used a measure called Comprehensive Composite Development Index (CCDI) to measure development and to classify the taluks into Relatively Developed Taluks, Backward Taluks, More Backward Taluks and Most Backward Taluks. The details are given in Table 14.1. From an analytical study of the table, we can infer that backwardness in Karnataka is not confined to any particular region/ division. It is all pervading. There are backward districts in all the four divisions. If there is any difference, it is one of degree and not of kind. However,, backward districts are more in number in Belagavi and Kalaburagi divisions than in Bengaluru and Mysuru divisions. The Table 14.1 gives a broad picture of the nature and extent of regional disparity in Karnataka. The HPC has classified 61 taluks whose CCDI value is more than 1 as Relatively Developed Taluks and the remaining 114 taluks whose CCDI values are less than 1 are classified into three categories, namely, Backward Taluks, More Backward Taluks and Most Backward Taluks. According to the HPC, 39 taluks come under the category of the Most Backward Taluks. Out of 39 Most Backward Taluks, 26 belong to Belagavi and Kalaburagi Divisions. Out of 26, 21 belong to Kalaburagi Division while the share of Belgavi Division is 05. From this we can conclude that in Karnataka, Kalaburagi Division is the extremely backward division. The share of Bengaluru and Mysuru Divisions in the 39 Most Backward Taluks, is 13. Of the 13, 11 belong to the former and two to the latter. Mysuru division emerges as the most prosperous region in the State.

Table 14.1
Number of Relatively Developed, Backward, More Backward and the Most Backward Talukas in Karnataka 2002.

Divisions / Regions	Relatively Developed Taluks CCDI >1	Backward Taluks CCDI 0.99 to 0.89	More Backward Taluks CCDI 0.88 to 0.80.	Most Backward Taluks CCDI 0.79 to 0.53
Bengaluru Division	18	09	13	11
Mysuru Division	22	10	10	02
Belagavi Division	18	14	12	05
Kalburagi Division	03	02	05	21
Karnataka	61	35	40	39

Source: Government of Karnataka. 2002. Final Report. HPCFRRI. Pp. 223-226

14.4.2 Regional Dimensions of Literacy

Literacy is an important determinant of human development. Gaps in literacy between State level literacy rate and the literacy rates of the divisions concerned could be one of the indicators of regional disparity. Literacy is one of the constitutive components of human development. It is heartening to note that the spatial gap in literacy has been declining in the State.

Table 14.2
Literacy Rates by Divisions in Karnataka 2001 and 2011

Divisions / State	Literacy Rate 2001			Literacy Rate 2011		
	Total	Male	Female	Total	Male	Female
Bengaluru Division	72.37	80.28	63.98	80.32	85.94	74.42
Mysuru Division	69.11	76.93	61.36	76.86	82.91	70.97
Belagavi Division	65.10	76.28	53.48	74.38	82.75	65.88
Kalaburagi Division	53.60	65.82	41.06	64.44	74.20	54.51
Karnataka	66.64	76.10	56.87	75.34	82.47	68.08

Source: *Census of India 2001 Primary Census Abstract, Series 30 Karnataka, Directorate of Census Operations, Bengaluru. Census of India 2011 Primary Census Abstract, Series 30 Karnataka, Directorate of Census Operations, Bengaluru.*
Note: *Division-wise Literacy Rate is calculated for the purpose of this study.*

For instance the gap in literacy between state level literacy rate and the literacy rate of the Kalaburagi division was 13.04 percentage points in 2001 and it has come down to 10.90 percentage points in 2011. One can easily identify the extent of disparity in literacy across divisions in Karnataka as shown in Table 14.2. In 2001 the literacy rate in Karnataka was 66.64 per cent. Hyderabad Karnataka Region could not attain that level even in 2011. The descending order of the literacy rates among divisions set in the table exhibits the extent of regional disparity in Karnataka. Literacy is considered a constituent of development. So, literacy gaps among divisions reveal the development disparity in the State.

14.4.3 Regional Character of Demographic Diversities in the State

The backward districts in Karnataka are backward not only in terms of income development and human development but they are demographically backward too. There are four districts in Karnataka where the growth rate of population has increased between 1991-2001 and 2001-2011. They are Bengaluru, Vijayapura, Yadgir and Ballari. Almost all the districts in Bengaluru and Mysuru Divisions, with a few exceptions, experienced a growth rate of less than one percent while the districts of Belagavi and Kalaburagi Divisions have recorded more than one per cent growth rate during 2001-2011. If we leave Bengaluru, in which migration

The backward districts in Karnataka are backward not only in terms of income development and human development but they are demographically backward too.

has contributed largely to growth rate, the remaining three districts are exceptionally demographically backward districts. The proportion of child population (0-6 age group) in these demographically backward districts in 2011 is more than 14 per cent. The State average is 11.72 per cent. This is another indicator of demographic backwardness. Another important demographic element which merits attention is that the backward districts in Karnataka have predominantly higher proportion of SC and ST population.

Table 14.3
Division-wise distribution of SC and ST Population in Karnataka 2011(in Lakh)

Sl.No.	Divisions	SC	ST	SC+ST	Percentage Share in Division's total population
1	Bengaluru Division	39.92	13.12	53.04	23.55
2	Mysuru Division	19.57	7.47	27.04	21.52
3	Belagavi Division	20.26	7.58	27.84	18.81
4	Kalaburagi Division	24.99	14.30	39.29	35.03
Karnataka		104.25	42.47	147.21	24.01

Census of India 2011, Primary Census Abstract, Data Highlights, Karnataka, Series 30
Directorate of Census Operations, Bengaluru.

The percentage of SC and ST together, in backward districts like Yadgir, Raichur, Ballari, Kolar, Chitradurga and Chamarajnagar is more than 35 per cent as against the State average of 24.1 percent.

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The problem of social exclusion and economic inequality must have played a crucial role in keeping these districts backward and people deprived. The distribution of SC and ST population across divisions is shown in Table 14.3. The Bengaluru and Mysuru Divisions account for 54.40 per cent of Scheduled Group Population (SC+ST) which is less than their share in total population (57.43 per cent). In contrast to it, in Belagavi and Kalaburagi Divisions, the share in Scheduled Group Population (SC+ST) is 45.60 percent which is more than their share in total population (42.57 per cent). In Bengaluru, Mysuru and Belagavi divisions, the percentage of SC and ST is less than their percentage at the State level. However, in Kalaburagi Division the proportion of SC and ST Population in the total population of the division is 35.03 per cent. If we add 15 per cent minority population to SC and ST population, the excluded and deprived population together accounts for more than 50 per cent of the total population in this division. This division has to struggle hard to develop with 50 per cent of its population being characterised as the most deprived population. The backward districts are characterised by higher concentration of agricultural labourers and historically marginalised groups - the scheduled castes and scheduled tribes.

14.4.4. Per Capita Net District Domestic Product and Regional Disparities

The historical data relating to districts with the districts having the highest and the lowest per capita net district domestic product from 1960/61 to 2012/13 are given in Table 14.4. Kogadu district of Mysuru division had the privilege of having highest per capita income in the first four points of time (1960/61 to 1990/91) and Bengaluru urban district in Bengaluru division replaced Kodagu from the highest per capita in the last three points of time (1999.00 to 2012/13). As against this, except in 1970/71 and 2010-11, one or the other districts of Kalaburagi division occupied the rank of the lowest per capita income in the five points of time. In 1970/71 the lowest per capita district was Vijayapura of Belagavi division and in 2010/11the lowest place was occupied by Chamarajnagara district of Mysuru division.

The Compound Annual Growth Rate (CAGR) of the highest per capita NDDP between 1960/61 and 2012/13 was 4.34 per cent while the CAGR of the lowest per capita NDDP was 2.68 per cent between the same periods. The ratio between the lowest per capita NDDP and the highest per capita NDDP has increased from 3.65 in 1960/61 to 5.31 in 2012/13. The inference of these findings is that the regional disparities have been continuously increasing in the state since 1960/61.

Table 14.4
Districts with Highest and Lowest Per Capita Net District Domestic Product at Current Prices in Karnataka:1960-61 to 2012-13 (In Rupees)

Sl.No	Years	Highest Per Capita NDDP		Lowest Per Capita NDDP		Per Capita NSDP
		Name of the District	Per Capita NDDP	Name of the District	Per Capita NDDP	
1	1960-61	Kodagu	728	Bidar	199	296
2	1970-71	Kodagu	1851	Vijayapura	979	685
3	1980-81	Kodagu	3079	Kalaburagi	862	1528
4	1990-91	Kodagu	10583	Bidar	3220	4631
5	2000-01	Bengaluru (U)	28512	Bidar	10611	17847
6	2010-11	Bengaluru (U)	115063	Chamarajanagar	32342	62251
7	2012-13	Bengaluru (U)	202347	Yadgir	38097	77168

Source: Government of Karnataka 2013 State and District Domestic Product 2014-15. Directorate of Economics and Statistics, Bengaluru.Pp.184-185.

It is instructive to note that the highest per capita income in 1960/61 accounted for 245.94 per cent of the State per capita income and it has gone up to 262.22 per cent of the State per capita income in 2012/13. In contrast to this, the lowest per capita income in 1960/61 accounted for 67.13 per cent of the State per capita income and it has gone down to 49.96 per cent in 2012/13. It is very clear from the analysis of the historical data of per capita income relating to the regional dimension is that the regional disparities have been widening and deepening in Karnataka.

14.4.5. Human Development and Poverty: A Regional Perspective

the intensity of poverty is more in the districts of Kalaburagi division than that of the districts of other divisions.

The interrelationship between HD and Poverty is an established fact. The improvement in the level of HD would reduce the intensity of poverty and reduction in the incidence of poverty would affect HD positively. Therefore, the indices of HD such as HDI(Human Development Index), GII(Gender Inequality Index), CDI(Child Development Index), FSI(Food Security Index) and DCDI(District Composite Development Index) help in identifying the regional dimensions of poverty in Karnataka. These indices have been calculated for all the 30 districts and 176 taluks for District Human Development Reports 2014 published by all the Zilla Panchayats in collaboration with the Department of Planning in Karnataka. Many indicators which go into the three dimensions of all these indices of HD are sensitive to poverty. For instance, the levels of non-agricultural labourers and per capita income that go into the standard of living dimension of HDI are negatively related to poverty. Similarly the indicators like anaemic pregnant women representing health in GII, malnourished children under nutrition in CDI, BPL card holders under accessibility in FSI and households without toilet and sanitation in DCDI reflect the extent and nature of poverty. Poverty is a multidimensional phenomenon. A critical look at these indices shows that the districts belonging to Belagavi and Kalaburagi divisions suffer from low values reflecting higher degree of the incidence of poverty(for the district-wise data on all these indices, see Chapters 2 and 9 of this report). The Multidimensional Poverty Index calculated for this report reinforces the regional character of poverty in Karnataka reflected in other HD indices.

An analysis of the MPI data in Table 14.5 reveals that the intensity of poverty is more in the districts of Kalaburagi division than that of the districts of other divisions. In the districts of this division, MPI ranges from 12.07 per cent in Bidar to 20.18 per cent in Yadgir district. Five districts of this division (except Bidar) occupy the bottom five ranks in MPI. The top five ranks are shared by one district in Bengaluru division and four districts in Mysuru division. The levels of MPI exceed the state level MPI (9.57 per cent) in 5 districts each in Belagavi and Kalaburagi divisions while the levels of MPI in all the districts of Bengaluru division and districts of Mysuru division and 3 districts of Belagavi division are lower than that of the State level MPI.

Table 14.5
Division-wise and District-wise Multidimensional Poverty Index 2014

Names of the Districts	MPI(%)	Rank	Names of the Districts	MPI(%)	Rank
Bengaluru Division :			Mysuru Division :		
Bengaluru(U)	2.40	1	Chamarajnagara	7.78	15
Bengaluru(R)	6.15	12	Chikkamagaluru	3.10	3
Chikaballapura	6.46	13	Dakshina Kannada	2.54	2
Chitradurga	8.58	18	Hassan	5.54	10
Davangere	8.22	16	Kodagu	3.36	4
Kolar	6.84	14	Mandya	4.34	7
Ramnagara	4.77	9	Mysuru	3.91	6
Shivamogga	5.95	11	Udupi	3.44	5
Tumakuru	4.49	8			

Belagavi Division :			Kalaburagi Division :		
Bagalkote	12.58	24	Ballari	14.94	26
Belagavi	8.81	19	Bidar	12.07	23
Dharwad	8.37	17	Kalaburagi	18.81	28
Gadag	11.07	22	Koppal	16.69	27
Haveri	8.90	20	Raichur	19.32	29
Uttara Kannada	10.08	21	Yadgir	20.18	30
Vijayapura	13.37	25			
Karnataka State	9.57				

Source: see Chapters 2 and 9 of this report

There are nine districts, six belonging to Kalaburagi division and three to Belagavi divisions where the value of MPI exceeds 11 per cent. In the remaining 21 districts, it is less than 11 per cent. The corresponding value of the State is also less than 11 per cent. Thus, poverty is more a phenomenon of Belagavi and Kalaburagi divisions than that of Bengaluru and Mysuru divisions. The district-wise MPI calculated for this report reinforces the findings about the regional disparities that are found in respect of literacy, per capita income, HDI and other indicators.

14.4.6. Human Development Dimensions of Regional Disparities

Karnataka is the first State in the country to have published District Human Development Reports for all the 30 districts at a time in 2014. So far, it has published two State Human Development Reports, the first in 1999 and the second 2005. The district-wise HDI is calculated for the purpose of the third State Human Development Report. The HDI is a composite value of three dimensional indices, namely, Health Index represented by Life Expectancy at Birth, Education Index represented by Expected Years of Schooling and Mean Years of Schooling and the Standard of Living Index represented by Gross Per Capita Income(for details see Chapter 2of this report). The HDI and three dimensional indices of 30 districts are shown in Table 14.6. These indices are calculated by using global goal posts set by UNDP.

Table 14.6
District-wise HDI in Karnataka with Global Goal Posts: (2012)

Districts	Health Index	Income Index	Mean Years of Schooling Index	Expected Years of Schooling Index	Education Index	HDI	Rank
Bagalkote	0.7240	0.5431	0.2840	0.5681	0.4260	0.5513	24
Bengaluru	0.8151	0.7279	0.6477	0.6599	0.6538	0.7293	1
Bengaluru Rural	0.7760	0.6204	0.4542	0.6782	0.5662	0.6484	4
Belagavi	0.7442	0.5672	0.3330	0.5889	0.4609	0.5794	18
Ballari	0.6854	0.5551	0.2361	0.6128	0.4245	0.5446	26
Bidar	0.7647	0.5311	0.2907	0.5979	0.4443	0.5651	22
Vijayapura	0.7539	0.5424	0.2951	0.6383	0.4667	0.5757	19
Chamarajanagar	0.7537	0.5937	0.2441	0.5762	0.4101	0.5683	21
Chikkaballapura	0.7539	0.5885	0.3365	0.6728	0.5046	0.6072	13
Chikkamagaluru	0.7928	0.5521	0.4643	0.7111	0.5877	0.6360	5
Chitradurga	0.7256	0.5356	0.2720	0.6303	0.4511	0.5597	23
Dakshina Kannada	0.8027	0.6796	0.4476	0.6239	0.5358	0.6636	3
Davanagere	0.7396	0.5761	0.2901	0.6384	0.4643	0.5827	16
Dharwad	0.7488	0.5922	0.4312	0.6620	0.5466	0.6235	8
Gadag	0.7019	0.5659	0.3060	0.6338	0.4699	0.5715	20
Kalaburagi	0.7038	0.5373	0.2178	0.5884	0.4031	0.5342	29
Hassan	0.7998	0.5625	0.3325	0.6673	0.4999	0.6081	12
Haveri	0.7485	0.5583	0.2286	0.5207	0.3747	0.5390	28
Kodagu	0.7693	0.7147	0.5853	0.5667	0.5760	0.6816	2
Kolar	0.7539	0.6271	0.3409	0.7000	0.5204	0.6266	7
Koppal	0.6744	0.5380	0.2470	0.6753	0.4611	0.5510	25
Mandya	0.7801	0.6012	0.2957	0.6188	0.4572	0.5986	14
Mysuru	0.7375	0.6143	0.4072	0.6468	0.5270	0.6204	9
Raichur	0.6444	0.5633	0.2195	0.6477	0.4336	0.5399	27
Ramanagara	0.7760	0.5819	0.3288	0.5881	0.4584	0.5916	15
Shivamogga	0.7868	0.5615	0.3588	0.6690	0.5139	0.6101	10
Tumakuru	0.7528	0.5590	0.2922	0.6387	0.4654	0.5807	17
Udupi	0.8289	0.6250	0.3591	0.6123	0.4857	0.6313	6
Uttara Kannada	0.7828	0.5943	0.3462	0.6289	0.4876	0.6099	11
Yadagir	0.7038	0.5373	0.2178	0.4253	0.3215	0.4954	30
KARNATAKA	0.7462	0.6151	0.3767	0.6178	0.4973	0.6111	

Source: see chapters 2 and 9.

The values of HDI range from a minimum of 0.5597 to a maximum of 0.7293 in Bengaluru Division, from 0.5683 to 0.6816 in Mysuru Division, from 0.5513 to 0.6235 in Belagavi Division and from 0.4954 to 0.5651 in Kalaburagi Division. It is interesting to note that the Health Index exceeds 0.7 in almost all the districts except Ballari and Koppal districts. In respect of Education Index, the values exceed 0.5 in 10 districts and it is less than 0.5 in 18 districts. In the remaining two districts, namely,Haveri and Yadgir, the values are the lowest at 0.3747 and 0.3215 respectively.

14.4.7. Top Five and Bottom Five HDI Districts in:1991, 2001 and 2012.

An attempt is made to identify the top five and the bottom five districts in terms of HDI across three points of time for which data on HDI are available. This identification shows that the Top Districts List is occupied by the districts of Bengaluru and Mysuru divisions, while the Bottom Districts List consists of the districts of Belagavi and Kalaburagi divisions. The values of HDI across three points of time are not comparable because the indicators used and the methodology adopted in each point of time for the calculation of HDI differs from one another. However, the continuation of regional disparities can be understood from the analysis of the ranks attained by the districts in terms of values of HDI. There are some changes in the composition of districts in the top five districts group as well as in the bottom five districts group. Three districts, namely, Kodagu, Dakshina Kannada and Bengaluru Urban continue to appear in the top list in all the three points of time. Shivamogga and Udupi districts appeared in 1991 and 2001 in this list. In 2014, Chikkamagaluru and Bengaluru Rural districts found place in the top list by replacing Shivamogga and Udupi districts. In contrast to it, in the bottom five districts group, we find significant changes in the composition of districts across three points of time. Raichur and Kalaburagi districts appeared in all the three points of time. Koppal and Chamarajnagara districts appeared in the bottom list in 1991 and 2001. Bidar appeared in 1991 while Vijayapur got the place in the bottom list in 2001.

the Top Districts List is occupied by the districts of Bengaluru and Mysuru divisions, while the Bottom Districts List consists of the districts of Belagavi and Kalaburagi divisions.

Table 14.7

Top Five and the Bottom Five Districts in Human Development Index in Karnataka:1991, 2001 and 2012

TOP FIVE DISTRICTS			
Sl.No	**1991**	**2001**	**2012**
1	D. Kannada-0.661(1)	Bengaluru(U)-0.753(1)	Bengaluru(U)-0.729(1)
2	Udupi-0.659(2)	D. Kannada-0.722(2)	Kodagu-0.681(2)
3	Kodagu-0.623(3)	Udupi-0.714(3)	D.Kannada-0.663(3)
4	Bengaluru(U)-0.623(4)	Kodagu-0.697(4)	Bengaluru(R)-0.648(4)
5	Shivamogga-0.584(5)	Shivamogga-0.673(5)	Chikkamagaluru-636(5)

BOTTOM FIVE DISTRICTS			
Sl.No.	**1991**	**2001**	**2012**
1	Bidar -0.492(23)	Vijayapura-0.589.(23)	Ballari-0.544(26)
2	Chamarajnagar-0.488(24)	Koppal-0.582.(24)	Raichur-0.539(27)
3	Kalaburagi-0.453(25)	Chamarajnagara-0.576(25)	Haveri-0.539(28)
4	Koppal-0.446 (26)	Kalaburagi-0.564(26)	Kalaburagi-0.534(29)
5	Raichur-0.443.(27)	Raichur-0.547(27)	Ydgir-0.495(30)

Source:
(1) Government of Karnataka. 2015. Karnataka Human Development Reports: 2005
(2) Government of Karnataka 2015. Human Development: Performance of Districts, Taluks and Urban Local Bodies in Karnataka 2014. Human Development Division, Planning, Programme Monitoring and Statistics Department, Bengaluru. P:19.
(3) Government of Karnataka. Karnataka Human Developmenr Report 2005. Planning, Programme Monitoring and Statistics Department, Bengaluru. P:16
Note: The figures in brackets indicate the rank each district has attained out of the total number of districts in the State.

In 2012, apart from Raichur and Kalaburagi districts appeared in all the points of time in the bottom list, another three districts appear in all the three points of time in the bottom list, namely Haveri, Ballari and Yadgir. It is pertinent to note that no districts of Bengaluru and Mysuru divisions has appeared in the bottom list and no districts of Belagavi and Kalaburagi division found a place in the top five districts list. The districts such as Bidar and Koppal belonging to Kalaburagi division and Chamarajnagara belonging to Mysuru division have moved from the low human development category to middle human development category. The composition of bottom category has changed significantly while the composition of districts in the top category has changed only slightly. In 2012, the top position is shared by the districts of Bengaluru amdMysuru divisions while the bottom position is shared by the districts of Belagavi and Kalaburagi divisions. However, it is heartening to note that Bidar, Koppal and Chamarajnagar have moved from low human development category to middle human development category in 2012.

14.4.8. Classification of Districts based on the Values of HDI- 1991, 2001 and 2012 (UNDP Method)

Karnataka is the second State in the country to publish its First Human Development Report in 1999. Its second report came out in 2005. The second report contains HD Indices of 27 districts for both 1991 and 2001. The Zilla Panchayats of all the 30 districts, in collaboration with Planning Department based on the guidelines provided by UNDP, have published their District Human Development Reports in 2014. We have classified the districts into High, Middle and Low Human Development districts based on the values of HDI using the UNDP method for three points of time. In 1991 as many as 20 districts out of 27 were in low human development category and 7 districts were in the middle human development category. However,, in 2001, 3 districts were in high human development category, 23 districts were in middle human development category and only one district was

in low human development category. In 2104, 24 out of 30 districts were in middle category and 5 in low human development category. Only one district was there in high human development category.

Table 14.8
Classification of Districts into High, Medium and Low Human Development Districts Based on their Values of HDI-1991, 2001 and 2012 (UNDP Method)

Years	High >0.700				Middle>0.550 to <0.699				Low <0.550				Total
	Ben	Mys	Bel	Kal	Ben	Mys	Bel	Kal	Ben	Mys	Bel	Kal	
1991	-	-	-	-	2	4	1	0	5	4	6	5	27
2001	1	2	--	--	6	6	7	4	--	--	--	1	27
2012	1	--	--	--	8	8	6	2	--	--	1	4	30

Ben: Bengaluru Division, Mys: Mysuru Division, Bel: Belagavi Division and Kal: Kalaburagi Division.

From the data in Table14.5, it is clear that Karnataka is a middle order State. In 2005, out of 27 districts, there were 23 districts in the middle human development category and in 2012, there were 24 districts in this category. It is distressing thing to note that four out of six districts of Kalaburagi division were in 'LOW' human development category in 2012.

14.4.9. Division-wise Distribution of Taluks based on the Values of HDI 2014

The District Human Development Reports of 30 districts of Karnataka contain the values of HDI of 176 taluks. An attempt is made in Table 14.9 to classify the taluks division-wise into High, Middle and Low Human Development Taluks based on the UNDP method.

Table 14.9
Division-wise Classification of Taluks into High, Medium and Low Human Development Taluks 2014

Sl. No	Ranges of values of HDI	Bengaluru Division	Mysuru Division	Belagavi Division	Kalaburagi Division	Total
1	High (>0.700)	04	01	00	00	05
2	Medium(>0.550 &<0.699	14	16	06	02	38
3	Low (<0.550)	34	27	43	29	133
4	Total	52	44	49	31	176

Source: Government of Karnataka 2015. Human Development: Performance of Districts, Taluks and Urban Local Bodies in Karnataka 2014. Human Development Division, Planning, Programme Monitoring and Statistics Department, Bengaluru.

It reveals that the districts of Kalaburagi division are more backward than that of the districts of other three divisions in respect of all the five human development indices. The backwardness is multidimensional in nature.

Out of 176 taluks, 133(75.57 per cent) are in the low HD category. Only five taluks, four in Bengaluru division and one in Mysuru division (2.84 per cent) are in the category of high HD taluks group. Out of 31 total taluks in Kalaburagi division, as many as 29 (93.55 per cent) are in the low HD taluk group. Similarly in Belagavi division, 87.76 per cent of the total taluks are in low HD taluk group. As against this, out of total taluks in Bengaluru (52) and Mysuru (44), 65.38 per cent and 61.36 per cent respectively belong to low HD taluk groups.

14.4.10. Maximum and Minimum Values of HDI, GII, CDI, FSI and DCDI in Karnataka

An attempt is made in Table 14.10 to identify division-wise maximum and minimum values of all the indices of HD, namely Human Development Index, Gender Inequality Index, Child Development Index, Food Security Index and District Composite Development Index. It is unfortunate that the minimum values attained by the districts of Kalaburagi division are lower than that of the minimum values attained by the districts of other three divisions. It reveals that the districts of Kalaburagi division are more backward than that of the districts of other three divisions in respect of all the five human development indices. The backwardness is multidimensional in nature.

Table 14.10
Division-wise Classification of Maximum and Minimum Values of Indices of Human Development

Indices of Human Development	Bengaluru Division		Mysuru Division		Belagavi Division		Kalaburagi Division	
	Maxi	Mini	Maxi	Mini	Maxi	Mini	Maxi	Mini
HDI	0.928 (1)	0.386 (23)	0.691 (2)	0.401 (22)	0.610 (6)	0.330 (27)	0.407 (19)	0.165 (30)
GII	0.124 (25)	0.056 (3)	0.105 (17)	0.038 (1)	0.130 (27)	0.070 (7)	0.167 (29)	0.110 (18)
CDI	0.743 (4)	0.466 (26)	0.840 (1)	0.555 (18)	0.734 (5)	0.474 (24)	0.569 (17)	0.231 (30)
FSI	0.589 (4)	0.216 (30)	0.694 (2)	0.362 (20)	0.695 (1)	0.422 (14)	0.569 (5)	0.266 (29)
DCDI	0.708 (1)	0.472 (20)	0.593 (4)	0.457 (21)	0.539 (9)	0.323 (29)	0.453 (22)	0.276 (30)

Source: Government of Karnataka. 2016. Annual Plan 2016-17. Volume-I. Planning, Programme Monitoring and Statistics Department. Bengaluru.p.36
Note: (1). The figures in the brackets indicate the ranks in the State.
(2). Maxi: Maximum. Mini: Minimum.

The data in Table 14.10 reveal that in respect of all the indices, districts of Kalaburagi division occupy the last position. The second position goes to Belagavi division. Bengaluru and Mysuru divisions vie each other for the first position. There is no dispute about the last position occupied by Kalaburagi division.

14.4.11. Persistence of Regional Development Disparities 2007-08 to 2012-13

It is heartening to note that our government has implemented the recommendations of HPC for the redressal of regional disparity and Eight-Year Special Development Plan (SDP) in 2007-2008. It is indeed disheartening to note that the regional development disparity has been persisting even after the completion of the Eight-Year SDP (2007-08 and 2014-15). The data in Table 14.11 reveal that the GDDP of Bengaluru division has been increasing at the cost of the GDDP of other three divisions in Karnataka. The GDDP of the districts of Bengaluru division in 2004-05 accounted for 46.64 per cent of the GSDP while its share in State`s population is 34.99 per cent.

Table 14.11
Gross District Domestic Product (at current prices) and Population by Divisions in Karnataka (2004-05 and 2012-13)

Sl. No	Divisions and State	2004-2005		2012-2013	
		GDDP (Rs in crore)	Population (in lakh)	GDDP (Rs in crore)	Population (in lakh)
1	Bengaluru Division	77768.59 (46.64)	193.57 (34.99)	260848.29 (49.97)	211.26 (34.99)
2	Mysuru Division	36320.04 (21.78)	123.44 (22.31)	102982.73 (19.73)	134.72 (22.31)
3	Belagavi Division	30001.98 (17.99)	136.53 (24.68)	88315.19 (16.92)	149.01 (24.68)
4	Kalaburagi Division	22659.53 (13.59)	99.73 (18.02)	69847.38 (13.38)	108.84 (18.02)
Karnataka State(GSDP)		166747.14 (100.00)	553.27 (100.00)	521993.59 (100.00)	603.83 (100.00)

Source: Government of Karnataka 2013. State and District Domestic Product of Karnataka 2014-15. Directorate of Economics and Statistics, Bengaluru.Pp 99 and 159
Note: The figures in brackets indicate the percentage share in the GSDP and Population.

In 2012-13, the GDDP of Bengaluru division accounted for 49.97 per cent of the GSDP while its share in State`s population remained the same. As against this, the combined GDDP of the other three divisions account for 53.36 per cent of the GSDP, while their share in the state`s population was 65.01per cent. It is observed that the share of Belagavi and Kalaburagi division in the

GSDP has declined from 31.58 per cent in 2004-05 to 30.30 per cent in 2012-13. More than this, what is disturbing is that the share of the Bengaluru division in the GSDP at both the points of time has been far higher than that of its corresponding share in the State`s population. The share of the other three divisions in the GSDP has been disproportionately lower than that of their share in the State`s population.

The rate of growth of GSDP during this period is 23.57 per cent while the GDDP of the Bengaluru division grew at an annual rate of 26.15 per cent per year. As against this, the GDDP of Mysuru, Belagavi and Kalaburagi divisions grew at an annual rate of 20.39 per cent, 21.59 per cent and 23.13 per cent respectively between 2004-05 and 2012-13.

14.4.12 Gender Dimensions of Regional Disparities

Gender relations constitute an integral and inalienable part of human development. However, it has remained as the most neglected aspect in development theory and practice. In this section, an attempt is made to analyse the regional dimensions of gender relations in Karnataka. The Gender Inequality Index (GII) is calculated for all the districts in the State as a part of District Human Development Reports 2015. The gender dimensions of regional disparities are captured with the help of four gender sensitive indicators including GII in the following Table 14.12

Table 14.12
Division-wise Gender Dimensions of Regional Disparities in Karnataka

Particulars	Female Disadvantage in Literacy		Female Agricultural Labourers as a percentage of Total Female Workers		Division-Wise Highest and the Lowest GII	
	2001	2011	2001	2011	Highest GII	Lowest GII
Bengaluru Division	-0.25	-0.15	34.37	29.52	0.4255 (Kolar)	0.3630 (Bengaluru)
Mysuru Division	-0.25	-0.17	27.03	27.62	0.4587 (Mysuru)	0.2077 (Udupi)
Belagavi Division	-0.43	-0.26	54.30	52.87	0.4849 (Bagalkote)	0.3653 (U.Kannada)
Kalaburagi Division	-0.60	-0.36	66.77	58.73	0.4803 (Raichur)	0.4286 (Bidar)
Karnataka	-0.34	-0.21	43.51	39.87	--	--

Source: (1) Census of India 2001, Primary Census Abstract, Series 30. Karnataka.
(2) Census of India 2011, Primary Census Abstract, Series 30. Karnataka.
(3) See Chapter 02 in this report.
Note: Female Disadvantage in Literacy (FD)= (Female Literacy Rate) – (Male Literacy Rate)/ (Female Literacy Rate)

The female disadvantage both in terms of literacy and agricultural labourers has been declining. However, regional disparities in both the indicators have been continuing. All the three indicators used in Table 14.12 to measure the female disadvantage reveal that it is extremely higher in the districts of Belagavi division and Kalaburagi division than that of female disadvantage in the districts of Bengaluru division and Mysuru division. Between Kalaburagi division and Belagavi division, Female Disadvantage in all the three indicators is higher in the former than in the latter. Gender inequality is all pervasive in the State. However, the values of gender inequalities are higher in the districts of Belagavi division and Kalaburagi division in respect of all the three indicators. The values of female disadvantage affect adversely the performance of the State in the field of human development in the backward regions. Gender sensitive indicators help in pushing up the values of human development index. Gender equality and human development will go together.

14.4.13. Production Relations and Productive Forces

There could be many reasons for the persistence of regional disparities in Karnataka. We cannot ignore the historical factors which are at the core of this issue. However,, we are focusing on one of the most critical reasons for the persistence of regional disparity in Karnataka in this section. Unless and until the production relations are transformed in favour of agricultural labourers, in the backward regions, it is not possible to bring development in these regions faster than that of the development in the developed regions.

the values of gender inequalities are higher in the districts of Belagavi division and Kalaburagi division in respect of all the three indicators.

Table 14.13
Production Relations and Productive Forces(Number in lakh)

Divisions	Total Workers (Main+Marginal)		Cultivators		Landless Agricultural wage labourers		Total Agricultural Workers	
	2001	2011	2001	2011	2001	2011	2001	2011
Bengaluru Division	82.23 (34.96)	110.23 (39.55)	22.58 (32.55)	22.06 (33.54)	19.82 (26.25)	20.04 (28.03)	38.88 (29.58)	42.10 (30.56)
Mysuru Dvision	54.76 (23.28)	53.57 (19.22)	17.34 (25.00)	14.05 (21.36)	10.24 (16.49)	10.14 (14.18)	27.58 (20.98)	24.19 (17.62)
Belagavi Division	57.09 (24.27)	64.67 (23.24)	18.00 (25.95)	17.76 (27.00)	18.85 (30.36)	21.38 (29.91)	36.85 (28.03)	39.14 (28.52)
Kalbaragi Division	41.14 (17.49)	50.09 (18.00)	11.43 (16.48)	11.90 (18.09)	16.20 (26.09)	19.92 (13.87)	28.13 (21.40)	31.82 (23.19)
Karnataka State	235.22 (100.00)	278.72 (100.00)	69.35 (100.00)	65.77 (100.00)	62.09 (100.00)	71.48 (100.00)	131.44 (100.00)	137.25 (100.00)

Source: (1) Census of India 2001. Primary Census Abstract, Data Highlights, Karnataka. Series 30.Directorate of Census Operations, Bengaluru.
(2) Census of India 2011. Primary Census Abstract, Data Highlights, Karnataka. Series 30.Directorate of Census Operations, Bengaluru.

in Karnataka, measured by using any development and deprivation indicators or indices, all the six districts of Kalaburagi division, three districts of Belagavi division, namely Bagalkot, Vijayapur and Haveri districts, Chamarajnagara district of Mysuru division and Chitradurga district of Bengaluru division emerge as more deprived, more backward than that of other districts

The 'production relations' is defined as the relationship between agricultural lands and agricultural labourers. In other words, it refers to ownership and control relations pertaining to society's productive assets. Production Forces refer to the size of cultivators and agricultural labourers. It refers to relationships of people to the objects used for the production of material wealth. The ownership pattern of means of production is referred to as production relations. Land is one of the basic factors determining the nature of the production function. We have two types of people depending on land, namely cultivators and landless agricultural labourers (Productive Forces). The data relating to this is given in Table 14.13.

It is interesting to note that in Bengaluru and Mysuru Divisions, the size of cultivators exceed the size of agricultural labourers while in Belagavi and Kalburagi Divisions, the size of agricultural labourers exceed the size of cultivators. The inference that can be drawn from this is that in Bengaluru and Mysuru Divisions 'production relations' is assuming the character of capitalism while in Belagavi and Kalaburagi Divisions it continues to be feudalistic in character. The production forces in Bengaluru and Mysuru Divisions could influence the production relations to a great extent. But in Belagavi and Kalaburagi Divisions, and particularly in Kalaburagi division production forces have not been able to influence the production relations. This is because, in Bengaluru and Mysuru Divisions together, agricultural labourers account for 18.42 per cent of total workers while in Belagavi and Kalburagi Divisions together, they account for 35.98 per cent of total workers in 2011. It is also necessary to note that the proportion of the femal elabourers in agricultural labourers is more than the proportion of the female labourers in total workers. For instance, in Bengaluru and Mysuru Divisions together, the females in total agricultural labourers account for 51.85 per cent, while their proportion in total workers in the region is only 33.15 per cent. In Belagavi and Kalaburagi Divisions, females in the total workers constitute 37.97 per cent, while in agricultural labourers, they account for 56.78 per cent (Census of India 2011). These facts throw light on the existence of differential degree of deprivation between Bengaluru and Mysuru Divisions, on the one hand, and Belagavi and Kalaburagi Divisions, on the other.

What comes out finally from the foregoing analyses of the regional dimensions of literacy, demography, income, indicesof human development, gender relationsis that in Karnataka, measured by using any development and deprivation indicators or indices, all the six districts of Kalaburagi division, three districts of Belagavi division, namely Bagalkot, Vijayapur and Haveri districts, Chamarajnagara district of Mysuru division and Chitradurga district of Bengaluru division emerge as more deprived, more backward than that of other districts belonging to Bengaluru, Mysuru and Belagavi divisions. They are more deprived both in terms of economic development and human development.

14.5. Towards Redressal of Regional Disparities

The government in the State has been striving hard to combat and contain regional disparities since its reorganisation in 1956. Not with

standing these measures, disparities continue to play havoc with the lives and livelihoods of people. In this section, we have analysed the performances of the measures initiated by the government after 1956 to address and redress the issues of regional disparity (for details see Planning Commission (GoI) 2007:421). The issue of regional disparity is assuming serious dimensions in recent years. The people affected by the differential levels and rates of development across divisions have gone to the extent of speaking about the division of the State.

14.5.1. Area Development Approach

One of the earliest measures initiated by the government to address the issue of regional disparity is the constitution of Area Development Boards. The Government of Karnataka has established three boards for the purpose of addressing the regional disparity in different parts of the State. They are Hyderabd Karnataka Area Development Board (1991), Malenadu Area Development Board (1993) and Bayaluseeme Area Development Board (1995). The HPCFRRI has sponsored a study for the evaluation of the performance of these boards (2001). HKADB came into existence on 11 December 1991. The main aim of the board was to provide extra and supportive assistance for the development of the most backward region of the State then comprising Kalaburagi, Bidar, Raichur, and Ballari districts. The CMDR, Dharwad undertook an evaluation study of the Boards sponsored by Dr.D.M.Nanjundappa Committee. The study found that between 1990 and 2001, it was allotted Rs. 567crore while it could utilise only Rs. 483.05 crore (85 per cent). Out of the total expenditure, the board allocated as much as 63.84 per cent for roads and bridges as against the ceiling limit of 40 per cent specified by the Dharam Singh Committee report. Education and health accounted for just 10.24 per cent of the total allocation. It is better to quote what the evaluation study has to say about the role of this board in reducing the regional imbalance. The study report States that 'correction of regional imbalances does not seem to be the explicit focus of the Board's activities' (Government of Karnataka. 2002. HPCFRRI Accompaniment 2. p. 14). The impact of HKADB on the balanced regional development is negligible and invisible. The evaluation study sponsored by HPCFRRI has observed that 'a close scrutiny of the information gathered from different sources reveals that none of the Boards has strictly adhered either the guidelines laid down or the charters provided in respect of holding meetings, allocations of funds, implementation, supervision, monitoring of the progress of the schemes'(Government of Karnataka 2002, HPCFRRI. Accompaniment 2: 6). Based on the findings of this study, the HPCFRRI has recommended the abolition of all these boards (Government of Karnataka, 2002, HPCFRRI: 890). However, the government could not implement this recommendation of the HPC. The budget allocation made to these boards in 2013-2014 is as follows.

Hyderabad Karnataka Area Development Board: Rs.65.30 crore

Malnad Area Development Board: Rs. 34.30 crore

Based on the findings of this study, the HPCFRRI has recommended the abolition of all these boards However, the government could not implement this recommendation of the HPC.

Area Approach adopted by the government to address the problem of regional disparities has not produced substantial dividends. The problem was one of weak implementation machinery and poor monitoring system.

Bayaluseeme Area Development Board: Rs. 17.30 crore.

Besides, there are other development boards such as Karavali Development Board, Border Area Development Board etc.

From the foregoing analysis, it is clear that the Area Approach adopted by the government to address the problem of regional disparities has not produced substantial dividends. The problem was one of weak implementation machinery and poor monitoring system. The board consisted of officers on deputation could not give full attention for the formulation and implementation of the board`s development programmes. For these reasons only, the HPC recommended for the abolition of the development boards.

14.5.2. Eight-Year Special Development Plan 2007-08 to 2014-15

This is one of the major recommendations of the HPCFRRI. It was a time-bound programme recommended for addressing the regional disparity. It was implemented in 2007-08. The data given in Table-14.14 is interesting in more than one way. It reveals that there is a gap between allocation and expenditure to the extent of 30 per cent during 2007-08 to 2014-15.

Table 14.14
Allocation and Expenditure under Special Development Plan: 2007-2015

Years	Allocation (Rs. in crore)	Release (Rs. in crore)	Expenditure (Rs. in crore)	Expenditure as a % of Allocation	Expenditure as a % of Release
2007-08	1571.50	827.93	804.48	51.19	97.17
2008-09	2547.34	1344.29	1134.00	44.52	84.36
2009-10	2578.83	1731.12	1543.11	59.84	89.14
2010-11	2584.00	1924.47	1762.54	68.21	91.59
2011-12	2984.14	2529.99	2200.16	73.73	86.96
2012-13	2680.00.	2464.83	2402.92	89.66	97.49
2013-14	2925.60	2053.65	2067.56	70.67	100.68
2014-15	2267.18	1370.54	1256.57	55.42	91.68
2007-15	20138.59	14246.82	13171.34	65.40	92.45
2015-16	2300.02	2032.87	1716.34	74.62	84.43
2007-16	22438.61	16279.69	14887.68	66.35	91.45

Source: Government of Karnataka: 2016. This Table is supplied by the Department of Planning, Programme Monitoring and Statistics. Bengaluru.

The total allocation in the budgets for SDP during the last eight years is Rs. 20,138.59 crore while expenditure is Rs 13171.34crore. The total short fall was Rs.69,67.25crore (34.60 per cent). The district level data about the SDP allocation and expenditure are not available. And we do not have any information about whether or not the SDP allocation has been made to taluks based on their values of the Cumulative Deprivation Index (CDI).

There are many things to say about the SDP. First one is about the gap between budget allocation and release, on the one hand, and on the other, between release and expenditure under SDP. The amount released accounts for 70.74 per cent of the total allocation and expenditure accounts for 65.40 per cent of allocation in the budgets between 2007-08 and 2014-2015. In four years, namely 2007-08, 2008-09, 2009-2010 and 2014-15, the release was less than 60 per cent of the allocation. However, it is heartening to note that the expenditure as a percentage of release has been more than 80 per cent in three years and more than 90 per cent in five years and it works out to 91.45 per cent.

Second thing is that the HPCFRRI, in its recommendation, has stipulated that the expenditure under SDP should be additional in nature (Rs. 16,000 crore) and not a part of the regular budgetary fund. To our consternation, we find that the funds allocated in the budgets for SDP since its commencement in 2007-08, has been a part of the budgetary resource and not an additional resource. Now, the 8-Year SDP has completed its term (2007-2015). The SDP was recommended by HPCFRRI with a view to reducing, if not eradicating the regional disparities in development in the State with an additional amount expenditure of Rs16000crore to the regular budgetary allocation of Rs15000crore to the 114 less developed taluks in 8 years. The performance of the 8-year SDP is far from satisfactory. The analysis in section 14.4, in this chapter shows that the magnitude of regional development disparity has remained intact even after the completion of SDP. The 8-Year SDP has not succeeded in addressing the problem of regional disparity. The HPCFRRI expected that the extent of regional disparity would disappear after the 8-Year SDP. Given the present status of regional disparities, we are not in a position to say that SDP has reduced the regional disparities.

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The government did make a great mistake by replacing the HPC`s allocation formula, which was based on CDI, by its own formula for the allocation of funds under SDP in the very first year of its launching in 2007-08. This has resulted in complete distortion of the 'geo-economic equality'. As a result of this change, the most backward Kalaburagi division which was required to get 40 per cent of the total allocation under SDP based on CDI value actually got less than what it would have got under the HPC formula. After 2007-08, the government has restored the formula recommended by HPCFRRI for the allocation of funds under eight-year SDP.

14.5.3.Sectoral Allocation and Allocation to District level Schemes

It is surprising to note that the allocations have been made to district level schemes under SDP. There is no such provision in the recommendations of HPCFRRI report. An amount of Rs 3405.52 crore under

The education and health sectors, which are critical and crucial to the human development of these districts, have not received sufficient attention while allocating funds under SDP. There has been a significant deviation from the guidelines provided by HPCFRRI in its recommendations for the implementation of SDP.

SDP was allocated for district level schemes in the Backward Districts. The expenditure under SDP during 2007-08 to 2014-15 has not been in line with the allocation plan provided by the HPCFRRI. For instance, as per the HPCFRRI allocation plan, the social sector consisting of education and health were to get 26.11 per cent of SDP allocation(HPCFRRI, Final Report,2002). But actually the amount earmarked for this sector during 2007-08 to 2015-16 was Rs. 2,134.40crore(see Government of Karnataka 2016, Karnataka Economic Survey 2015-16. Department of Planning, Programme Monitoring and Statistics, Bengaluru.p.694. Table:14.3). and the expenditure during the same period was Rs.1,202.46crore. The amount earmarked for this sector works out to 9.51 per cent of SDP allocation and the expenditure accounts for 8.50 per cent of SDP expenditure. In the background of education and health being critical sectors in backward regions for development, this distortion of and deviation from the allocation plan of HPC is difficult to understand. The education and health sectors, which are critical and crucial to the human development of these districts, have not received sufficient attention while allocating funds under SDP. There has been a significant deviation from the guidelines provided by HPCFRRI in its recommendations for the implementation of SDP. We have to consider the impact of SDP on regional disparities on the basis of all these deviations and other distortions. But there is no information in this chapter about the 'Balanced Regional Development' in Karnataka Economic Survey Report on the allocation of SDP funds to 114 backward taluks in the State. If CDI were to be used for the allocation under SDP, Kalaburagi Division alone would have got 40 per cent (Rs. 5268.54 crore) of total expenditure (Rs. 13171.34 crore).

It is reported that under SDP between 2007-08 and 2014-15, the amount allocated to the Most Backward Taluks was Rs. 8463.40 crore. It accounts for 42.02 per cent and 64.26 per cent of total SDP allocation and expenditure respectively between 2007-08 and 2014-15. According to HPCFRRI formula, 40 per cent of SDP allocation is to be transferred to Kalaburagi division. The Most Backward Taluks are 39 in the State in number. The share of Kalaburgai division in 39 Most Backward Taluks is 21. If 40 per cent of SDP fund were allocated to Kalaburagi division, it should have got Rs. 8,055.44crore (Government of Karnataka 2016. Karnataka Economic Survey: 2015-16, P; 695).In practice the amount allocated for all the 39 Most Backward Taluks is Rs. 8,463.40 crore. From this analysis and insights, the conclusion is inescapable that the guidelines of the HPCFRRI have not been followed in managing the SDP programme.

14.5.4. Backward Regions Grant Fund (BRGF)

The Backward Regions Grant Fund (BRGF) programme launched in 2007-2008 by the Central Government aims at addressing persisting regional imbalances of development in India. The RSVY (Rashtria Sam Viaks Yojane) has been subsumed under BRGF. In Karnataka six districts are selected for the BRGF programme. They are Bidar, Chitradurga, Davangere, Kalaburagi, Raichur and Yadgir. The

amount allocated under BRGF between 2007-08 and 2014-15 for these six districts was Rs. 985.78 crore. However,, these six districts could spend Rs831.63 crore(Government of Karnataka 2015). The expenditure under BRGF accounts for 84.36 per cent of the total allocation. This programme has contributed significantly for reducing gaps in infrastructure in the six BRGF districts. One of the principal objectives of the BRGF is to make development inclusive. Inclusiveness involves not only bringing people but also regions into the fold of development.

14.5.5. Regional Disparity and Article 371 (J)

The State government and the people of Hyderabad Karnataka Region (HKR) have been demanding and making representation to Government of India to accord special status to the erstwhile HKR, the present six backward districts of Kalaburagi division under Article 371 of the Indian Constitution. The Government of India could not refuse the demand of the people of HKR for a long time. The Government of India amended the Constitution by inserting of Article 371(J) for granting special status to Hyderabad Karnataka Region on 2nd January, 2013. One of the problems with 371(J) is that it covers the backward districts of Kalaburagi division only. There are many backward districts in other divisions in Karnataka.

The Provisions of Article 371(J)

The principal provisions of Article 371(J) are as follows-

1. Establishment of a separate Development Board for Hyderabad Karnataka Region with a provision that a report on the working of the Board will be placed before the State Legislative Assembly
2. Equitable allocation of funds for development expenditure over the said region subject to the requirement of the State as a whole
3. Equitable opportunities and facilities for the people belonging to the said region in the matter of public employment, education and vocational training, subject to the requirement of the State as a whole.

The Government of Karnataka has issued the following orders for the implementation of Article 371(J).

i). Hyderabad Karnataka Region Development Board Order, 2013

ii). The Karnataka Public Employment (Reservation in Appointment for Hyderabad Karnataka Region) Order, 2013. It provides for creation of a local cadre and reservation in the Hyderabad-Karnataka Region as under, besides reservation of 8 per cent of the posts in the State level offices or institutions or apex institutions

iii). The Karnataka Private Un-aided Educational Institutions (Regulations of Admission in the Hyderabad-Karnataka Region) Order, 2013. It provides for reservation of 70 per cent of the available seats in every course of study in any regional University or educational institution referred to in the First Schedule, besides 8 per cent of the available seats in every course of study provided in a State wide University or a State wide educational institution.

The Government of India could not refuse the demand of the people of HKR for a long time. The Government of India amended the Constitution by inserting of Article 371(J) for granting special status to Hyderabad Karnataka Region on 2nd January, 2013. One of the problems with 371(J) is that it covers the backward districts of Kalaburagi division only. There are many backward districts in other divisions in Karnataka.

The HKRDB has evolved a method of allocating 70 per cent of its annual budgetary funds for filling infrastructure gaps and 30 per cent for filling the institutional gaps in the region.

iv). The Karnataka Educational Institutions (Regulations of Admission in the Hyderabad – Karnataka Region) Order, 2013. It provides for reservation of 70 per cent of available seats.

The Government of Karnataka has issued an order to make the provision for the establishment of Hyderabad Karnataka Region Development Board on 16.11.2013. It was constituted with 28 members on 23rd January, 2014. The HKRDB has evolved a method of allocating 70 per cent of its annual budgetary funds for filling infrastructure gaps and 30 per cent for filling the institutional gaps in the region. It is too a short period to evaluate the performance of the measures initiated under the Article 371(J). However,, an attempt is made in this section to analyse the institutional structures that have come into existence and the measures initiated under this provision.

The Hyderabad Karnataka Region Development Board has started functioning from 2013-14. The data relating to its activities for the last three years is shown in Table 14.15. The performance of the board is not satisfactory. Given the seriousness of the issue of backwardness of districts of Kalaburagi division, it should have started working seriously and pro-actively. The dynamism expected of the board is not there to see.

Table 14.15
Progress of Hyderabad Karnataka Region Development Board (HKRDB)

Financial Progress (Rs. in Crore)				Physical Progress (No. of Works)			
Years	Allocation	Release	Expenditure	Approved Works	Completed Works	Works Under Progress	Different Stages of Implemen tation
2013-14	150.00	30	--	728	286	306	136
2014-15	600.00	300	123.35	2380	502	1005	873
2015-16	1000.00	500	291.13	3412	75	596	2741
2013-16	1750.00	830	414.48	6520	863	1907	3750

Source: Government of Karnataka 2016, Economic Survey of Karnataka 2015-2016. Planning, Programme Monitoring and Statistics Department, Bengaluru. P. 713

The fund allocated in 2013-14 was Rs 150 crore. In the year 2014-15, the Government allocated Rs 600 crore, and for the year 2015-16, the allocation was Rs1000 crore for the HKRDB.Out of the total allocation of Rs 1750 crorefor three years (2013 and 2016), only Rs 414.48 crore (23.68 per cent) has been spent.

14.6. A Critique of the Regional Development Measures in Karnataka

The first and the foremost thing is that Karnataka does not have a thing called Regional Development Policy (RDP). In fact, one of the recommendations of the

HPCFRRI is to formulate a RDP by the State government. But the governments have not made any efforts to formulate such a policy. Even now it is not too late. It is necessary to have one RDP.

The State government has tried to see that the newly proposed IIT is established in Raichur which is one of the most backward districts in the State. But, for various reasons, the central government has selected Dharwad which is one of the most developed districts in Karnataka, for the establishment of a newly proposed IIT. Its rank is 6th in HDI in the State in 2014. It is a clear violation of the recommendation of the HPCFRRI. The State government should have prevailed upon the central government to select Raichur for setting up of IIT.

The government has done a good thing by continuing the Eight-Year Special Development Plan after it completed its eight year term in 2007-2015. The HKRDB which came into being under 371(J) covers only the six backward districts in Kalaburagi division. However, we have many districts in other divisions which are as backward as that of the districts in Kalaburagi division. The Eight-Year Special Development Plan covers all the backward districts including the districts of Kalaburagi division. This is an important step taken by the government for promoting balanced regional development.

The crucial limitation that we have noticed in the measures initiated by the government so far is that firstly, they lack gender dimension. Gender inequality is one of the basic hurdles in the way of eradication of regional disparity. Gender equality is not an issue related to women only. It is a development issue (World Development Report 2012). And secondly, they lack social group dimensions too. The people belonging to AHINDA[Alpasankyatharu(Minorities), Hindulidavaru(Backward Class) and Dalitharu (Daliths)] categories in the backward districts are more vulnerable and deprived than that of such people in developed regions. The AHINDA philosophy has the constitutional recognition (Article 38(2)). The SC, ST and Minorities account for more than 45 to 50 per cent of the total population in Kalaburagi division. The findings of many studies have shown that the plights of backward people in the backward region are more severe than that of the plights of backward people in the developed regions. It is clear that in an unequal society, measures initiated based on equality can only aggravate inequality. Therefore differential and preferential approach is necessary to address the issues of regional disparities and inequality.

The allocation of funds to backward districts and taluks alone is not sufficient to address and redress regional disparity (Planning Commission (GoI), 2007: 426). The management of development programmes in the backward regions needs greater attention. The civil society in backward regions is not as robust as in the developed regions. The participation of people in development programmes is also not satisfactory. Therefore the government must give as much attention to people`s participation as it gives to the allocation of funds in the budgets under regular programmes and under special programmes. People in the backward regions and developed regions feel that a lot of investment is

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made in backward regions. But the impact of regional disparity redressal programmes is not commensurate with the volume of investment. We have to focus not only on the amount allocated to SDP and other regional disparity redressal programmes but it is also necessary to give attention to the impact and outcomes of these programmes.

A uniform policy for different types of deprived regions/divisions/ districts is not suitable. Therefore differential strategies are necessary for the differentially endowed and differentially developed regions. District-specific measures can serve as an effective tool for the redressal of regional disparity.

Under Special Development Plan, a large amount is allocated to build physical infrastructure. For instance, the allocation made to Social Infrastructure such as education, health, labour, child and women development etc was Rs.1146.44 crore under SDP between 2007 and 2015. This accounts for 7.83 per cent of total expenditure under SDP (Rs14639.04 crore). The amount allocated to Agriculture, Irrigation, Power, Rural Development, etc has been in line with the criterion laid down by HPC in its report. The culprit of distortion in the allocation of funds under SDP is the social sector. (Government of Karnataka 2002, Government of Karnataka 2015). In this sector the shortfall is as much as 18.28 percentage points. Given the State of social development in these backward regions/divisions, it should have received higher allocation in the SDP funds. Economic infrastructure is important for development. But in the backward regions, social factors such as literacy, health, food security, reproductive issues, nutrition etc are considered to be crucial determinants of people's well-being. It is better, under special programmes to allocate more funds to social sectors such as education, health, nutrition, reproductive health, child care etc (ShiddalingaswamiHanagodimath 2014). These things will go a long way in strengthening the human capabilities of the people in the backward regions.

There is no provision for a programme like district level expenditure under SDP in the recommendations of HPCFRRI. However, the government allocated 23.95 per cent (Rs. 3,505.44 crore) of total expenditure under SDP to district level schemes in the backward districts. The HPCFRRI has used taluk and not district as the basic unit of development. The allocation of SDP funds to district level schemes is a clear violation of the recommendation of HPCFRRI.

Both the final report of HPCFRRI (Government of Karnataka 2002:864) and Karnataka Development Report (Planning Commission (GoI) 2007:425) have drawn our attention to the importance of micro planning to address the issue of imbalances in development. According to them, macro planning is responsible to some extent for the imbalances in development to continue in Karnataka. A uniform policy for different types of deprived regions/divisions/districts is not suitable. Therefore differential strategies are necessary for the differentially endowed and differentially developed regions. District-specific measures can serve as an effective tool for the redressal of regional disparity. It is hoped that the appointment of senior KAS officers for monitoring the development programmes in 39 Most Backward Taluks, which is a right step in that direction, would help in addressing and redressing the problems of backwardness in a more dynamic and faster way. The policies to address the issue cannot succeed if it is

in the nature of 'businesses as usual'. It needs conscious and concerted actions on the part of governments at all levels-central, State and local.

14.7. The Way Forward

The persistence of regional disparities is a fact in Karnataka. It has a long history. The government of Karnataka has been striving hard to combat, contain and control it since 1991 through various measures. Notwithstanding these measures, regional disparities persist in Karnataka. The Dr.D.M.Nanjundappa Committee Report (2002), Karnataka Human Development Report (2005) and District Human Development Reports 2014 have shown in a systematic way the nature, magnitude and spread of regional disparities with the help of various quantitative measures.

One of the major recommendations to redress regional disparity by the HPCFRRI in 2002 was the Eight-Year Special Development Plan. It was implemented in 2007-08 and its term expired in 2014-2015. Replying to the discussion in the Legislative Assembly on the implementation of the recommendations of Dr.D.M.Nanjundappa Committee Report, Chief Minister Siddaramaiah said that as the disparities persist, the government has decided to continue providing SDP grants to backward taluks earmarking Rs 12000 crore for the next four years (2015-2019)(Deccan Herald. July 16, 2015). Unlike 371(J), the SDP covers all the 114 backward taluks identified by the HPCFRRI. These 114 backward taluks spread all over the State. The Article 371(J) and the Board constituted by the government, namely HKRDB cover only the six backward districts of Kalaburagi division. Apart from these two measures, we have a centrally sponsored programme namely BRGF. There are many programmes addressing regional disparity. However, they have not succeeded in reducing the disparity. Notwithstanding all these State level and central level measures, the issue of regional disparity is persisting in the State. The programmes formulated to address the issues of regional disparities have to give due consideration to the issue of intra-regional/divisional disparity.

Our approach to address this issue needs basic change. Our approach is largely economic and infrastructure oriented in nature. But, regional disparities have social and human dimensions. The programmes which are operating in the field of regional equality have to give priority to social indicators such as literacy, nutrition, health, child care, reproductive health, food security etc. It is essential to treat the policy of correcting regional disparity as a matter of social justice. Our efforts in making development inclusive and equitable fail, if regional disparities are not considered a part of development policy. Karnataka needs a Regional Development Policy. The issue of regional disparities involves more than 2 crore people in Karnataka. Regional balance in development is necessary to realize the goals set by the architects and champions of United Karnataka.

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Financing Human Development

Chapter-15

Financing Human Development

Introduction

The importance of pro active human development policies and adequate funding support by governments has been amply recognized for promoting human development. Advanced Asian Economies' combined low fiscal deficit policies with large allocations for social services during their high growth phase, (Mundle, 1998). Higher levels of public investment in human capital development has been cited as one of the major reasons for the fast economic growth of East Asian Economies (Mundle, 1998 and Rao, 1998) Research evidence in Indian context has also revealed that higher per capita expenditure has proven positive impacts on human development (Kurian, 2000; Tilak, 2002; Dholakia, 2006; Ghosh, 2006 and 2011) It is further argued that the human development induced growth process has to be strengthened by allocating more resources to social sectors like education, health services, sanitation, drinking water etc. In addition it is observed that Human development improving programs should be given priority in any economic reforms for achieving sustainable economic and human development (Ghosh, 2006). A strong case for substantially enhancing government expenditure has been made by Tilak (1999) in view of the strong correlation observed between government expenditure and level of education of the States.

Performance of Karnataka in human development has been observed to be improving over time in terms of HDI value; However, its rank among Indian States has got lowered to ten in 2011 as against seven in 2001 (GoK, 2014-15). However, this may not be a meaningful comparison as the 2011 list includes more newly carved States. Karnataka's HDI status among southern States is not very favorable as, Kerala and Tamil Nadu are far ahead and the latter has had a not only an enhanced HDI value but its relative position also gained substantially among Indian States. Karnataka's performance is marginally better than Andhra Pradesh. In addition, Karnataka is one among the five States that experienced deterioration in its relative position along with AP, Assam, Gujarat and Maharashtra. Tamil Nadu along with Madhya Pradesh and Rajasthan has managed to improve their relative position (Ghosh, 2011). It is in this background that it becomes important to track the trends and patterns of government expenditure on sectors of importance to enhance human development.

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Remainder of this chapter is structured

After the launch of Fiscal Responsibility Act (FRA) in 2002. Since then, the State government's fiscal and revenue deficits have been well within the targeted levels and the State attained revenue surplus to enable much sought after capital and social sector investments.

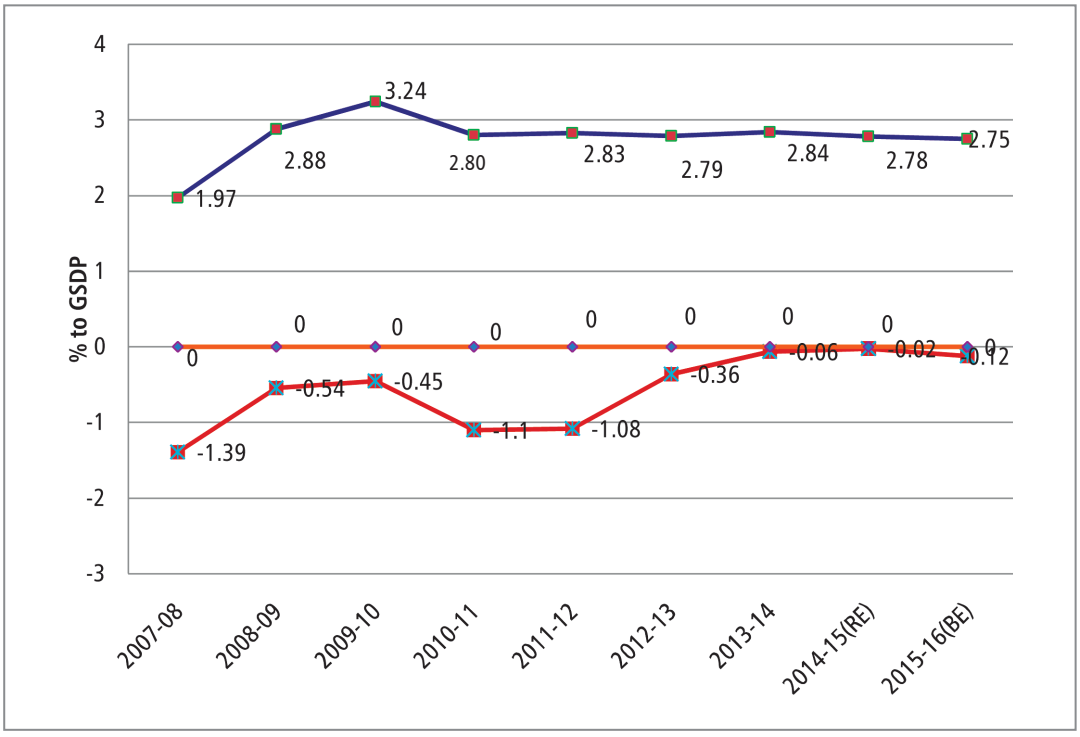
as follows. Section one discusses the State's fiscal capacity to finance human development. A review of government priorities with reference to the functional categories of expenditure are analyzed in section two. Composition of expenditure on the social sectors that help to enhance human development is discussed in section three. Regional distribution of select items of human development expenditure is analyzed in section four. Section five discusses the gender budgeting initiatives in Karnataka. The penultimate section discusses financing human development Vis-a-Vis outcomes-some issues and challenges in the context of government spending that are impinging on human development in the State of Karnataka. Conclusions and recommendations are presented in the last section.

Section one

Karnataka State's fiscal capacity to finance Human development

Karnataka's fiscal capacity as reflected in the various fiscal indicators reveals that the State that had experienced severe fiscal stress during the decade of nineties, recovered after the launch of Fiscal Responsibility Act (FRA) in 2002. Since then, the State government's fiscal and revenue deficits have been well within the targeted levels and the State attained revenue surplus to enable much sought after capital and social sector investments. The fiscal and revenue deficit trends are depicted in Figure 15.1. Fiscal recovery was largely revenue led contributed by the reforms introduced by the State.

Figure 15.1
Trends in fiscal and revenue deficits in Karnataka



Source: Medium Term Fiscal Plan (MTFP)

Karnataka's relative fiscal performance with reference to 'All States' is also considerably sound as indicated by the key fiscal indicators such as the share of revenue deficit in fiscal deficit; capital outlay ratio to gross fiscal deficit; share of non development expenditure in aggregate expenditure and the share of revenue expenditure met from State's tax revenue. (Table 15.1)

Karnataka's revenue receipts have recorded higher rate of growth than the Gross State domestic Product (GSDP), excepting during the years of global recession, (Table15.2) providing scope for the State government to finance development activities. The absolute amount of revenue raised by each of the key sources along with percent increase in respective source is presented in table 15.3. The composition of revenue presented in Figure 15.2 indicates that States own tax revenue constitutes a very large share in the total. Rapid revenue growth and the containment of revenue deficits clearly indicates the enhanced fiscal capability to support the much needed social sector expenditure that are expected to enhance human development status in the State of Karnataka.

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Table 15.1
Major Fiscal Indicators of Karnataka

Fiscal Indicators	2008-09 (Accounts)		2009-10 (Accounts)		2010-11 (Accounts)		2011-12 (Accounts)		2012-13 (RE)		2013-14 (BE)	
	KAR	All States	KAR	All States	KAR	All States	KAR	All States	KAR	All States	KAR	All States
RD/GFD	-18.7	-9.4	-14.9	16.4	-39	-1.9	-38.13	-14.23	-6.17	-8.41	-3.44	-19.48
Capital Outlay/ GFD	113	106	111.6	79	125	94.1	126.1	101.72	97.64	99.23	101.03	110.52
NDE/AD	23.6	28.9	21.1	30.3	20.2	30.8	20	29.7	21	28.1	22	28.9
STR/RE	66.4	47.2	64.3	45.4	71.2	49.4	71.4	75.66	63.7	72.41	64.1	74.95

RD = Revenue Deficit; GFD = Gross Fiscal Deficit; STR =State Tax; NDE=Non-development
RE=Revenue Expenditure; AD=Aggregate disbursement, KAR = Karnataka
Source: Table A: Fiscal Performance, Table B: MTFP Projections Medium Term Fiscal Plan

Table15.2
Revenue Receipts and GSDP Growth Rate

YEARS	GSDP (%)	Revenue Receipts (%)
2003-04	8.36	28.40
2004-05	19.27	27.99
2005-06	17.67	14.24
2006-07	16.39	23.84
2007-08	19.04	9.48
2008-09	11.39	5.20
2009-10	11.12	13.55
2010-11	13.44	18.41
2011-12	14.02	19.93
2012-13	19.92	11.99
2013-14	15.53	14.54
2014-15 RE	13.89	21.63
2015-16 BE	7.41	6.84

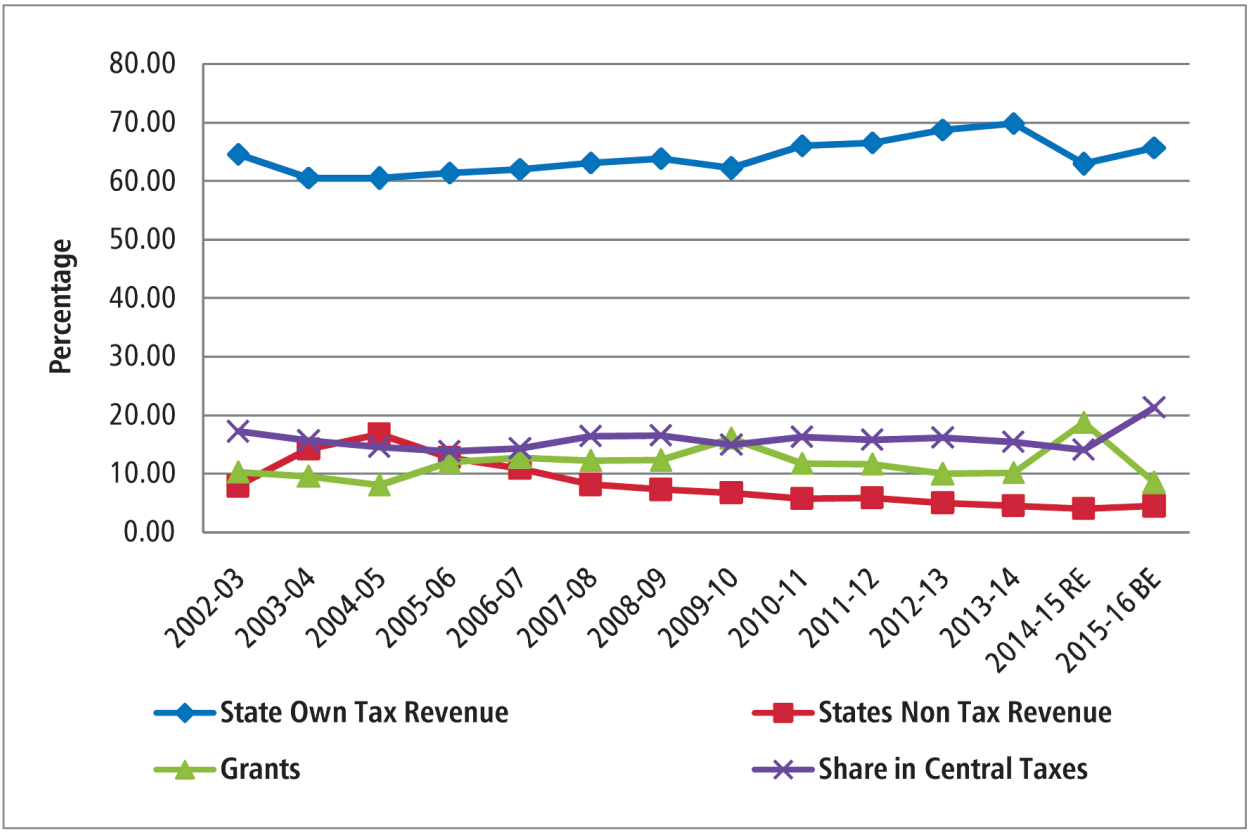
Source: Computed using basic data from budget papers

Table 15.3
Karnataka State's Resource position (Rs in crores)

YEARS	STR	SNTR	GRANT	Share in central taxes	Revenue Receipts
2002-03	10440	1278	1665	2786	16169
2003-04	12570	2958	1987	3245	20760
2004-05	16072	4472	2147	3878	26570
2005-06	18632	3875	3632	4213	30352
2006-07	23301	4098	4813	5374	37587
2007-08	25987	3358	5027	6779	41151
2008-09	27646	3159	5332	7154	43291
2009-10	30579	3334	7883	7360	49156
2010-11	38473	3358	6869	9506	58206
2011-12	46476	4087	8168	11075	69806
2012-13	53754	3966	7809	12647	78176
2013-14	62604	4032	9099	13808	89544
2014-15 RE	68554	4465	20478	15410	108908
2015-16 BE	76445	5206	9919	24790	116360
Percent increase	632.23	307.36	495.74	789.81	619.65

STR: States Own Tax Revenue; SNTR: States Non-Tax Revenue
Source: GoK, Budget papers-various years and Source: MTFP, Table A/B

Figure15.2
Composition of Revenue Receipts



Section Two
Review of government priorities

A review of the expenditure priorities of Government of Karnataka as indicated by the functional categories[26], General, Social and Community and Economic services reveals that the expenditure on Social services that largely contributes to human development had the lowest amount of allocation in 2002-03 with Rs. 6852 crore as opposed to Rs 7188 for general services and Rs 7745 crore for Economic services receiving the highest allocation (Table15.4). Subsequently, government priority has shifted in favor of Social and community services as revealed by the sharper growth in its expenditure as compared to the other two categories resulting in highest allocation for the social and community services as per the 2015-16 budget estimates. The compound annual growth rates for the above period are 11.21 percent, 15.29 percent and 13.8 percent for general, social and community and economic services respectively. The share of functional categories in State's GSDP also reveals that Social and community services currently have the highest share. (Figure 15.3), also in terms of the total expenditure it constitutes close to 40 percent share (Figure 15.4) The sharper increases awarded to the social sector is a welcome trend considering the slow pace of human development achieved by the State in the past.

government priority has shifted in favor of Social and community services as revealed by the sharper growth in its expenditure as compared to the other two categories resulting in highest allocation for the social and community services as per the 2015-16 budget estimates.

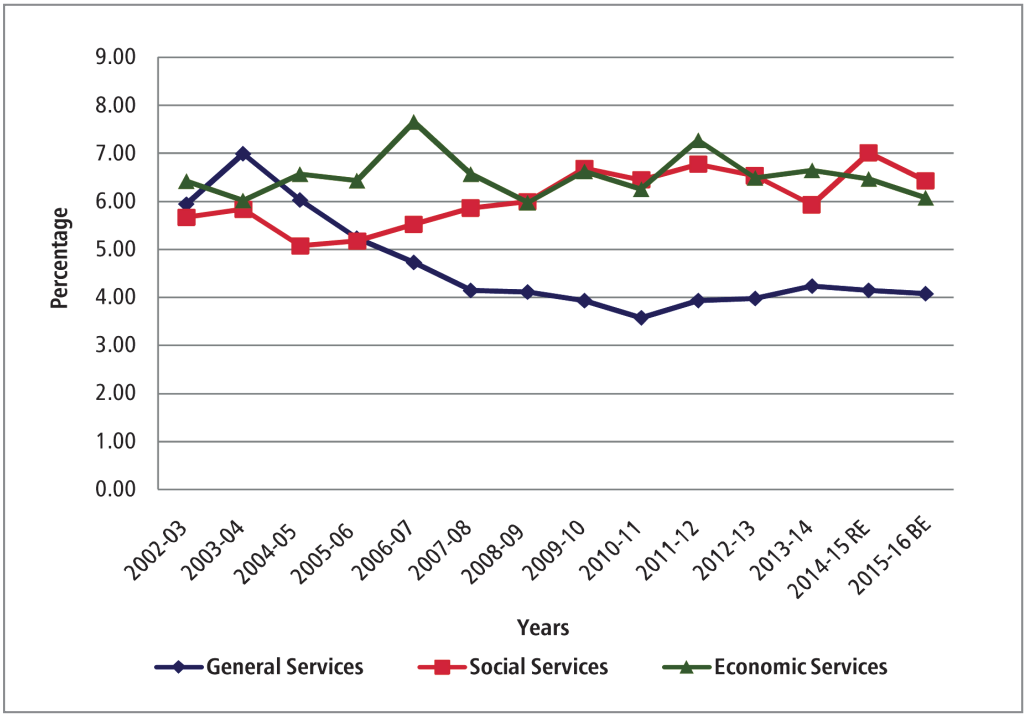
[26] *Functional categories of expenditure refer to the groping of expenditure by the functions performed by the government. The three broad categories used are "General Services', 'Social and Community Services'; and 'Economic Services' as per the UN classification.*

Table15.4
Trends in expenditure by Functional Categories (Rs in crores)

Year	General Services	Social Services	Economic Services
2002-03	7188	6852	7765
2003-04	9168	7649	7880
2004-05	10036	8448	10935
2005-06	10254	10147	12603
2006-07	10740	12555	17401
2007-08	11211	15866	17777
2008-09	12751	18601	18534
2009-10	13252	22575	22354
2010-11	14520	26215	25413
2011-12	17071	29413	31607
2012-13	20770	34151	33934
2013-14	25455	35675	39986
2014-15 RE	28429	48020	44311
2015-16 BE	31829	50204	47430
CAGR	11.21	15.29	13.8

Source: GoK Budget papers- various years

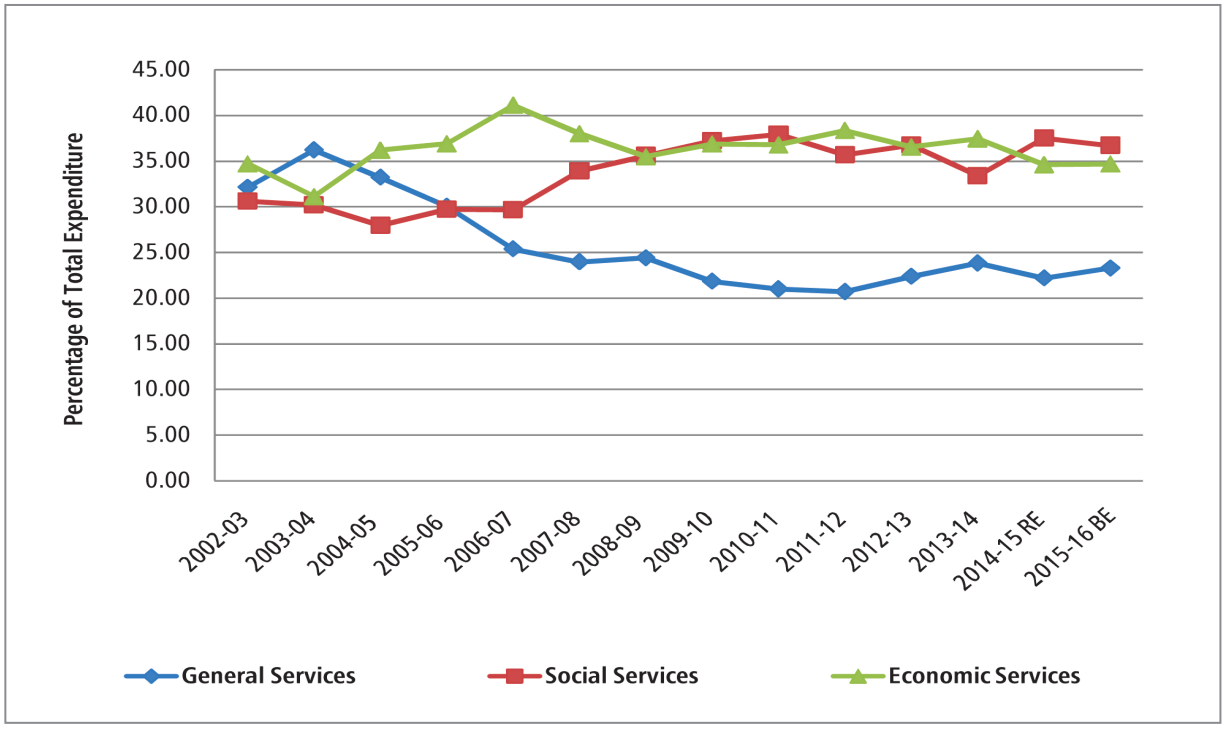
Figure 15.3
Functional categories of expenditure as percent to GSDP



Source: MTFP, Table Expenditure on Services

Figure 15.4

Functional Categories as a percentage of Total Expenditure of Karnataka



Source: Same as for 15.3

Section Three

Composition of Social services expenditure

Efficient allocation of expenditure within the social services spending is an important aspect in the promotion of human development. Advanced economies of Asia during their high growth phase had combined large allocations to social sectors with efficient resource allocation within the social sectors for basic education and health services and reliance on the private sector for higher levels of education and expensive curative health care, (Mundle, 1998).

Social and community services expenditure in Karnataka comprises of important items such as Education, Health and Family Welfare, Urban Development, Social Security and Welfare, Water Supply, Sanitation, Housing, Welfare of SCs / STs and OBCs. A little more than 40 percent of the total social and community services expenditure is spent on Education, Art and Culture. The expenditure on Welfare of SC, ST and OBCs has received increased attention by the State government as indicated by a sharp rise in its share from 9 percent in 2007-08 to 14.71 percent in 2015-06, the largest increase among all the items. The share of Social Welfare and Nutrition has increased from 11.68 percent to 14.23 percent during the above reference period. Health and family welfare had a marginal increase, However, marked by reduced share during some years in between, especially in 2009-10.

A little more than 40 percent of the total social and community services expenditure is spent on Education, Art and Culture. The expenditure on Welfare of SC, ST and OBC s has received increased attention by the State government as indicated by a sharp rise in its share from 9 percent in 2007-08 to 14.71 percent in 2015-06, the largest increase among all the items.

Table 15.5
Composition of expenditure on Social services (Rs in crores)

State expenditure (Rs Crores)	Years									
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15 RE	2015-16 BE	CAGR
Education, Sports, Art and Culture	6932	8692	8792	11213	12565	14986	16554	21030	20302	0.127
Health and Family Welfare	1836	2077	2248	2797	3317	3929	4533	6277	6158	0.144
Urban Development	1257	988	1243	1037	762	714	903	1085	1239	-0.002
Information and Broadcasting	31	56	43	77	69	77	77	93	93	0.130
Labor Welfare	144	182	272	247	261	294	287	605	579	0.167
Social Welfare & Nutrition	1853	2589	4956	3966	4642	5576	4955	5903	7143	0.162
Water Supply, sanitation	1251	1448	1806	1961	1701	1720	1472	2562	2699	0.089
Housing	812	884	927	916	1141	1690	1486	2639	3995	0.194
Welfare of SC/ST/OBCs	1435	1486	1762	2716	3218	3668	4616	6824	7387	0.200
Others	315	199	526	1285	1737	1497	792	1002	609	0.076
Social Services	**15866**	**18601**	**22575**	**26215**	**29413**	**34151**	**35675**	**48020**	**50204**	**0.137**
Percentage to total Social Services										
	2007-08	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15 RE**	**2015-16 BE**	**Average**
Education, Sports, Art and Culture	43.69	46.73	38.95	42.77	42.72	43.88	46.4	43.79	40.44	43.1
Health and Family Welfare	11.57	11.17	9.96	10.67	11.28	11.51	12.71	13.07	12.27	11.8
Urban Development	7.92	5.31	5.51	3.96	2.59	2.09	2.53	2.26	2.47	3.3
Information and Broadcasting	0.19	0.3	0.19	0.29	0.23	0.23	0.22	0.19	0.19	0.2
Labor & Labor Welfare	0.91	0.98	1.21	0.94	0.89	0.86	0.8	1.26	1.15	1.0
Social Welfare & Nutrition	11.68	13.92	21.96	15.13	15.78	16.33	13.89	12.29	14.23	14.8
Water Supply, sanitation	7.88	7.79	8	7.48	5.78	5.04	4.13	5.34	5.38	5.9
Housing	5.12	4.75	4.11	3.5	3.88	4.95	4.17	5.5	7.96	5.2
Welfare of SC/ST/OBCs	9.04	7.99	7.81	10.36	10.94	10.74	12.94	14.21	14.71	11.8
Others	1.99	1.07	2.33	4.9	5.9	4.38	2.22	2.09	1.21	2.8
Social Services	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100.0**

Source: GoK, Budget papers; various years

Expenditure on Education

Among the major items of education expenditure, Elementary education is the largest component followed by secondary and higher education categories. Government of Karnataka's priority to expenditure at elementary level has been revealed by the 'thrust Sector' status assigned and justifiably so given its meritorious nature. Further with the largest share of 55 percent (average for the time period) 2002-03 to 2015-16 BE) of education expenditure followed by secondary education with an average share of 30.3 percent reveals the governmental emphasis of promoting elementary education in the State (Tables 15.6 and 15.7).

Further with the largest share of 55 percent (average for the time period) 2002-03 to 2015-16 BE of education expenditure followed by secondary education with an average share of 30.3 percent reveals the governmental emphasis of promoting elementary education in the State

Table 15.6
Trends in Education expenditure (Rs. in crores)

Years	Elementary Education	Secondary Education	University & Higher Education	Adult	Language Development	General	Total
2002-03	1796	1054	476	5	16	52	3400
2005-06	2667	1304	509	5	9	77	4571
2008-09	4724	2609	709	20	16	169	8246
2011-12	6053	3649	1604	18	19	153	11495
2013-14	8381	4456	2051	11	32	124	15054
2015-16 BE	9481	5504	2772	10	33	537	18338
Percent Increase	427.90	422.20	482.35	100.00	106.25	932.69	439.35

Source: GoK, Budget papers: Various years

Table 15.7
Composition of Education expenditure (percentage to total)

Years	Elementary Education	Secondary Education	University & Higher Education	Adult	Language Develop-ment	General	Total
2002-03	52.82	31.01	14.02	0.16	0.47	1.52	100.00
2005-06	58.35	28.53	11.13	0.10	0.20	1.68	100.00
2008-09	57.29	31.64	8.59	0.24	0.19	2.05	100.00
2011-12	52.66	31.74	13.95	0.16	0.17	1.33	100.00
2013-14	55.67	29.60	13.62	0.07	0.21	0.82	100.00
2015-16 BE	51.70	30.01	15.12	0.05	0.18	2.93	100.00
Average	55.51	30.30	12.25	0.14	0.23	1.57	100.00

Source: Computed using, Data from Budget papers: GoK

Expenditure on education by other departments

Government expenditure on education is not limited to the expenditure by the Education department alone. A number of other departments also spend money on education related programs. These majorly include programs related to social welfare, medical, Agriculture, Forest, Technical, police to name a few. In order to track total expenditure on education and its distribution by education and other departments, data has been compiled using Ministry of Human Resources Development source and presented in table 15.8. In Karnataka 88 percent of total education expenditure comes from Education department (2007-08) which has marginally declined to 83 percent in 2012-13.

Allocation for the health sector is of concern in Karnataka as in the first place, the overall share of allocation of State resources to health sector is small; further the poor prioritization with a larger focus on urban health services pose serious issues to the health sector development in the State.

Table 15.8
Expenditure on Education by other departments:

Major States	2007-08		2012-13	
	%share of Education Department	% share of Other Departments.	%share of Education Department	% share of Other Departments
Andhra Pradesh	73.5	26.5	72.51	27.49
Bihar	87.0	13.0	87.60	12.40
Gujarat	89.5	10.5	79.89	20.11
Haryana	82.5	17.5	85.55	14.45
Karnataka	88.3	11.7	83.00	17.00
Kerala	84.4	15.6	83.59	16.41
Madhya Pradesh	75.9	24.1	86.49	13.51
Maharashtra	82.5	17.5	84.39	15.61
Orissa	86.5	13.5	88.27	11.73
Punjab	87.6	12.4	87.17	12.83
Rajasthan	93.2	6.8	94.60	5.40
Tamil Nadu	92.8	7.2	84.54	15.46
Uttar Pradesh	82.1	17.9	87.90	12.10
West Bengal	95.8	4.2	90.48	9.52

Source: GOI, MHRD, Analysis of Budgeted expenditure on education

Health and Family Welfare

Regarding the major items of expenditure under Health and Family Welfare department data presented in tables 15.9 and 15.10 reveals that 'Urban Health' had the largest allocation until 2010-11, after which 'Medical Education' took the lead. Rural health services and Public health categories had much smaller allocations. The sharp increase in the recent years was on account of the central funding that got routed through the State budgets from 2014-15. Allocation for the health sector is of concern in Karnataka as in the first place, the overall share of allocation of State resources to health sector is small; further the poor prioritization with a larger focus on urban health services pose serious issues to the health sector development in the State.

Table15.9
Growth of expenditure on Health and Family welfare (Rs. in crores)

Years	Urban Health Services	Rural Health Services	Medical Education Training & Research	Public Health	General	Total
2002-03	327	29	126	47	264	794
2005-06	336	19	227	44	378	1004
2008-09	501	83	367	91	609	1652
2010-11	477	179	496	118	774	2045
2013-14	755	270	1018	341	1205	3589
2015-16 BE	1082	1164	1039	522	1078	4884
Percent increase	**230.89**	**3913.79**	**724.60**	**1010.64**	**308.33**	**515.11**

Source: GoK, Budget papers, various years

Table 15.10
Composition of expenditure on Health and Family Welfare (percentage to total) (Rs. in Lakhs)

Years	Urban Health Services	Rural Health Services	Medical Education Training & Research	Public Health	General	Total
2002-03	41.26	3.66	15.93	5.9	33.25	100.00
2005-06	33.49	1.89	22.58	4.37	37.68	100.00
2008-09	30.35	5.05	22.19	5.53	36.88	100.00
2010-11	23.35	8.78	24.28	5.77	37.82	100.00
2013-14	21.04	7.53	28.36	9.51	33.56	100.00
2015-16 BE	22.14	23.83	21.27	10.70	22.06	100.00
Average	**29.55**	**8.10**	**21.62**	**6.58**	**34.15**	**100.00**

Source: Computed using budget data

Social sector expenditure indicators in Karnataka

Human Development Report 1991 of UNDP has suggested four ratios to assess the importance assigned to human development and have been popularly used by many studies. These are :

1) Public expenditure Ratio (PER): PER indicates the ratio of total budgetary expenditure to the Gross State Domestic Product of the State. The norm suggested for PER is 25 percent

2) Social Allocation Ratio (SAR): SAR refers to the ratio of social sector expenditure to the budgetary expenditure. Here social sector refers to expenditure on social services and rural development. The UNDP norm for SAR is 40 percent

3) Social Priority Ratio (SPR): The share of expenditure on human priority to the social sector expenditure. Human priority areas include Elementary

per capita spending is more important than the human expenditure ratio and any analysis of public spending on human development must go beyond the four ratios. (GoK, 2005) Per capita real expenditure on social sector has had a considerable increase from Rs 918 in 2002-03 to Rs 4064 in 2013-14.

Education, Health and Family Welfare (Excluding medical education, training and research). Nutrition, Water supply, sanitation and rural development. The UNDP norm suggested is 50 percent.

4) Human Expenditure Ratio (HER): HPR is the product of the above three ratios. The norm for HER is 5 percent.

Trends in the social sector expenditure indicators are presented in Table15.11.

Public expenditure ratio has been on the decline and the norm of 25 percent is fulfilled only during 2003-04. Social allocation ratio has been largely on the increase and has also marginally crossed the suggested norm of 40 percent in 2014-15(BE). Social priority ratio was in the suggested range of 50 percent until 2004-05 but has declined to 38.75 percent in 2013-14 but has increased again to 49.82 percent in 2014-15. Human expenditure ratio has been clearly less than the suggested norm of 5 percent throughout the study period. Also, the issues for concern include that, the growth path is not steady and often the ratio has declined and also it is below the UNDP recommended level. The wide fluctuation in the share year on year reveals that there is no consistency in the effort.

While these norms provide the broad direction, these ratios should be highly region specific as the needs, impending requirements and the cost of provision of these services vary significantly from one region to another and hence the required levels of State participation in these sectors also are best framed at the regional level. However, such exercises tend to be very detailed and it is very important to base such normative estimates on the current program achievements and the impending requirements which should serve in framing informed expenditure decisions.

It is argued that per capita spending is more important than the human expenditure ratio and any analysis of public spending on human development must go beyond the four ratios. (GoK, 2005) Per capita real expenditure on social sector has had a considerable increase from Rs 918 in 2002-03 to Rs 4064 in 2013-14. Per capita social sector expenditure in Karnataka in a comparative perspective with other major Indian States is presented below.

Table 15.11
Social sector expenditure indicators

Years	Public Expenditure Ratio	Social Allocation Ratio	Social Priority Ratio	Human Expenditure Ratio	Per capita Expenditure in Rs.
2002-03	23.3	31.4	53.09	3.88	918.40
2003-04	26.45	28.4	52.06	3.91	909.50
2004-05	21.46	28.5	50.88	3.11	1764.06
2005-06	17.85	33.4	48.51	2.89	1962.21
2006-07	19.4	32.7	45.41	2.88	2268.70
2007-08	17.78	36.7	46.1	3.01	2596.27
2008-09	17.41	37.8	46.85	3.08	2779.33
2009-10	18.65	39.9	41.5	3.09	3144.25
2010-11	17.7	39.9	43.85	3.1	3219.73
2011-12	19.75	37.8	46.04	3.44	3363.78
2012-13	18.48	39.2	46.46	3.37	3599.46
2013-14	18.39	39.5	38.75	2.81	4064.20

Source: Computed using budget data

Karnataka Vis-a-Vis other States

Karnataka's per capita social sector expenditure compared well with other States as the State has been with in the top five States during the first reference point, 2004-05 (Table 15.12) Per capita expenditure has also revealed a constant increase. Interestingly, Karnataka spent larger per capita sums during the years 2006-07 till 2010-11 than even Kerala, the State that has excelled in human development. However, in relative terms, the State's position dropped to seventh place as the increase in the other States has been much larger, especially that of the low income States. A comparison of social sector expenditure in southern States presented in Figure 15.6 reveals that Tamil Nadu has all along spent more than Karnataka and the gap also has been largely on the increase. Per capita social sector expenditure in Andhra Pradesh has been by and large lesser than that of Karnataka except during 2008-09 and 2013-14.

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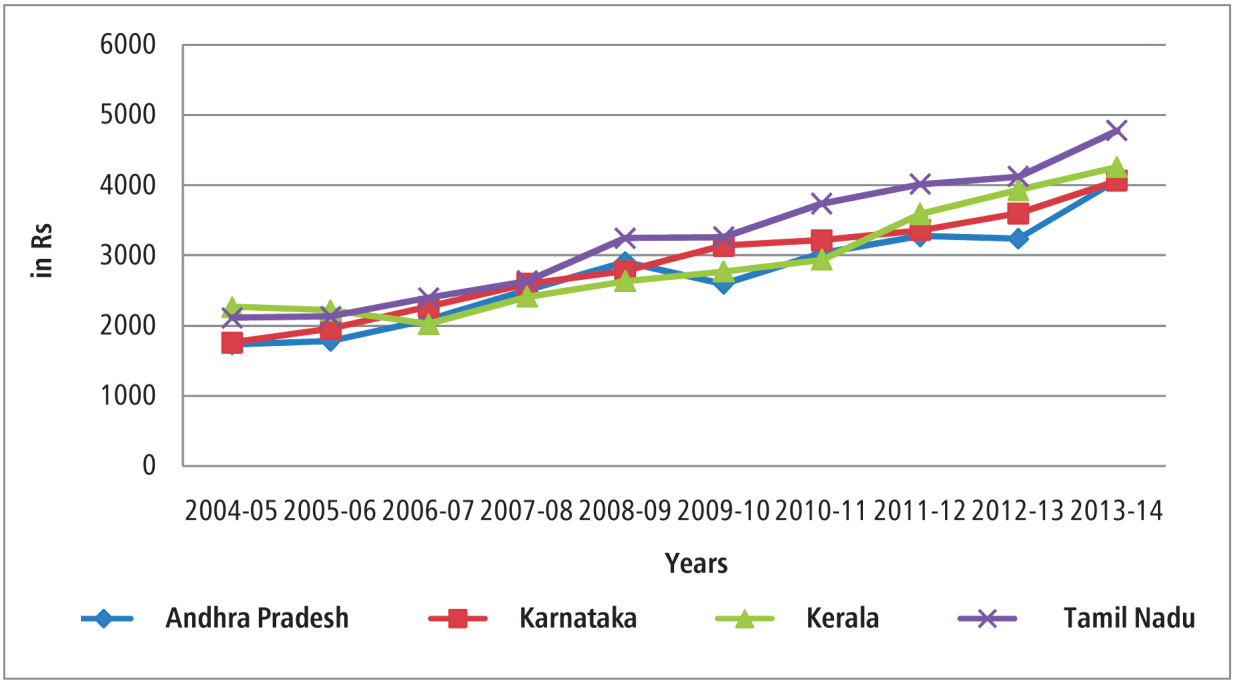
Table 15.12
Per capita Real Social Service Expenditure (in. Rs)

Major States/ Years	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Andhra Pradesh	1738.32	1783.46	2087.98	2506.84	2913.91	2600.62	3036.57	3277.46	3243.17	4072.53
Bihar	690.26	890.35	1071.20	1224.92	1305.72	1294.91	1274.47	1440.80	1667.26	2357.75
Gujarat	1882.97	1921.20	2109.21	2259.22	2598.72	3099.87	3432.77	3340.64	3991.43	4190.91
Haryana	1541.37	1967.94	2147.36	2545.72	3003.18	3666.25	3391.83	3751.82	3978.42	4391.99
Karnataka	1764.06	1962.21	2268.70	2596.27	2779.33	3144.25	3219.73	3363.78	3599.46	4064.20
Kerala	2266.35	2217.16	2025.60	2412.67	2638.50	2775.40	2940.47	3595.13	3935.29	4263.62
Madhya Pradesh	1123.30	1369.07	1427.50	1554.33	1640.40	1839.29	2211.01	2358.67	2622.74	2852.31
Maharashtra	1991.89	2254.26	2446.41	2405.38	2712.35	3340.80	3398.09	3561.76	3796.23	4305.51
Odisha	1194.22	1333.22	1411.24	1628.42	2038.92	2164.38	2316.72	2521.41	2469.41	3159.30
Punjab	1441.64	1443.14	1551.58	1469.61	1836.77	1750.77	1877.46	2068.68	2432.96	3085.77
Rajasthan	1621.89	1692.57	1778.10	1881.70	2252.39	2280.13	2129.39	2267.24	2532.84	3185.27
Tamil Nadu	2114.38	2131.66	2394.28	2637.80	3247.75	3264.51	3741.17	4018.90	4127.99	4781.85
Uttar Pradesh	948.96	1049.40	1157.46	1337.06	1592.55	1693.67	1678.10	1797.13	1853.86	2105.11
West Bengal	1159.69	1298.87	1399.70	1607.17	1758.48	2295.20	2296.47	2422.49	2545.69	2724.26

Source: Computed using RBI State finances data: Various years

Figure15.5
Per capita Social Service Expenditure at constant prices



Private expenditure on select social sectors

Private expenditure in select social sectors like Education and Health has been observed to be quite sizeable and increasing in Indian context. Rapid increase in expenditure on education is viewed as willingness to pay, while there are also views that households are compelled to spend due to inadequate support extended by the governments (Tilak, 2003). It is further argued that household expenditure and government expenditure do not substitute each other on the contrary they complement each other. Increase in the government expenditure might stimulate households to spend more on education. In the context of overall human development of a region, it is important to recognize that total resources irrespective of the source, the quantum and effective application of the same play an important role. However, tracking the time series trends in total expenditure poses many challenges. While year on year public expenditure data is available in public domain that of private sector is available only for the National Sample Survey years.

Per capita public and private expenditure presented in Table 15.13 reveals that both on health have revealed an increasing trend; However, the former has revealed a much larger increase. In the case of Karnataka, it can be noticed that neighboring States like Kerala and Tamil Nadu have much larger per capita expenditure on health both in the public and private sectors. It has been observed that these two States have performed better than Karnataka in terms of health development; it becomes clear that resource support to the sector's developments is essential, albeit its effective use is the ultimate factor deciding the extent and nature of outcomes.

Table 15.13
Public and private per capita Health expenditure in Indian States (in Rupees)

	2004-05		2013-14	
Major States	**Public**	**Private**	**Public**	**Private**
Andhra Pradesh	187.04	869.65	742.07	**835.35**
Bihar	68.46	420.21	274.79	**526.05**
Gujarat	175.66	754.79	557.18	**859.84**
Haryana	167.79	874.91	747.83	**1229.35**
Karnataka	**187.25**	**597.20**	**720.62**	**1145.88**
Kerala	275.11	2703.10	995.43	**2642.74**
Madhya Pradesh	132.26	644.23	502.80	**756.72**
Maharashtra	184.37	1008.16	607.32	**1294.72**
Orissa	162.78	715.32	469.50	**731.85**
Punjab	232.20	1093.96	830.62	**1302.60**
Rajasthan	172.90	574.73	686.81	**795.50**
Tamil Nadu	202.43	1033.32	825.09	**1497.06**
Uttar Pradesh	114.18	84.64	411.44	**892.56**
West Bengal	161.14	1085.82	435.36	**992.97**

Source: Computed using National Health Accounts for the Year 2004-05; NSS 71st Round and RBI State finances

In the case of Karnataka, it can be noticed that neighboring States like Kerala and Tamil Nadu have much larger per capita expenditure on health both in the public and private sectors. It has been observed that these two States have performed better than Karnataka in terms of health development;

Private expenditure on Education

Per capita Private and public expenditure details presented in table15.14 reveals that resources flowing into the education sector (at all levels) have been on the rise. Both under the private and public expenditure categories, Kerala has had larger expenditure than Karnataka during both the time points. Tamil Nadu too has had larger per capita expenditure in both public and private expenditure excepting in 2007-08 wherein Karnataka had larger per capita public expenditure in 2007-08 than Tamil Nadu. There are other States too like Maharashtra, Punjab and Haryana that have larger levels of expenditure than Karnataka.

The relatively smaller per capita public and private sector expenditure in Karnataka as compared to the neighboring States is a cause for concern in the broader context of human development. The issue related to the role of government in financing human development assumes greater significance as Karnataka has been having the highest poverty level among the southern States and Thus, reiterates the need for greater government spending.

Table 15.14
Public and private per capita Education expenditure in Indian States (in Rupees)

Major States	2007-08		2013-14	
	Public	Private	Public	Private
Andhra Pradesh	743.18	694.35	2395.02	2272.36
Bihar	573.28	243.65	1881.90	1369.51
Gujarat	852.10	584.26	2404.46	1887.81
Haryana	972.46	1201.41	3257.00	3991.70
Karnataka	**1006.76**	**772.13**	**2835.10**	**2054.12**
Kerala	1197.91	1039.59	3388.36	3608.98
Madhya Pradesh	547.60	417.94	1809.32	1530.74
Maharashtra	1164.74	855.06	3350.27	2500.15
Orissa	625.71	466.91	2017.54	1371.85
Punjab	859.06	1379.20	2535.77	3113.36
Rajasthan	781.08	701.13	2359.30	2084.80
Tamil Nadu	926.26	880.07	3073.47	3665.37
Uttar Pradesh	577.56	530.64	1590.31	1551.52
West Bengal	729.18	626.69	1962.58	1674.66

Source: Computed using NSS 64 and 71st Round and RBI State finances

The relatively smaller per capita public and private sector expenditure in Karnataka as compared to the neighboring States is a cause for concern in the broader context of human development. The issue related to the role of government in financing human development assumes greater significance as Karnataka has been having the highest poverty level among the southern States and thus, reiterates the need for greater government spending.

Section Four

Regional distribution of expenditure

Regional disparities in Karnataka's development have been a cause for concern and a number of corrective measures have been initiated from time to time. An understanding of the financing of human development by each of the districts is important for future corrective measure to bridge regional disparities. Unfortunately, centralized public expenditure data by each district is not available for any meaningful analysis. The per capita education and health expenditure data culled out from various District Human Development Reports (DHDR) has been analyzed in table 15.8 along with the respective Education and Human Development Indices.

Ideally, in any regional disparity corrective measure one would expect government spending to be inversely proportionate to the level of development, meaning, lower the level of development larger should be the public spending and vice versa. It is quite disturbing to note that (Table 15.15) there is a considerable disconnect between the Education/ Health Development Index and per capita expenditure among Karnataka districts. Districts that are the bottom five ranks of Health Development Index (HeDI) namely, Koppal, Raichur, Ballari, Kalaburagi and Bagalkote have far lesser per capita health expenditure when compared to the districts that have better Health Development Index. On the contrary districts such as Bengaluru Urban and Mandya that are in the top five districts in terms of Health Development Index have much larger per capita health expenditure. Per capita expenditure in Koppal (ranking the lowest in Health Development Index) is Rs. 68 as compared to Rs. 1783 in Mandya (ranking in the fourth place in Health Development Index). While the Per capita expenditure in the bottom hive HeDI districts has ranged between Rs. 68 to Rs. 222 that of top five HeDI has ranged between Rs. 81 to Rs. 1783. Thus, there is a wide gap between the per capita spending among the districts that needs to be corrected taking into consideration the level of sectoral development.

Education sector too has revealed similar disparities. The gap between the districts in per capita spending in Education is large with the highest being Rs. 3004 in Belagavi as compared to Rs. 229 in Ballari. Incidentally, Ballari is one among the bottom five districts in terms of Education Development Index ranking in 25 place in the State. Similarly, Koppal, Raichur and Kalaburagi that rank in the bottom five districts have far smaller per capita spending than many other districts with better Education Development Index. While Per capita education expenditure in the bottom five EDI districts has ranged between Rs. 229 to Rs. 1252 that of five districts with top EDI has ranged between Rs. 795 to Rs.1856.

In the context of Karnataka's development, it is often argued that the State's performance is being pulled down on account of wide regional disparities. Hence, it is very important to address the issue of bridging the regional disparities and the government has been rightfully advocating corrective measures. However, the disconnect observed in the current levels of sectoral development and per capita

Koppal, Raichur and Kalaburagi that rank in the bottom five districts have far smaller per capita spending than many other districts with better Education Development Index. While Per capita education expenditure in the bottom five EDI districts has ranged between Rs. 229 to Rs. 1252 that of five districts with top EDI has ranged between Rs. 795 to Rs 1856.

expenditure indicate greater need to pursue informed corrective measures such that the regional disparities are reduced over time and also help tone up overall human development in the State. The need to have a centralized district level expenditure database is of utmost importance in this context.

Table 15.15
District-wise per capita Education/Health expenditure and Education/Health development Index

Bottom Five EDI districts	EDI	Rank	Per capita Exp	Rank	Top five EDI districts	EDI	Rank	Per capita Exp	Rank
Bidar	0.49	27	1252	12	Chikkamagaluru	0.777	1	1182	15
Koppal	0.50	26	495	21	Kodagu	0.757	2	1637	7
Ballari	0.501	25	229	29	Bangalore Urban	0.740	3	795	20
Raichur	0.526	24	467	23	Chitradurga	0.733	4	1673	6
Kalaburagi	0.529	23	468	22	Uttara Kannada	0.730	5	1856	3

Bottom Five HeDI districts	HeDI	Rank	Per capita Exp	Rank	Top five HeDI districts	HeDI	Rank	Per capita Exp	Rank
Koppal	0.024	25	68	28	Dakshina Kannada	0.981	1	190	17
Raichur	0.251	24	222	15	Udupi	0.958	2	81	27
Bellary	0.301	23	112	24	Bengaluru Urban	0.952	3	1524	2
Kalaburagi	0.310	22	163	20	Mandya	0.858	4	1783	1
Bagalkote	0.317	21	97	26	Bengaluru Rural	0.833	5	171	19

Note: Detailed table including all the districts and their ranks are presented in Appendix T8
Source: GoK DHDR2014, Planning Department for per capita expenditure and Economic Survey for Education Development Index and Health Index.

Karnataka government has identified the need to enhancing opportunities and empowering women across social, economic and political spheres as one of the twelve key areas of transformation for the State in its vision 2020.

Section Five

Gender Budgeting

Interventions for women and child development

State policy

Karnataka government has identified the need to enhancing opportunities and empowering women across social, economic and political spheres as one of the twelve key areas of transformation for the State in its vision 2020. Further, the Women and Child Development department envisages having all women contributing as equal partners and all children in the State to be provided with care and protection that is required for a safe and healthy childhood, thereby lay foundation for a holistic development (RFD, 2011-12). Karnataka is one of the first States to engender the planning process which is evident from the 12th plan approach papers. Karnataka State also has to its credit the preparation of Gender Budgets to track the budgetary resources allocated for the cause since 2007.

The Department of Women and Child Development which is responsible for their welfare has been conceiving and implementing a number of programs from time to time which are largely classified as programs for development, child development and child defence.

Gender Budgeting

Government of Karnataka has been presenting Gender budget Statement putting together budget allocation for schemes benefitting women since 2007-08 to provide a gender perspective of budgets. The women related allocations from 29 Demands for Grants are grouped under two categories - A and B. The former is concerned with schemes that confer benefit exclusively to women and the latter reflecting schemes that benefit women at least to the extent of 30 per cent of the allocation. The State intervention to bridge the gender inequalities through direct programs is spread across 39 departments. The progress in budget allocations for the cause of women is presented in table 15.16. There has been a sharp increase in the budget allocation during the reference period. While the Category A allocation has increased by 465 per cent points that of Category B has increased by 204 per cent points. The increase in the budget allocation in 2014-15 over 2012-13 is to the tune of 37.86 per cent for Category A and 61.58 per cent for Category B. A large portion of the Category A spending is under plan component.

Government of Karnataka has been presenting Gender budget Statement putting together budget allocation for schemes benefitting women since 2007-08 to provide a gender perspective of budgets.

Table 15.16
Gender based budgeting (Rs in Lakhs)

Year	No of Departments	Category A				Category B			
		No. of Allocation			Total	No. of Allocation			Total
		schemes	Plan	NP		schemes	Plan	NP	
2009-10	39	47	64323	199	64522	742	906026	1275871	2181897
2010-11	39	49	92107	323	92430	737	1154820	1415185	2570005
2011-12	39	45	105930	39485	145415	759	1604025	1888291	3492316
2012-13	39	39	215124	49627	264751	621	1808991	2293666	4102657
2013-14	39	40	203126	51052	254178	760	2054042	2713882	4767924
2014-15 RE	39	59	332735	45003	377738	798	3314400	3154587	6468987
2015-16 BE	39	64	455501	95619	551120	863	3361007	3074131	6435138
% increase			608.1	47949.75	754.16		270.96	140.94	194.93
Inc on 13-14			63.81	-11.85	48.61		61.36	16.24	35.68

Source: Gender Budget, GOK Website

A major initiative for women and child development is the Integrated Child Development Services (ICDS) that has been in operation for a long time. An important activity under this initiative is to provide supplementary nutrition to the targeted beneficiaries with an objective of filling the gap between the required nutrition and that which is available through their regular intake

Bhagyalakshmi is yet another major initiative launched in 2006-07 to improve the State's sex ratio by providing financial incentive. An amount of Rs. 19,300 (Enhanced from Rs. 10,000) for the first girl child and Rs.18,350 for the second girl child is deposited in the partnering financial institutions to be paid to the beneficiaries on attaining the age of 18 years.

of diet at home. Bhagyalakshmi is yet another major initiative launched in 2006-07 to improve the State's sex ratio by providing financial incentive. An amount of Rs. 19,300 (Enhanced from Rs. 10,000) for the first girl child and Rs.18,350 for the second girl child is deposited in the partnering financial institutions to be paid to the beneficiaries on attaining the age of 18 years. The scheme is guided by certain conditionalities. Financial incentives are also available to recognize children's bravery and awards for institutions and individuals who have done best work in the field of child welfare. The State also operates a scheme to combat trafficking in women and children through training programs and awareness campaigns.

Chief Minister of Karnataka Mr. Siddaramaiah in his budget speech of 2013-14 has announced women and child welfare as his government's priority. A substantial increase in revolving fund from Rs. 5000 to Rs. 25000 in a phased manner has been announced. Milk to be supplied to all children as additionality to supplement nutrition provided under ICDS. Honorarium of Anganwadi workers and helpers has been enhanced. Financial security (Rs. 50,000) to physically challenged persons when they get married, child care allowance of Rs. 2000 a month for visually challenged for two years from the date of delivery, enhancement of grant in aid to old age homes, pension to Ex Devadasis, subsidy to construct their own house are some of the schemes announced. The 2014-15 budget of Mr. Siddaramaih reiterates the priority for women and child development by announcing seven new schemes.

Fiscal Marksmanship

Literature on budget data analysis has very often revealed that the actual expenditure incurred by governments has deviated in a significant manner from the estimated budget allocation. It has to be noted that the budgeted estimates are only financial proposals and do not reach the intended benefits until actually expended. In addition, budgetary planning exercise is supposed to be carried out in a scientific manner such that the final expenditure does not deviate in a significant manner from the estimates and indicates the extent of fiscal marksmanship. Budgeted estimates are supposed to be accurate. In the present paper this analysis was possible only for 2011-12 and 2012-13 for the years for which the actual expenditure details are available. This analysis for select programs presented in table 15.17 reveals that actual expenditure has a significant variation with the budgeted estimates much above the accepted level of ten per cent variation. These results hint at the need to tone up budgetary planning exercise.

Table15. 17
Fiscal marksmanship (Rs in lakhs)

Programs (State sector)	2011-12				2012-13				2013-14			
	B.E	R.E	A/C	% Var	B.E	R.E	A/C	% Var	B.E	R.E	A/C	% Var
Direction and administration	946	3606	2723	187.84	966	1131	939	-2.8	NA	NA	NA	-
ICDS HO Cell	1632	1632	700.2	-57.09	450	1382	1365	203.33	NA	NA	NA	-
Bhagyalakshmi	40784	40784	48609	19.19	46817	71817	75539	61.35	39643	39643	37158	-6.27
Balvikas Academy	400	400	150	-62.5	400	400	300	-25	300	300	NA	-
Stree Shakti Rev fund for SHGs	1042	1042	795.38	-23.67	1050	1050	1040	-0.95	1500	1500	1458	-2.77
SABALA (100 %CSS)	432	432	142.5	-67.01	434	434	291	-32.95	433.6	433.6	108.3	-75.02
Pension to destitute	1613	1613	0	-100	400	50	90	-77.5	100	NA	NA	-
Protection of against dom vio	530	530	245	-53.77	553	502	397	-28.21	600	600	501.34	-16.44

Source: Computed using budget data

Women and Child Development in Karnataka: Budget allocations and Impacts

Budget is an important channel for a government to state its priorities, translate its goals and objectives through resource allocation. The changing priorities are reflected in the increase or decrease (a very rare phenomenon in conventional incremental budgeting practice) of allocations and announcement of new schemes. Mainstreaming gender has been high on the agenda of Indian governments and justifiably so, given the prevailing gross gender inequality across almost all the sectors and the regions. The Gender Inequality Index (GII) reflecting the gender based disadvantages in reproductive health, empowerment and labor market is very low for India and ranks 132 as per the Human Development Report 2013 (Economic Survey, 2013-14). Economic empowerment as revealed by the participation of adult women in economic activity rate in 2011 is very low at 29 as opposed to 81 for Indian men. Further adult economic activity rate of women compares very unfavorably with many countries. India has the lowest rate within the BRICS group with the rate being 60, 56, 29, 68 and 44 for Brazil, Russian Federation, India, China and South Africa respectively. Nepal at 80 has the highest rate among the countries listed (GOI, 2014). India offers a poor comparison with reference to Sex ratio (women/100 men) at 94; Pakistan is better placed at 97. The BRICS nations' sex ratios are 103, 116, 94, 93 (does not include Hong Kong and Macao) and 102 respectively. Maternal mortality rate estimates for 2010 has the second highest at 200 among BRICS nations, the highest being in South Africa at 300. MMR in other BRICS group countries is very low with Brazil at 56, Russian federation at 34 and China at 37. UNESCO data[27] with reference to Youth (15-24) and adult (15+) literacy rate and Gender Parity Index (Female to Male ratio) reveal that the status in India is very weak as compared to other nations. BRICS nations have the youth literacy Gender Parity Index as 101, 99.66, 88.41, 99.69 and 98.5 respectively.

The Gender Inequality Index (GII) reflecting the gender based disadvantages in reproductive health, empowerment and labor market is very low for India and ranks 132 as per the Human Development Report 2013

[27] *While all the countries listed in this database have literacy data for 2011 and 2012 India's data refers to 2006 speaking volumes for status of statistical data in India*

Karnataka's sex ratio as per 2011 census at 968, although higher than the national average at 940 compares unfavorably with its neighboring States. Kerala has the highest ratio of 1084, followed by Tamil Nadu at 995 and Andhra Pradesh at 992.

Karnataka, while being fiscally a very progressive State with all its fiscal parameters[28] performing very well and having the highest per capita development and plan expenditure in the country, compares unfavorably with many States with reference to gender equality. The "Gender related Development Index" (GDI) of Karnataka has revealed a marginal improvement from 0.545 in 1996 to 0.611 in 2006; However, the gender disparity is still a cause of concern in many sectors. While the urban male literacy has crossed 90 per cent the rural female literacy is yet to cross 60 per cent (Economic Survey, 2013-14).

Karnataka's sex ratio as per 2011 census at 968, although higher than the national average at 940 compares unfavorably with its neighboring States. Kerala has the highest ratio of 1084, followed by Tamil Nadu at 995 and Andhra Pradesh at 992. Workforce Participation Rate in Karnataka for women is 31.87 as compared to 59 for men. The male - female differential is a common feature of all Indian States with the North Eastern States revealing comparatively larger female work participation. Among the Southern States, Karnataka's Maternal Mortality Rate (MMR) (31) in 2013 is better than Andhra Pradesh (39) while both Kerala (12) and Tamil Nadu (21) have far lesser maternal mortality rates.

Performance of select women and child development programs

Analysis of the budgetary allocations indicate at the best the financial performance which need to be supplemented with the results/impacts that these programs have exerted on the people to whom these benefits are intended. It is important to note that the final impacts or the outcomes of some programs may involve long gestation period. Nevertheless, it is very important to understand the performance of the programs to help the policy makers to make some midway corrections and also to ascertain if the programs are working towards the expected results. Such an exercise would require at least information regarding appropriate 'output' or 'intermediate outcome' indicators. Government reports like 'performance budget' provide information for plan programs relating to financial and physical targets and achievements. Results framework document (RFD) too provides trend values for success indicators. Data from performance budget documents are used to present the achievements of select schemes.

Integrated Child Development services

An important component of ICDS is 'Supplementary Nutrition'. Under this program the beneficiaries are provided with supplementary feeding to fill the gap between what is required in terms of calories, proteins, vitamins, minerals, fats etc and what is available through their regular intake of food at home. 'Supplementary Nutrition' is provided for 300 days in a year at a cost of Rs 4, 5, and 6 a day for children with normal nutrition, pregnant/nursing mothers/adolescent girls and severely malnourished children respectively.

[28]The State's fiscal deficit, revenue deficit, debt etc have always been within the targeted levels ever since the State has promulgated the Fiscal responsibility Act in 2002.The State has one of the highest tax/GSDP ratios in the country

Physical targets (Rs. 56,21,019) and achievements (Rs. 54,32,714) reveal (as on 31-12-2013) (Table 15.18) that there has been a shortage of 3.35 per cent in the achievements as against the target. The financial target, release and expenditure vary with one another in a significant manner. As against a target of a sum of Rs. 11,38,25 only a sum of Rs. 70,505.09 is released constituting 62 per cent of release and further only Rs. 45,745.28 is spent constituting 64 per cent of the release. The amount spent as per cent of target is a meager 40.19 per cent. This is a matter of serious concern as it could be either due to poor budget planning or poor absorptive capacity. Preparing budget estimates for a program like 'Supplementary Nutrition' with defined financial norms and the population, is expected to be close to accurate and any disconnect between the targets, releases and expenditure is a matter for serious concern regarding budget planning. Similar variations are observed between targets, releases and achievements for items of expenditure such as Administrative cost, Kishori Shakti Yojana, additional honorarium to Anganwadi workers etc. With reference to Kishori Shakti Yojana each Anganwadi Centre, two adolescent girls in the age group of 11-18 years are given five day residential training and supplementary nutrition is provided. Under this particular scheme only 59 per cent of the targeted amount is released and 17 per cent of the targeted amount is actually expended (24 per cent of the amount released) (until 31-12-2013) Budget allocations under these circumstances of sharp deviations with the actual expenditure do not really mean much for the welfare of the intended beneficiaries.

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Table 15.18
Financial targets and achievements for select schemes (Rs. in lakhs)

Scheme	Target / Allocation	Release	Achievement	% Achievement to target
Supplementary Nutrition	113825	70505	45745	40.19
Kishori Shakti Yojana	141	83	24	17.02
Addl honorarium to Anganwadi workers	22835	13167	12311	53.91
ICDS training program	600	391	205	34.17
Bhagyalakshmi	39643	17591	205403	44.37
Streeshakti	1500	NA	1234	82.27
Hostel for girls	305	229	146	47.87
Attendance scholarship	79	NA	27	34.18
Working Women's hostel	17	NA	0	0

Source: Women and Child Development Department, Performance Budget- 2013-14

Performance budget 2013-14 (p 20) States "It was a landmark decision of the government as it was for the first time a conscious and positive attempt was made by government to address gender issues".

Yet another serious issue of concern relates to bunching of expenditure referring to large-scale spending that happens in the last quarter of the financial year. (Table 15.19) With reference to the scheme 'Construction of Anganwadi buildings' by the department, only 58 per cent of the earmarked allocation for 2013-14 was expended by December 2013. Bhagyalakshmi scheme's performance is even more disappointing wherein of the Rs 39642.86 lakh financial target (2013-14) only Rs 17591.19 lakh amounting to 44.37 per cent was achieved by December 2013. With reference to the physical target of 205403 only 91917 was achieved by 2013 December accounting for 44.75 per cent. Stree Shakti reports only 44.21 per cent expenditure till December 2013. A very laudable initiative of Government of Karnataka is to earmark one third of resources for women in individual beneficiary oriented schemes and labor intensive schemes of various departments of Karnataka under the scheme Karnataka Mahila Abhivruddhi Yojane. Objective of this Yojane is to ensure gender equality and to integrate in the mainstream of development. Performance budget 2013-14 (p 20) States "It was a landmark decision of the government as it was for the first time a conscious and positive attempt was made by government to address gender issues". It is also reported that during 2013-14, 25 departments have identified 293 schemes. Out of the total outlay of 12104.99 crore, the one-third allocation for Karnataka Mahila Abhivruddhi Yojane is Rs.4786.32 crore. An expenditure of Rs.1489.94 crore constituting 31.13 per cent of total allocation is incurred up to December 2013. Bunching of expenditure as observed by a number of studies has not proved to be very effective in achieving the program objectives. (Indira Rajaraman, 2001, Mukherjee, 2009 and Gayithri,2012)

Table 15.19

Time pattern of spending Women and Child development for Select schemes (Rs in lakhs)

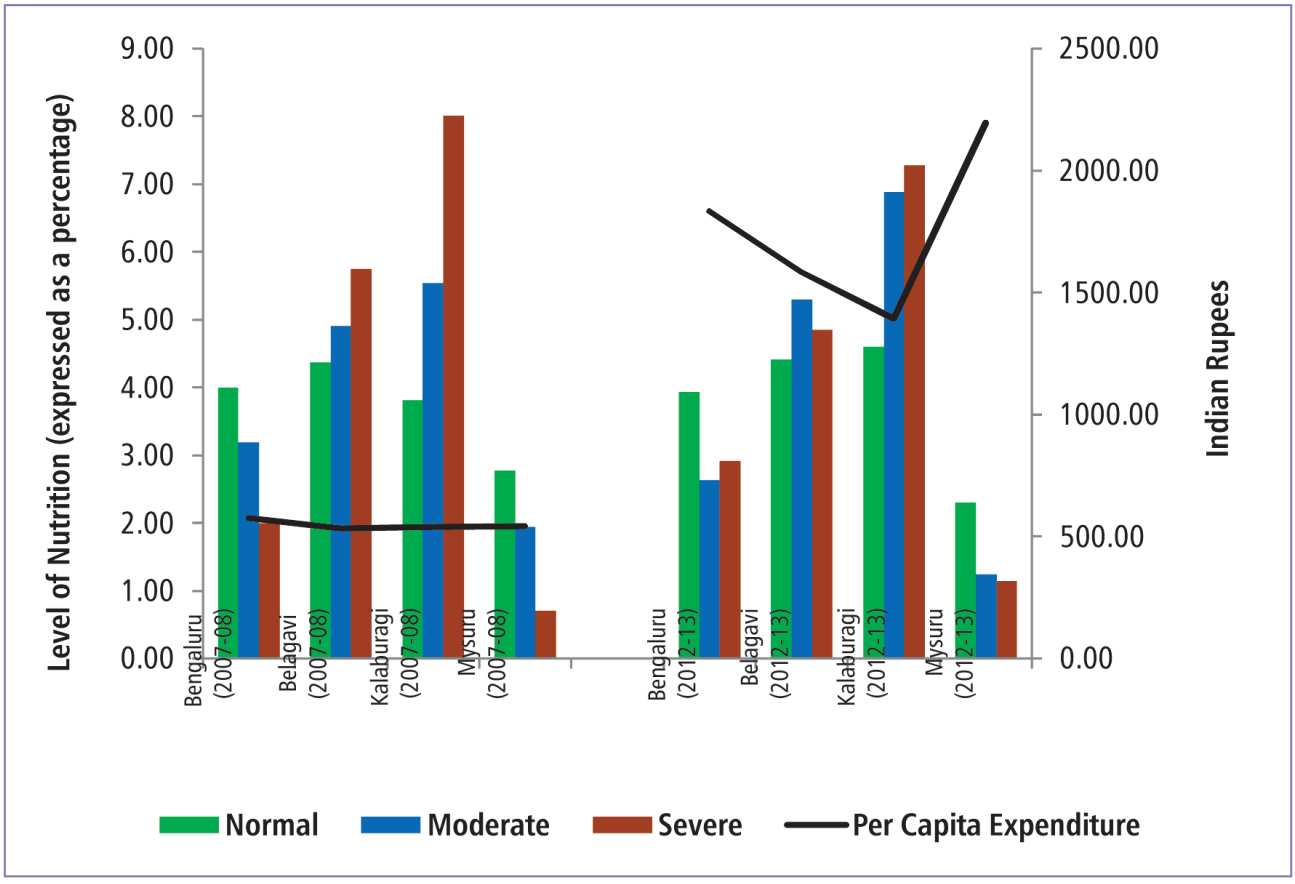
Select Schemes	B.E 2013-14	Amt released by Dec 2013	% Amt released by Dec 2013
Anganwadi Bldgs (Con)	1649.9	967.98	58.66
Bhagyalakhsmi (Fin)	39642.86	17591.19	44.37
Bhagyalakhsmi (Phy)	205403	91917	44.75
Stree Shakti	1500	663.26	44.21
Mahila Abhivruddhi Yajane-(crore)	4786.32	1490	33.13

Source: Woman and Child Development Department, Performance Budget- 2013-14

Insights from a recent study on Integrated Child development services in Karnataka[29] reveal that financial resources have been increasingly allocated for the program. In terms of program performance it was observed that the program had better impacts in South Karnataka than in North Karnataka albeit with similar per capita expenditure in 2007-08. Over time, South region has had larger per capita expenditure and also realized a much greater improvement in the levels of moderate and severe malnutrition. Economic Survey 2012-13 observes that districts of southern region of Karnataka like Mysuru, Mandya, Tumakuru, Kolar and Chikkamagaluru are better performing in the Maternal and child health aspects than the northern districts like Uttar Kannada, Bidar, Gadag and Koppal. These findings reiterate the fact that regional variations in development in Karnataka have been quite disquieting and hint at the need to address these issues.

districts of southern region of Karnataka like Mysuru, Mandya, Tumakuru, Kolar and Chikkamagaluru are better performing in the Maternal and child health aspects than the northern districts

Figure 15.6
Comparison of levels of nutrition and per capita expenditure on ICDS by Divisions



*Data source: Ministry of Women and Child Development, Bengaluru, Karnataka

[29] Rajan, Pavithra, Jonathan Gangbar and K.Gayithri, Integrated Child Development services in Karnataka, Working Paper, Institute for Social and Economic change, Bengaluru

The State's efforts in preparing the Results Framework Document are laudable, only when they are linked with the financial allocations and used in expenditure planning in the ensuing budgets,

Select outcome indicators Karnataka vis-a-vis southern States

The recent statistics released by the Central Statistical Organization, Government of India presented below render some pointers to the areas that need to be addressed by the government of Karnataka on a priority basis.

Karnataka State has shown some improvement in sex ratio from 965 in 2001 to 968 in 2011 and it is also better than the national average. However,, it does not compare very well with the other southern States (Table 15.20). It can also be observed from other indicators (Table 15.21) that while Karnataka's performance has been better than that of national average, the State lags behind its neighboring States in certain indicators. Incremental budgeting practiced currently should gradually give way to performance budgeting that is being currently practiced in a number of countries. The State's efforts in preparing the Results Framework Document are laudable, only when they are linked with the financial allocations and used in expenditure planning in the ensuing budgets, otherwise the efforts remain as yet another report without serving much purpose in toning up allocative efficiency of public spending.

Table 15.20
Sex ratio among the Southern States

States	2001		2011	
	Sex Ratio Total Population	Sex Ratio 0-6	Sex Ratio Total Population	Sex Ratio 0-6
Karnataka	965	946	968	943
Andhra Pradesh	978	961	992	943
Kerala	1058	960	1084	959
Tamil Nadu	987	942	995	946
All India	933	927	940	914

Source: Economic Survey, 2013-14

Table15. 21
Select development indicators

States	MMR 2010-12	Gender gap-Literacy 2011	Female Literacy 2011	Worker- pop ratio Female 2012-13	Labor Participation rate Rural Female 2011
Karnataka	144	14.4	68.1	44.5	**28.9**
Andhra Pradesh	110	15.7	59.1	28.7	**44.8**
Kerala	66	4.0	92.1	22.1	**25.8**
Tamil Nadu	90	13.3	73.4	37.8	**38.6**
All India	178	16.3	65.5	24.8	25.3

Source: GoI, Planning Commission, 2014

The fact that women and Child development is considered as a priority area as revealed by the policy pronouncements from time to time for long and attracting increased budgetary allocations with the passage of every budget is very encouraging. This is all the more important for a State like Karnataka that despite the improvements achieved in various women and child related development over time, the State has not compared very favorably even with neighboring States in select women and child development indicators. Karnataka is among one of the first to frame Gender budget to track the resources allocated for the cause of women and earmark one-third of resources for individual beneficiary oriented schemes and labor intensive schemes of various departments under Mahila Abhivruddhi Yojane. By way of welcome measures budget allocations, both in nominal and per capita terms, have shown significant increase and more and more new schemes are getting announced based on the felt needs of and children. Women and Child Development Department has been highly proactive in promoting the welfare of women and children. Some aspects that need However, to be taken care of in the context of not a very encouraging fiscal marksmanship relate to toning up of budget planning. The large variation observed between the targets, releases and the actual expenditure for certain schemes does not augur well in the promotion of women and child welfare. Mere announcement of programs does not aid in the promotion of women and child welfare; the real impacts are possible only when these programs get translated into benefits to the groups concerned. Similarly there is need to avoid rushing of expenditure in the last quarter of the financial year to ensure effective implementation of the programs. In the execution of schemes, the departments may be encountering a number of constraints; there is every need to resolve these in order to have the financial allocations get translated into effective outcomes to achieve the overall objective of women and child welfare in the State of Karnataka.

Section Six

Financing human development vis-à-vis outcomes in Karnataka: Some issues and concerns

Karnataka's fiscal capability and the priority assigned to the social sector, as observed in the initial analysis reveals that the State's performance with reference to financing of human development is comparable overtime and with other States, However, this should not lead to complacency, as the State's performance on human development front has not been commensurate with the resources flowing into the sector. This is amply clear from the fact that the States with similar per capita spending like Tamil Nadu have achieved much better levels of human development as compared to Karnataka. Analyzing the relative performance of Indian States in various dimensions of human development, Ghosh, 2011 observes that Madhya Pradesh, Rajasthan and Tamil Nadu managed to improve their HDI position over time, Karnataka along with Andhra Pradesh, Gujarat and Maharashtra experienced deterioration in their relative position. Despite the overall improvement in the HDI level overtime, the relative performance of the State has been a cause for concern.

There is a need to probe deep into the issues that are hindering effective translation of outlays into outcomes in the State. Existing research evidence

Mere announcement of programs does not aid in the promotion of women and child welfare; the real impacts are possible only when these programs get translated into benefits to the groups concerned.

highlights some problems that need to be addressed in this context.

Technical efficiency spending Some insights from health sector

Acievement of human development is not dependent on mere enhancement of allocation there is every need to ensure effective and efficient execution of the schemes. Effectiveness refers to translation of inputs into outputs and outcomes and efficiency refers to cost effectiveness in scheme implementation. Recent literature has provided methodologies to compute technical efficiency of health sector spending which basically helps in the computation of potential outputs/outcomes obtainable from given investments vis-a-vis the actual outputs/outcomes obtained. Important observations (Gayithri, K, 2011) of this exercise comparing inter and intra State technical efficiency of Karnataka's health sector reveal that:

Acievement of human development is not dependent on mere enhancement of allocation there is every need to ensure effective and efficient execution of the schemes. Effectiveness refers to translation of inputs into outputs and outcomes and efficiency refers to cost effectiveness in scheme implementation.

- Both with reference to IMR and Life expectancy, achievements are observed to be deviating in a significant manner from the potential levels. This is not just the case in Karnataka, many other States also reveal this kind of deviation.
- Seven other States have revealed better performance than Karnatka with reference to IMR (Kerala, Haryana, Andhra Pradesh, Tamil Nadu, Maharashtra, Punjab and West Bengal.)
- In the case of Life expectancy, the results reveal that post reform phase deviation from the potential level is larger as compared to the pre reform phase.
- An intra State analysis (Purohit, 2010) reveals that while the share of potential utilised is to the tune of 98.87% (Dakshina Kannada) and 98.52% (Udupi) or is to the tune 84.34% (Kalaburagi) and 86.82% (Bagalkote)

Issues in budget execution

Scheme execution plays an important role in the effectiveness with which services are delivered. Bunching/ rushing of expenditure towards the close of the financial year in the process of delivering the services not only adversely affect the quality of public services but also affects the monitoring. These instances are observed in the context of major schemes of rural development (Rajaraman, 2001 and Mukherjee, 2009) in the context of education expenditure An analysis of expenditure incurred under the Plan and Non-plan by each quarter reveals that (figure 15.7) close to fifty percent of the plan component of revenue and capital expenditure is incurred in the last quarter and third and fourth quarters together account for more than sixty percent of the expenditure, while that of the Non-Plan expenditure is more evenly spread out. This implies that a large program component of expenditure that matter a great deal in the delivery of services is staggered to the last quarter of the financial year. In the context of expenditure incurred under the social and community services and economic services by each quarter it has been observed that close to fifty percent of the expenditure is incurred in the last quarter and third and fourth quarters together account for more than seventy five percent of the expenditure (Gayithri, 2011). This has been the case with the health and Rural development expenditure (Figure

15.8 and 15.9) based on the Monthly Program implementation Calendar (MPIC) data (provided by the Planning Department).

A primary survey undertaken as a part of another study (Gayithri, 2010) reveals that there are instances wherein the grass root health facilities have received the allotted amount in the month of March under NRHM. There were also instances wherein the grass root implementing agencies had kept the bills ready even before the execution of the program just to ensure that the money does not lapse. These practices are largely a fall out of the releases which reach them at the fag end of the financial year. The delays could be both on account of administrative procedures involved in the release of funds or related to the availability of funds. These practices need to be arrested at the earliest to ensure effective service delivery.

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Figure 15.7
Bunching of Public Expenditure 2014-15 BE

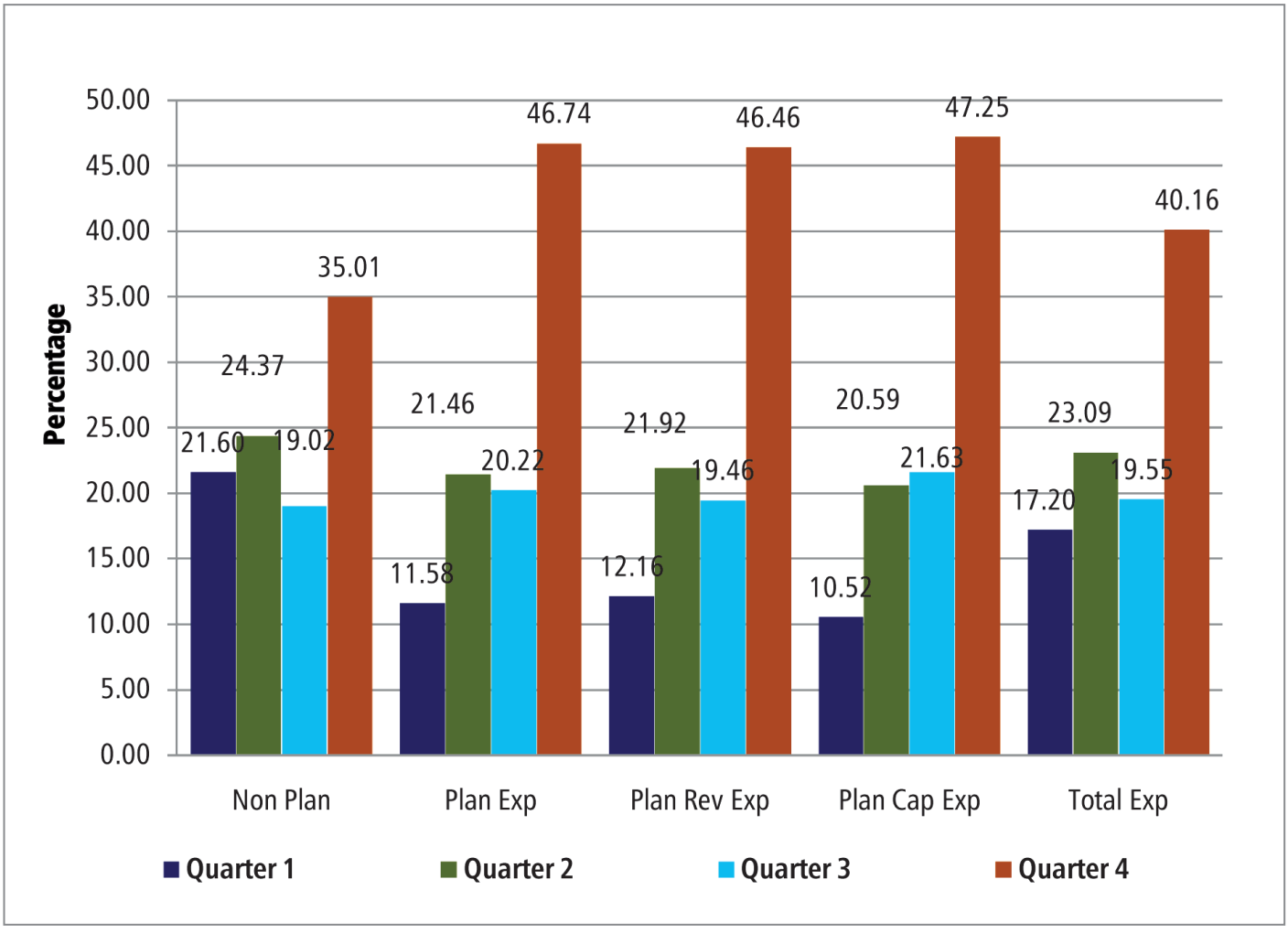


Figure 15.8
Quarterly Expenditure of Health and Family Welfare (% of Total Expenditure 2014-15)

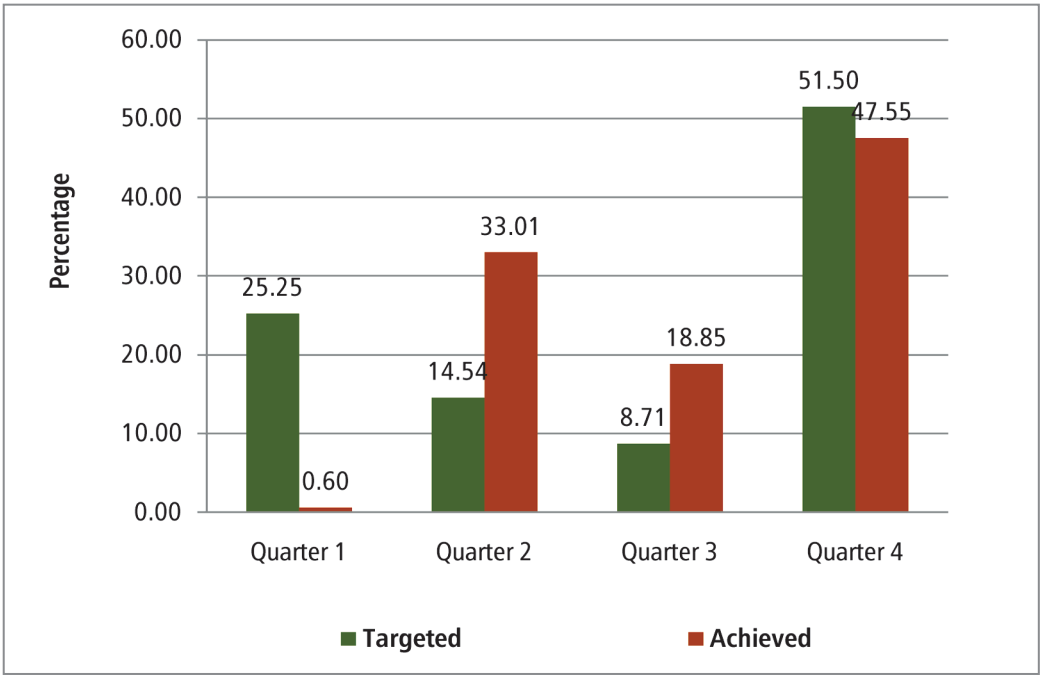
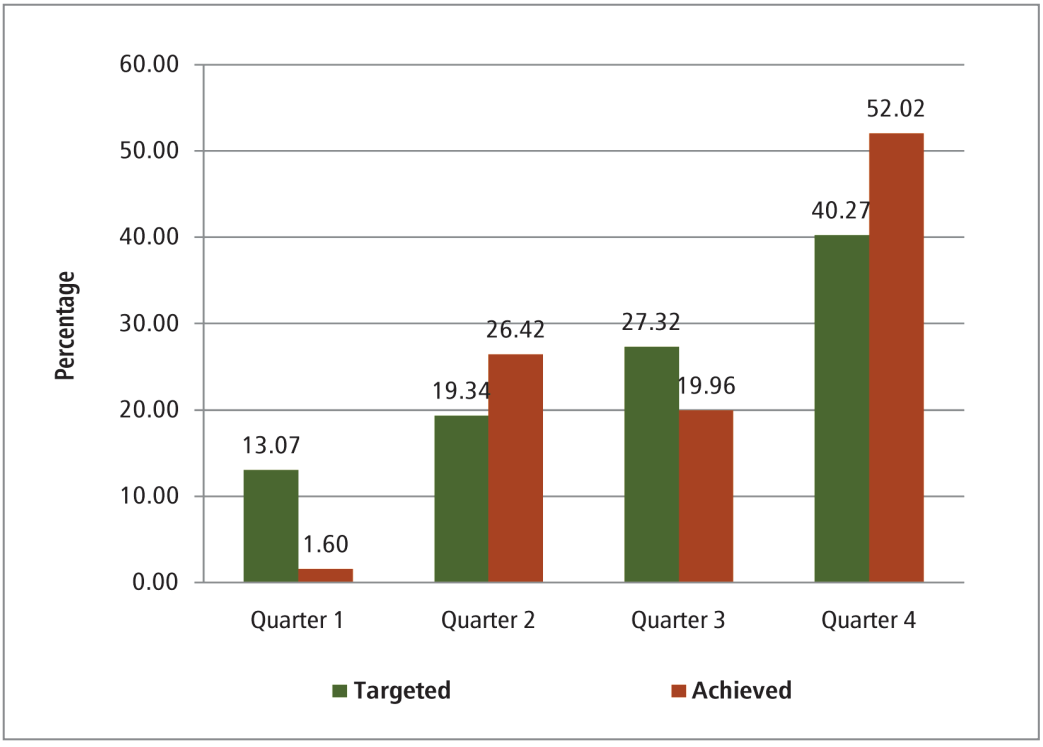


Figure 15.9
Quarterly Expenditure of RDPR (% of Total Expenditure 2014-15)



Under utilization Many studies have identified under spending of the resources allocated to various social sectors as a serious problem in achieving the much needed social sector development. To make matters even worse underspending rarely occurs in the non-plan category (Dev and Jos Mooij, 2004) as it contains mainly the committed expenditure such as salaries and maintenance. Under utilization has also been a problem in Karnataka.

Health Development Index and health care expenditure Mapping the NRHM per capita expenditure and the Health index rank and value among the districts in Karnataka to examine whether the health needs of districts are reflected in the expenditure it is observed (Gayithri, 2012) that there is a clear mismatch between need as indicated by the Health index value and the rank and per capita expenditure. This indicates a clear disconnect between policy and planning. The health expenditure of Rs. 49 in Udupi district ranking in first place in terms of Health Index is higher than that of districts such as Chamarajnagar, Vijayapura or Kolar which experience poor health index ranking. Bengaluru Urban and Shivamogga districts account for the highest per capita expenditure at Rs. 84.7 and Rs. 78.4 among all the Karnataka districts with 5 and 4 ranking in terms of health index. While this may be inadvertent fallout, as the focus at the time of allocation is to merely allocate a larger share based on their backwardness, but to make the intervention more effective, the government has to take into account the need of the area which gets best reflected by the size of the population, age composition, disease profile, overall level of health development etc. The above analysis clearly points at the need not to merely enhance funding but also improve expenditure planning by the authorities concerned to achieve the targeted outcomes in a cost effective manner.

Conclusions

Karnataka's fiscal capability assessed in terms of the broad fiscal indicators such as fiscal and revenue deficits has revealed that the State has had a sharp fiscal recovery during the last decade as compared to that of nineties, hence in a better position to support human development intervention. State's revenue position has substantially improved. Further, the government's priorities have undergone a substantial change in favor of social and community services by assigning thrust sector status to select sectors such as Education, Health etc.,The compound annual rates of growth of the functional categories of expenditure reveal that social and community services have experienced the highest rate of growth. The current decade has seen a good gain in the social and community and economic services as opposed to the highest rate of growth revealed by the general services expenditure in the decade of nineties. This accounts for an increased focus on the social services by the Government of Karnataka which certainly is a very welcome trend, given the adverse trends that prevailed during the course of last decade and slow improvement in the Human Development Index (HDI) of the State. However, fluctuations are observed that are largely caused by revenue uncertainties. For instance, the revenue shortfall experienced in

to make the intervention more effective, the government has to take into account the need of the area which gets best reflected by the size of the population, age composition, disease profile, overall level of health development etc.

post 2007-08 resulted in an absolute decline in the expenditure Health sector in the FY 2009-10. It is important to insulate social sectors from such adhocism by earmarking a prescribed share in the GSDP to ensure sustained improvements in human development.

An important issue in the context of expenditure planning for the districts is to move away from the strategy of enhancing share in total allocations to need based planning. An important prerequisite for this is the availability of district wise expenditure breaks up by each sector, which currently is lacking.

Per capita real expenditure of Karnataka has been on the increase and was fifth largest among the major fifteen States in 2002-03. Growth in per capita expenditure in other States has been larger during the last decade relegating Karnataka to seventh place. Despite the fact that Karnataka's per capita real expenditure on some key social services expenditure is on the increase and comparable with States like Tamil Nadu (to a larger extent) and Kerala (to a smaller extent) the State does not compare well with reference to the indicators of human development. However, per capita private expenditure in these States has been larger than Karnataka, Thus, probably leading to better human development levels considering the fact that development is influenced by total investment (public and private) in a sector. The relatively smaller per capita public and private sector expenditure in Karnataka as compared to the neighboring States is a cause for concern in the broader context of human development. The issue related to the role of government in financing human development assumes greater significance as Karnataka has been having the highest poverty level among the southern States and Thus, reiterates the need for greater government spending.

The regional imbalances observed in the development of sectors like Health and education needs to be addressed not by merely earmarking increased allocations but also linking it with the current performance attainments. The growing divergence across districts in demographic indicators and IMR is a serious issue of concern. This needs immediate attention. An important issue in the context of expenditure planning for the districts is to move away from the strategy of enhancing share in total allocations to need based planning. An important prerequisite for this is the availability of district wise expenditure breaks up by each sector, which currently is lacking. This has to be attended to immediately. The only one time point data available for Education and Health sectors in per capita terms reveals that there is a complete disconnect between the levels of Education and Health development indices of districts with that of their per capita expenditure. Districts that are better off are getting more money than the backward districts. This clearly accounts for planning anomalies in the mitigation of regional disparities which need immediate correction. Need based expending of resources of each of the districts in the State is an impending need of the hour top tone up human development in the State. Karnataka's relative rank in Human Development Index has not improved over years and it is often observed that the State average is pulled down by low levels of human development in certain districts. Per capita expenditure in such districts is observed to be low and needs to be toned up on a priority basis by earmarking adequate allocations. Technical efficiency defined in terms of the attained levels of output/ outcome to the potential obtainable is weak in the context of health sector spending

in Karnataka as compared to seven other major States and north Karnataka districts are performing much below the potential. This necessitates toning up of cost effectiveness of public spending in Karnataka especially in some districts which are pulling down the overall performance of the State.

Scheme execution plays an important role in the effectiveness with which services are delivered. Weak expenditure planning leading to bunching/ rushing of expenditure towards the close of the financial year in the process of delivering the services not only adversely affect the quality of public services but also affects the monitoring. An analysis of expenditure incurred under the plan and non-plan; social and community services; Health and family welfare and Rural development by each quarter reveals that close to fifty percent of the expenditure is incurred in the last quarter and third and fourth quarter's together account for more than sixty percent of the expenditure. There is an urgent need to rectify these practices to enhance effectiveness of public spending.

The fiscal reform process has still not focused on redefining the 'Role of State' in the changing times. This is the right opportune time to make a systematic delineation of the responsibility of the State in terms of direct provision, facilitation; regulation etc., Expenditure reprioritized on these lines would not only right size the government but also help enhance fiscal space and allocative efficiency of public spending.

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Table 15.22
Regional distribution of expenditure

DISTRICTS	Per capita Education expenditure (in. RS)	EDI	Per-capita Health Expenditure (in. RS)	Health Index
BAGALKOTE	1700 (5)	0.563 (21)	97 (26)	0.317 (21)
BELAGAVI	3004 (1)	-	297 (12)	-
BALLARI	229 (29)	0.501 (25)	112 (24)	0.301 (23)
BENGALURU RURAL	917 (19)	0.692 (12)	171 (19)	0.833 (5)
BENGALURU URBAN	795 (20)	0.740 (3)	1524 (2)	0.952 (3)
BIDAR	1252 (12)	0.490 (27)	99 (25)	0.565 (16)
CHAMARAJANAGARA	1597 (8)	0.535 (22)	558 (6)	0.714 (11)
CHIKKABALLAPURA	1159 (16)	0.611 (19)	157 (21)	-
CHIKKAMAGALURU	1182 (15)	0.777 (1)	706 (5)	0.819 (6)
CHITRADURGA	1673 (6)	0.733 (4)	387 (11)	0.545 (19)
DAKSHINA KANNADA	326 (26)	0.701 (10)	190 (17)	0.981 (1)
DAVANAGERE	339 (25)	0.676 (15)	291 (13)	0.561 (17)
DHARWAD	404 (24)	0.645 (16)	262 (14)	0.583 (14)
GADAG	1056 (18)	0.573 (20)	416 (10)	0.579 (15)
KALABURAGI	468 (22)	0.529 (23)	163 (20)	0.310 (22)
HASSAN	1768 (4)	0.693 (11)	194 (16)	0.770 (9)
HAVERI	1419 (10)	0.686 (13)	730 (4)	0.551 (18)
KODAGU	1637 (7)	0.757 (2)	418 (9)	0.788 (8)
KOLAR	154 (30)	0.723 (7)	50 (30)	0.528 (20)
KOPPAL	495 (21)	0.500 (26)	68 (28)	0.024 (25)
MANDYA	1239 (13)	0.645 (17)	1783 (1)	0.858 (4)
MYSURU	1115 (17)	0.685 (14)	503 (7)	0.760 (10)
RAICHUR	467 (23)	0.526 (24)	222 (15)	0.251 (24)
RAMANAGAR	1187 (14)	0.631 (18)	182 (18)	-
SHIVAMOGGA	311 (28)	0.726 (6)	62 (29)	0.647 (13)
TUMAKURU	321 (27)	0.705 (9)	425 (8)	0.673 (12)
UDUPI	1338 (11)	0.709 (8)	81 (27)	0.958 (2)
UTTARA KANNADA	1856 (3)	0.730 (5)	1521 (3)	0.802 (7)
VIJAYAPURA	2127 (2)	-	141 (22)	-
YADGIR	1453 (9)	-	127 (23)	-

Source: GoK DHDR2014, Planning Department for per capita expenditure and Economic Survey for Education Development Index and Health Index

Table 15.23
Percentage of Per-capita Expenditure on education

Years	Elementary Education	Secondary Education	Univer-sity &Higher education	Adult	Language Development	General	Total
2002-03	52.82	31.01	14.02	0.16	0.47	1.52	100.00
2003-04	56.08	28.50	13.19	0.15	0.40	1.68	100.00
2004-05	58.51	27.71	11.89	0.11	0.22	1.56	100.00
2005-06	58.35	28.53	11.13	0.10	0.20	1.68	100.00
2006-07	57.15	30.82	10.18	0.17	0.18	1.49	100.00
2007-08	57.59	31.29	9.43	0.22	0.20	1.27	100.00
2008-09	57.29	31.64	8.59	0.24	0.19	2.05	100.00
2009-10	55.75	33.27	9.34	0.18	0.20	1.26	100.00
2010-11	52.70	30.50	14.19	0.13	0.21	2.27	100.00
2011-12	52.66	31.74	13.95	0.16	0.17	1.33	100.00
2012-13	54.56	30.92	13.55	0.16	0.21	0.60	100.00
2013-14	55.67	29.60	13.62	0.07	0.21	0.82	100.00
2014-15 RE	56.28	28.65	13.32	0.06	0.16	1.53	100.00
2015-16 BE	51.70	30.01	15.12	0.05	0.18	2.93	100.00

Table 15.24
Percentage of Per-capita Expenditure on Health

Years	Urban Health Services	Rural Health Services	Medical Educa-tion Training & Research	Public Health	General	Total
2002-03	41.26	3.66	15.93	5.91	33.25	100.00
2003-04	39.98	3.29	15.07	5.55	36.10	100.00
2004-05	37.56	6.34	15.07	6.55	34.48	100.00
2005-06	33.49	1.89	22.58	4.37	37.68	100.00
2006-07	36.15	3.03	17.67	5.27	37.88	100.00
2007-08	35.30	4.21	17.32	4.97	38.21	100.00
2008-09	30.35	5.05	22.19	5.53	36.88	100.00
2009-10	32.39	4.29	23.98	4.26	35.08	100.00
2010-11	23.35	8.78	24.28	5.77	37.82	100.00
2011-12	20.65	7.86	29.28	5.55	36.66	100.00
2012-13	21.28	5.97	28.41	7.89	36.46	100.00
2013-14	21.04	7.53	28.36	9.51	33.56	100.00
2014-15 RE	18.71	27.60	21.33	10.35	22.01	100.00
2015-16 BE	22.14	23.83	21.27	10.69	22.06	100.00

Way Forward

Chapter-16

Way Forward

Karnataka State is experiencing faster economic growth in recent years. The programmes and policies both at the Centre and the State level are directed towards transforming this growth into accelerating equitable human development. The analysis in earlier chapters has brought out in detail the extent and spread of human development across regions and social groups in the State. It indicates that the agenda is still half finished. Though convergence is taking place, its magnitude is inadequate to achieve the targets set in Sustainable Development Goals and human development in the State. A more integrated and concrete action that is required in near future is outlined here.

As per the analysis presented in Chapter two of this report, Karnataka ranks 8th in Human development across the States with HDI value of 0.611. It was ranked at 12th in National Human Development Report 2007-08 with the HDI value of 0.519. This indicates progress made in Human Development indicators is significant over the period 2007-08 to 2012 as reflected in these two reports. The Inequality Adjusted HDI is 0.454 and the rank is 10th across the States. Inequality adjusted HDI showed that potential loss due to inequality is 26%. The loss due to inequality is highest with respect to education dimension (40%) followed by health dimension (22%) and least by income dimension (12%). There are large differences in the status of different districts with regard to human development indicators. Further the inequalities as indicated by education, health and income parameters are wide across the social groups.

Education

Modern Endogenous theories of growth identify knowledge as a major source of economic growth. During the twentieth century, education, skills, and the acquisition of knowledge have become crucial determinants of a person's and a nation's productivity. It is clear that no country can achieve sustainable economic development without substantial investment in human capital. Education enriches people's understanding of themselves helps them to make rational choices. Education has significant externalities that benefit the individuals and the society.

Karnataka's achievement in the field of education is significant. Literacy rates in the State are higher than the All India average rates from 1961 to 2011. The State has recorded 9th rank in literacy rates among major States, in 2011. But the gain in literacy rate is lower when compared to Tamil Nadu, Kerala and the agenda of equity and inclusiveness still remains incomplete. Sex, social and spatial inequities continue to exist till the day. The other significant issue that needs a focus is quality of education. The interventions need to begin from the early childhood level. The strategy to be:

School Education

- The State needs to adopt the elite, scientific, nursery model that fits into a competitive society or alternatively,

regulate nursery curriculum across all schools. The schools 1 to 8, 1-10 and 1-12 to be established in Gram Panchayats with full adequate and complete infrastructure and other support facilities and with transport facilities to children of smaller habitations along with security. There is phenomenal growth of private unaided schools in the State that does not augur well for the interests of public school system. It also affects inclusiveness of education.

Adoption of media and publicity (including folk media), religious and other social platforms to take rural households into confidence to send their wards to schools and continue their education. This may help to reduce the dropout rates at secondary and higher education.

- Adoption of media and publicity (including folk media), religious and other social platforms to take rural households into confidence to send their wards to schools and continue their education. This may help to reduce the dropout rates at secondary and higher education.
- Efforts are being made to improve the infrastructure facilities in the schools as this helps to improve the learning environment. All HPS need to be provided with a full-fledged computer Laboratory. Teacher and student capacities for digital learning, discovery learning should be pursued. Quality schooling includes digital learning, connectivity, self-learning facilitation, promotion of creativity, innovation, diversity and flexibility in curriculum. The quality interventions need to be directed in this direction. Institutional mechanisms to be developed to ensure sustainable quality interventions.
- Enrolments experiences a steep fall after the 7th standard. The fall is sharper in case of girls, SC, ST, Minorities and OBC categories. The enrolment needs to be increased by providing adequate financial assistance and through scholarships and hostel facilities. Though overall attendance is increasing due to mid day meals programme, but concerns are expressed about districts of North Karnataka. Teachers and the community, the youths in the village have to play a greater role this regard.
- The Department of Mass Education needs to be restructured. It has to complete the residuals in basic literacy with knowledge about health and hygiene, environment, development, legal awareness, family management, women's empowerment and especially digital literacy for the youths (18 to 25 age group). The DME has to concentrate in Hyderabad Karnataka districts viz; Bidar, Kalaburagi, Raichur, Ballari, Yadagir and Koppal which carry 3.37 million (25.43 percent) of a total of 11.29 million illiterates in the State.

Higher Education

There has been significant focus on school education over the years but to reap the demographic dividend, it is essential now to focus on higher education also. An integrated policy for higher education needs to be evolved:

- To ensure flexibility and autonomy to the Universities and Research institutions in promoting quality in higher education and research.
- To recognise and incentivize colleges and Universities to focus beyond providing opportunities to retaining and building capacities among the special disadvantaged groups SC/ ST/ Women/ Disabled / gifted population.
- In planning to expand the sector, the

government, could choose some of the promising institutions in Karnataka from different geographical locations and develop them into institutions of Excellence.

- Proper manpower planning need to be undertaken focusing on global and regional job market requirements. The curriculum to be developed to incorporate global competencies among the students. Facilitate mobility across different courses at different levels through a system of credit transfer.
- Against the target set for the increase in the enrolment of higher education (GER) from about 12-15 % to 30% by 2020, the State has to explore innovative financial solutions to support a large number of students aspiring to enter the higher education system.
- The budget of the Department of Higher Education must be enhanced to an annual spending of 2% of the GSDP and must be at least 30% of the overall education budget.
- Develop a National and or State Framework for Vocational education. Support private sector vocational education through accreditation and recognition mechanisms.
- The Right to Education should be extended to Grade 11 and 12 which will mean that every child is assured 12 years of schooling.
- Establishment of appropriate institutional mechanisms for capacity building of Teachers at various levels through exploring PPP models.

Gender concerns in human development

The State is pro active in fostering a healthy and safe environment for women. More focused interventions (laws, policies and schemes) inclusive of gender budgeting by the State and central governments have been undertaken to address the issues of women which result from their situation of subordination, oppression and marginalization in the gender, class and caste hierarchies. Despite all such interventions, the State of Karnataka and India (to a more or less extent) along with all its States/UTs, (union territories) have yet to resolve many issues linked to life, health and survival, safety and security, identity and dignity which affect women across all social groups.

There is a need to evolve an integrated/ holistic perspective and policy to address the intrinsically interrelated concerns associated with women of all ages across multiple dimensions of social exclusion – family, economy, polity, education, religion, culture and media. The State has now formulated a Girl Child Policy and Women Empowerment Policy that attempts to address many of these issues. Along with the effective implementation of the existing policies, the following issues need to be addressed on priority basis.

- Facilitating higher levels of gender sensitization in particular and social sensitization in general against all forms of discrimination/abuse based on gender, caste, language, occupation/wealth, disability and sexuality. Based on this perspective it is important for the State to evolve a gender sensitization policy.
- Focus on creation and equitable access to secure and sustainable livelihood

There is a need to evolve an integrated/holistic perspective and policy to address the intrinsically interrelated concerns associated with women of all ages across multiple dimensions of social exclusion – family, economy, polity, education, religion, culture and media. The State has now formulated a Girl Child Policy and Women Empowerment Policy that attempts to address many of these issues.

options to ensure empowerment of women and human well being and reduce gender disparities. To promote equity in access to higher education, and health facilities.

- A comprehensive health policy addressing the issues of malnutrition, anemia, reproductive health and rising non-communicable disease burden inclusive of mental health with a life cycle approach.
- Evolving a policy framework that promotes equitable percentage of women in governance/ leadership positions in all State, civil society and corporate sectors. Ending severe forms of social exclusion to which the transgender persons continue to be subjected and safeguarding their rights to live with security and dignity.
- Promoting human security and prevent atrocities on women, transgender persons and other vulnerable sections and ensuring safe environment for peaceful survival of girls and women.
- Facilitate more effective Gender budgeting and Gender Auditing of Government schemes and programmes.
- Facilitating the establishment of effective institutional mechanisms that are non-hierarchal/ democratically constituted, inclusive and autonomous, adequately resourced and sustainable in order to design/execute/monitor/ evaluate policies, laws and programme interventions to evolve a model of development that is gender sensitive, dalit/ adivasi sensitive, child sensitive, elderly sensitive and eco sensitive to ensure the well being of all and women in particular.

The population growth rate has significantly come down from over 2 per cent per annum around three decade before to 1.5 per cent in recent years. This is likely to get reduced further in future. Thus, the concern on rapid increase in population is now giving way to an era of optimism in recent times. Yet, there is lot to be done in ensuring better health status in comparison to southern States.

Demography &Health

The State provides a mixed scenario as far the demographic and health achievements are concerned. The achievements in demographic field have been noticeable in Karnataka. The population growth rate has significantly come down from over 2 per cent per annum around three decade before to 1.5 per cent in recent years. This is likely to get reduced further in future. Thus, the concern on rapid increase in population is now giving way to an era of optimism in recent times. Yet, there is lot to be done in ensuring better health status in comparison to southern States. The health outcomes in Karnataka still lag behind neighbouring States like Kerala and Tamil Nadu. For example, the Maternal Mortality Ratio reported by the Sample Registration Survey (2010-12) for Karnataka is 144 per 1,00,000 live births (and 133 in 2015), it continues to be the highest among the four southern States. Though, Karnataka has achieved the India-specific Millennium Development Goal of a target of 38 per 1,000 live births, its IMR which stands at 28 per 1,000 live births, is higher than rates in Kerala and Tamil Nadu which is 12 and 22 respectively. Still inequity in health outcomes and access to healthcare services, as evidenced by indicators disaggregated for vulnerable groups and different geographies, continues to exist.

Improvements in health front require sustainable efforts in ensuring accessible health care provision for all, innovative methods of health financing and addressing the social determinants of health in terms of class, gender and marginalized groups, as well as issues related to potable drinking water, sanitation, environmental factors, education, employment etc.

More attention is required to address the rising costs of medical care and the large out of pocket expenditure with adverse consequences on the poor. The enhancement of governmental funding, perhaps, is important to provide good quality public health care services. In addition, other innovative methods of health financing like insurance schemes, cost effective strategies of providing drugs etc can go a long way in ameliorating the heath burden of a large sections of the population. To improve the health status of the people, the following factors need serious considerations..

- The full immunization coverage is only 63 per cent in the State which is mainly due to poor coverage of polio vaccine and measles. Moreover, the Vitamin A tablet consumption is also only 78 per cent in the State with wide district level variation despite the fact that the malnutrition is significantly prevalent in the State. It shows that the follow up of the children is still weak and needs further strengthening. There is a dire need for expanding the health delivery system in those poor performing districts of North Karnataka.
- The recent initiatives for pregnant women and mothers are innovative and had been instrumental in increasing the institutional delivery in the State substantially. These have brought down the IMR and MMR. There is need for further sustaining these initiatives to achieve the SDG goals.
- Lack of manpower affects the service delivery in the health facilities seriously with implications to achieve desired health goals in the State. Therefore, ensuring the presence of required manpower in the health institutions need to be a priority for the State.
- Nearly 80 per cent of both out-patient and inpatient care is offered through private health facilities in Karnataka. Therefore neither the role of private sector for the health care provision can be undermined nor it can be left unattended. Suitable legislations are necessary to ensure standards and suitable pricing mechanism within the sector.
- There is considerable inequality in health status across socio-economic groups as well as regions in the State. This is despite the fact that several efforts to address these inequities have been undertaken. Although health equity is understood differently in different context, the pursuit on systematic elimination of health disparity should be the priority in any contexts. Therefore, renewed attention is required to ensure that the health system is more equitable and in particular addresses to improve the health status of the vulnerable sections of the population.
- With the changing age structure there is considerable shift in the disease burden towards non-communicable diseases. The Non-Communicable Disease (NCD) programmes underway in the State are inadequate to cater to the emerging disease pattern change in the State. More importantly, the NCD programme should be widened with larger efforts involving community and voluntary organisations. As control of these diseases is critical through preventive and promotive strategies, mere establishment of service delivery will not help in achieving the desired results.

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Karnataka Public Health policy 2017 is a comprehensive and integrated policy It focuses on Social policy initiatives that address the social determinants of health and inequities and Individual factors, life style determinants and community empowerment. Effective implementation of the policy will go a long way in achieving the health outcomes.

- There are several success experiments in the State like in the case of HIV-AIDS which brought down the prevalence systematically through several innovative initiatives involving Government, NOGs and communities. Such efforts are necessary in the health sector particularly for preventive and promotive health and also in ensuring better provision of health care services.
- Health is not merely a function of the provision of health care facilities but has direct connection with many social determinants. Adequate nutritious food, quality of water, controlling environmental pollutants, providing employment, ensuing education etc affect the health status overwhelmingly. The holistic approach to health, therefore, necessitates addressing all these issues which has direct linkages for the overall well-being of population. Therefore, achieving higher levels of health involves addressing all these concerns as well than mere provision of health care facilities.
- Karnataka Public Health policy 2017 is a comprehensive and integrated policy It focuses on Social policy initiatives that address the social determinants of health and inequities and Individual factors, life style determinants and community empowerment. Effective implementation of the policy will go a long way in achieving the health outcomes.

Food and Nutrition

Food and nutrition is the basic determinant of human development and human capital. The vicious circle of poverty prevailing in an underdeveloped economy can be broken only on human/labour productivity front. Adequate availability and access to food and nutrition ensures food security and increased labour productivity. Therefore, intake of adequate nutritious food during the critical phases of life such as infancy, childhood, adolescence, during pregnancy, lactation ensures better physical and mental health & over eating at any given age can lead to detrimental consequences. Considering the opportunities, targeting nutritional outcomes is a key goal of the State and the effective approaches are- for reducing inequalities, public provisions, quality of food &nutritional support to the poorest, unreached& most exploited group. Given the intent, comprehensive understanding of where Karnataka positions today, is essential for setting milestones for future development.

Though Karnataka is a high growth oriented State, but the health and nutrition status of the population is not so impressive. 36.2% of children under-five are stunted and 10.5% are severely wasted and 35.2 percent of the children are underweight (NFHS -4,2015-16) Anaemia among children under-five is too high at 60.9% and 44.8% of the women are anaemic (NFHS-4,2015-16). The incidence of malnutrition is high in all the districts of Kalaburagi division. Raichur and Yadgir districts are placed at the bottom. There is a need to concentrate on malnutrition among the children if the State has to reap the demographic dividend.

The commitment and the priority of the State to improve nutrition has resulted in designing State flagship programs in the sector of WCD, Health, & Agriculture.These programs fortify the spirit and commitment, bestowed upon the vulnerable section, to mitigate the stress & to reduce

vulnerabilities to a large extent. The major flagship programs to support food security and Nutrition of vulnerable population include Annabhagya, Ksheerabhagya, Mid day meals scheme, Mathrupoorna yojane, including the recently initiated initiatives like Indira Canteen. Yet the achievements are not significant. The agenda of ensuring better nutritional status for its population is still fragmentary & requires to be taken forward with the focus on:

- Setting the targets for domain wise reduction levels for Anaemia, low birth weight & improvement for exclusive breastfeeding rate by 20 percent from the current status by 2025.
- Generating awareness about the concept of nutrition among the rural women and about suitable food consumption patterns. Malnutrition is more among the girl children due to discriminatory practices. These need to be addressed though education and social change.
- Decentralized planning & flexibility in the flagship programs to respond to the varied needs in diverse vulnerable pockets have to be hastened to ensure greater accountability.
- The existing initiatives like Annabhagya and Ksheerabhagya to be made sustainable over the longer period.

Employment and Skill development

Provision of productive and quality employment for the increasing labour force is a major challenge for all governments including that of Karnataka. High economic growth is necessary condition for creating new work opportunities but it is the pattern of economic growth which has important implication for productive and quality employment for the large section of labour force. In Karnataka, agriculture still employs almost half of the total workforce. The employment in this sector is insecure and vulnerable. Only in the last one decade or less, the structural change in employment is being witnessed with share of agriculture and allied declining by 11 in all workers and 15 per cent in principal worker category. Correspondingly the share of industry and tertiary sector has gone up. But unlike India, the shift of employment from agriculture has moved largely towards services and not industry. The challenge is therefore, to shift employment structure towards more productive non-agricultural sectors so that better and sustained source of livelihood for the working population can be created.

Women's work participation particularly in marginal or subsidiary employment shows clear decline. It reflects decline in the precarious nature of employment where women were forced to work for some days in the year to meet the shortfall in household expenditure. Though the vulnerability in employment in agricultural sector is partly met through flagship programme of MGNREGA, yet the agenda of providing decent work still remains incomplete.

The government of Karnataka has set up the Skill Development, Entrepreneurship and Livelihood Department (SDEL) in 2016 to help the youth to acquire necessary skills and expertise for employment. The Department has prepared a Skill Development Policy to promote skill development in the State, and to address the issues such as market failure, information asymmetry, coordination failure and exclusion of marginalised groups.

Generating awareness about the concept of nutrition among the rural women and about suitable food consumption patterns. Malnutrition is more among the girl children due to discriminatory practices. These need to be addressed though education and social change.

The major challenges are

- The employment of a substantial proportion of primary and middle school educated young persons who are unemployed or likely to enter labour market in the near future. The dynamic sections of the growing service sector provide productive employment to the more educated ones. The options for skilled jobs for less educated ones lie primarily in manufacturing sector and to a certain extent in construction sector. Therefore, training of these youths as per job requirements is essential.
- The number of youths requiring vocational education from 2017 to 2030 is projected at 1.88 crores, comprising of 75 lakhs of the workforce existing in 2016 and 113 lakhs of fresh entrants. This is a huge task and needs adequate financial support and human resources to execute the programme.
- Expansion of manufacturing and service sector with adequate support to generate employment.
- Effective manpower planning and planning of skill development courses based on job market survey and skill gap analysis.
- Provision of quality training and certification along with placement opportunities to increase the employability of the trained youths.

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Asset Ownership

The concept of human development has focused on three basic parameters of health, education, and standard of living. Income measures are typically used as a proxy for standard of living. But in recent years, along with income and consumption measures, assets and wealth are also included in the analysis of well being Increasingly, there has been a shift towards incorporating wealth in addition to income measures into poverty studies since wealth represents unspent income accumulated over a period of time and therefore captures a relatively long-term picture of well-being. Asset ownership is critical for people to plan for the future, while income merely caters to short-term consumption needs

Assets have a bearing on the economic and social status of households and individuals. In rural India as well as Karnataka, land is the most productive asset but it is unevenly distributed across different social groups. Thus, the extent of inequalities that we find in asset ownership patterns and wealth distribution is suggestive of the notion that the rising tide has not lifted everyone in Karnataka. Much remains to be achieved to in terms of ensuring equitable growth and particularly targeting the vulnerable groups like SC, STs and women.

Addressing Equity issues in Asset distribution

- Accelerating equitable human development necessitates attaining equity in distribution of assets through policy interventions and by enabling the asset poor group to acquire assets through productive and gainful employment. Inheritance is the dominant form of acquisition of high valued assets. Globally, some form of estate duty is often used as a policy tool for smoothening wealth distribution in the population. A tax on inheritance along with wealth tax may be considered as a measure to

reduce the magnitude of inequality.

- To strengthen data base that fill the gaps with regard to gender, social groups and regional variations in asset distribution patterns. Programmes that facilitate asset creation or generate income should keep intra-household dynamics in mind. State interventions should bear in mind not only vulnerable households but also vulnerable individuals, who may reside in non-vulnerable households, in their programme design.
- Collecting individual level data at regular intervals is also essential for a better understanding of gender inequality as it helps policy makers go beyond an analysis based on headship status. The Sustainable Development Goals under Goal 5 (gender equality) refers to undertaking reforms to give women equal rights to economic resources including property, specifically, with respect to assets.
- The existence of legislation has not made any substantive impact on social norms and processes over more than two decades and consequent on the property ownership by women The Government needs to conduct legal awareness and gender sensitization programmes for men and women to ensure that the law is implemented in letter and spirit.
- The metropolitan regions of Bengaluru are disproportionately wealthy compared to the rest of the State, and even within Bengaluru, there are glaring wealth disparities. This inequitable growth simultaneously adds pressure on urban infrastructure while depriving other regions of economic opportunities. Initiatives to stimulate asset creation in a sustainable manner need to be intensified in all parts of the State to ensure a better spread of prosperity.

Income and Poverty

The analysis of income indicates that the interstate inequality in per capita State domestic product has worsened in the post reforms period. The performance of States in the post-reforms period in terms of growth as well as reduction of income poverty and multiple deprivations varies across the States. Karnataka is ranked 6th among the States of India in terms of GDP and one of the developed States of South India. The State is experiencing structural change in the composition of State Domestic Product with the share of primary sector declining in favour of the tertiary sector over a long time.

But in Karnataka, extreme poverty still remains a concern. 24.5% in rural areas and 15.3% in urban areas are poor constituting nearly 13 millions. Although poverty has been reducing during the last two decades, it is still high and the challenges remain vast. States progress in fighting poverty has been modest when compared with some of its neighboring States. 72% of the poor in Karnataka reside in rural areas, where broader economic growth as a poverty eliminator may not reach the poor. Majority of these poor households are concentrated in districts of Northern Karnataka and socially disadvantaged caste. Extra efforts are required to ensure economic sustainability through targeted and effective policies to keep with the pace of poverty decline.

The following issues need to be addressed in the future strategy

- Growth to be made to trickle down to the bottom groups by going beyond the establishment of social safety nets to protect the vulnerable groups from the

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risks, and focus on providing decent employment and raising incomes of the poor through explicit policy interventions. The public policies that influence both the distribution of income and the process of income generation need to be formulated and implemented effectively..

- Poverty alleviation programmes are top down in nature and the poor are normally passive in them. For effective poverty alleviation, social mobilization and empowerment of the poor is the first basic step. This has been very successfully done through the formation of SHGs, particularly those of the poor women. The strategy needs to be strengthened through effective coordination across various Programmes and Departments.

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- Income rise and its sustenance is a slow process. Hence, basic deprivations of the poor need to be addressed directly through public support systems in the short period.

- Improve capabilities by providing skill training to the poor and make poverty alleviation programmes development-oriented as being done by Bharatiya Agro Industries Foundation (BAIF),

Supporting Human Development

The livelihood conditions of the people have significant impact on human development. Human Development is therefore dependent on a set of basic needs that are required to provide a decent standard of living. The access to drinking water, sanitation, housing, energy and roads matter significantly in shaping the living environment. The analysis of infrastructure in the State indicates that despite achieving progress in coverage and governance mechanisms, Karnataka needs to design and implement programs that address disparities that exist between rural/urban, All/SC/ST and slum households. Accelerated interventions are essential in regions which indicate high levels of deprivations.

The State has to focus on the following strategies:

- With basic infrastructure of drinking water, sanitation and housing bearing a strong impact on human health and quality of life, it is imperative that the State and the private sector align their efforts to alleviate human suffering in these areas focusing on critical regions.

- With about a third of the State's population being dependent on groundwater sources, and the increased incidence of untimely or delayed or scarce rainfall in a majority of the State's districts, coupled with the emergence of water quality problems (fluoride, nitrates, salinity, iron and arsenic), the State has to urgently adopt a multi-dimensional strategy to ensure water security for its citizens. Investments in water supply must be oriented towards demand management and to reduce intra-city disparities as well as to enhance the quality of water that is supplied to all people. Sanitation is another gray area that needs adequate focus.

- Karnataka has been visionary in its deployment of resources to schemes that provide housing to most of the disadvantaged sections of its society including the urban poor. Considering the relative disadvantage of SC/ST population with respect to housing in the State, it may be useful to consider

intensifying and accelerating the existing housing schemes.

- Access to electricity has been growing across the State but the disparities exist between regions and urban/rural with respect to the access as well as the duration and quality of power supply. This needs to be addressed on urgent basis.
- Disparities exist in the road length across districts as well as between the south zone and north zone districts. With roads being an enabler of economic activity and growth, managing/upgrading/expanding the State's road network in an equitable manner could contribute to a more balanced growth across regions and communities.
- An integrated infrastructure policy related to the supply of public goods for providing better livelihood to the people needs to be formulated and implemented effectively.

Urbanization

Urbanization is a consequence of the process of industrialization and economic development in an economy. Karnataka is one among the fast growing States in the country and therefore is experiencing rapid growth of urbanization. Karnataka is India's 7th most urbanized State, with 38.6% of residents living in urban areas above the national average of 31.1 percent. But the urban spread is highly skewed. Nearly 67% of all urban residents live in the 26 Class I cities – the remaining 23% live in 321 urban hamlets that are Class II to VI cities. The growing urbanization has created pressures on basic infrastructure requirements.

The challenges for a sustainable urban development in future are:

- Addressing the entitlements to basic needs effectively. The poor residents work without protections in the informal sector, and often live in precarious housing conditions. This uncertainty of residence leads to denial of basic protection of citizenship rights and entitlements, and prevents an effective urban welfare regime from meeting key human development goals. The extent of Karnataka's urban housing shortage is such that it cannot be addressed by the State or market actors alone. Improving the existing housing conditions by providing basic amenities should also be a part of the strategy along with the implementation of the housing schemes.
- While the rights to education and food have been secured in urban areas, the right to work, water, health and housing remain absent. Creating a clear entitlement framework to basic needs must, therefore, be the first step to promote human development of the urban poor.
- Karnataka was one of the first States to adopt the National Urban Sanitation Policy. It has begun to prepare City Sanitation Plans for Mysuru, Belagavi, Shivamogga, Kalaburagi, Hubli-Dharwad, Mangaluru, Tumakuru and Ballari. Pilot projects on 24/7 water and sewerage have also been undertaken and shown results. The trends, therefore, are welcome and positive, but must be scaled with a strong discourse of universal access and rights in order to reach the last mile.
- Policies to promote development of small cities and towns and curbing

This uncertainty of residence leads to denial of basic protection of citizenship rights and entitlements, and prevents an effective urban welfare regime from meeting key human development goals. The extent of Karnataka's urban housing shortage is such that it cannot be addressed by the State or market actors alone. Improving the existing housing conditions by providing basic amenities should also be a part of the strategy along with the implementation of the housing schemes.

the rural urban migration may help in reducing the pressure on existing towns and cities.

- Eliminating Target Specific Exclusions is another challenge in urban policy. Patterns of exclusion that come up across sectors highlight (a) gender-based differentials; (b) youth unemployment; and (c) exclusion of migrants. For the former, it is imperative not just to mainstream but to urgently prioritize interventions that seek to close gender differentials particularly in employment, health and education. Youth unemployment presents similar dangers and points to a strong gap between education, skills and market demand. This can have great impact on the State and nation's levels of economic growth and productivity. Finally, the exclusions in housing, access to education and health, as well as the conditions of employment have impact on migrants. Such exclusions due to their voluntary and involuntary mobility means that these are precisely the households with children out of school, the adult workers without contracts, security, protection or fair wages; and the communities with low health and nutrition outcomes. Commitments to universal access will need more innovative and dynamic service mechanisms and policy frames to accommodate the migrants.

With climate change occurring at a faster rate, specifically temperature and rainfall, impacts are likely to be severe on water availability, food production, forests, biodiversity and clean air, specifically affecting the poorest and the marginalized people living in the most vulnerable areas. Hence there is a need for developing coping strategies (INDC, Paris agreement) to reduce the impact of climate change

Natural Resources and Climate Change

Growing population and its ever-increasing demand for resources, is leading to increased pressure on natural resources. Natural resources such as forests, grasslands, rivers, oceans and air are subjected to over exploitation or pollution leading to degradation or loss, with adverse implications on human development. With climate change occurring at a faster rate, specifically temperature and rainfall, impacts are likely to be severe on water availability, food production, forests, biodiversity and clean air, specifically affecting the poorest and the marginalized people living in the most vulnerable areas. Hence there is a need for developing coping strategies (INDC, Paris agreement) to reduce the impact of climate change on the natural resources and people reliant on them and in turn to secure the livelihood of human beings.

- Environmental policies and regulations require effective institutions which should enforce, regulate and punish any failures. Karnataka has several agencies such as Pollution Control Board, City Municipal Corporations, and many Government Departments with regulatory powers such as the Forest Department. Still degradation of environment in Karnataka shows the inadequacies of the existing policies and in particular, the institutions. A detailed assessment and evaluation of the existing policies, regulations and institutions is necessary to identify the barriers to enforcement of the policies and regulations and based on the gaps, new policies, regulations and institutions need to be framed. There is a need to adopt a holistic and integrated approach to environment conservation and sustainability.

- There is no dearth of organizations for disaster management, but often coordination across so many agencies and multiple guidelines is a challenge. There is a need for bringing co-ordination and cohesion among

these agencies. Further, technical capacity of some of these agencies need to be enhanced. The Environmental Management and Policy Research Institute (EMPRI) is an autonomous institution conducting applied research on environmental issues and providing training and advisory services to government, industry and civil society. EMPRI needs to be strengthened with adequate technical capacity to be effective in managing the industrial environment, in coordination with other regulatory agencies, by being the knowledge partner.

- The five critical ingredients for addressing the developmental and environmental challenges include; technologies, finance, enabling policies, institutions and governance. Policy makers will have to be aware of poverty alleviation strategies, livelihoods of the vulnerable population, and the importance of natural resources in rural livelihoods while furthering sustainable development. The thrust of the policies should be in addressing illiteracy, poverty, unemployment, disease, saving lives of mothers and children, and addressing the inequities caused by gender and class/caste, in general attaining the Sustainable Development Goals.

Governance and Human Development

Good governance is the basic requirement of human development. Access to citizens` is the benchmark for assessing the contribution of Governance to human development. While it may be argued that the ideal measure of governance is in terms of the policies, priorities and programmes that an administration adopts, the true measure of governance is in the results and perception of those for whom governance is meant for. It is a clear fact that the Government of Karnataka has pursued the agenda of good governance with enthusiam and sincerity since beginning. The ideological frame of governance appears to be visibly evident. So too does the institutional platform. It is hailed as a `reform oriented State` as there have been a range of multi-track reforms that have been initiated. Under the rubric of e-governance initiatives, there have been several programmes and initiatives which have won national and even global attention. The government has clearly been proactive in its efforts to harness the potential of information technology, but while connecting to information technology is vital, reconnecting to human technology is equally critical to be able to see the real benefits of e-governance impacting positively on the lives of common people.

The Strategy to strengthen governance in future has to emphasize on:

- Empowering local governments with adequate powers at different levels and building the capacities of the people's representatives. Many more initiatives are underway and these need focused attention.
- Given the fact that common people continued to believe that the most important challenges they continue to face are linked to basic amenities, strengthening the efforts of government that is closest to the people is imperative.
- With regard to Backward Region Development, it is observed that ambitious schemes have been initiated and a real assessment of the progress would require some time to be given

Under the rubric of e-governance initiatives, there have been several programmes and initiatives which have won national and even global attention. The government has clearly been proactive in its efforts to harness the potential of information technology, but while connecting to information technology is vital, reconnecting to human technology is equally critical to be able to see the real benefits of e-governance impacting positively on the lives of common people.

for the initiatives to show results. A close monitoring of these schemes is required.

- Health Sector reforms have a clear focus but are likely to face serious challenges in terms of their financial viability.
- Solid Waste Management especially in urban areas requires a more concerted effort of bringing together all the stakeholders, especially the local communities. More effective regulation of private players in the process may be required to ensure that the expectations of the citizens are met.

Regional Disparities

The persistence of regional disparities in economic as well as human development is an established fact in Karnataka. The spatial hiatus has deep roots. The government of Karnataka has been striving hard in recent years, to combat, redress and control them through various measures. The high Power Committee (Nanjundappa Committee) Report (2002), Karnataka Human Development Report (2005) and District Human Development Reports 2014 have shown in a systematic and scientific way the nature, magnitude and spread of regional disparities with the help of various quantitative measures.

One of the major recommendations of the High Power Committee to redress regional disparity was the Eight-Year Special Development Plan (SDP). It was implemented in 2007-08 and its period expired in 2014-2015. As the disparities persist, the government has decided to continue providing SDP grants to backward taluks earmarking Rs.12,000 crore for the next four years (2015-2019). Unlike 371(J), the SDP covers all the 114 backward taluks identified by the HPCFRRI. These 114 backward taluks spread all over the State. The Article 371(J) and the Board constituted by the government, namely HKRDB covers the six backward districts of Kalaburagi division.

Future strategy

- Karnataka's relative rank in Human Development Index has not improved over the years and it is often observed that the State average is pulled down by low levels of human development in certain districts like Raichur, Yadgir, Koppal, Chamrajnagar, Kalaburagi Gadag etc. the districts of North Karnataka need adequate focus in Programmes and policies in future.
- The various development programmes formulated to address the issues of poverty and regional disparities have to give due consideration to the requirements of the backward regions.
- The approach adopted till now is largely economic and infrastructure oriented in nature. But, regional disparities have social and human dimensions. The programmes which are operating in the field of regional equality have to give priority to social indicators such as literacy, nutrition, health, child care, reproductive health, food security etc.
- Karnataka needs a Regional Development Policy. The issue of regional disparities involves more than 2 crore people in Karnataka. Regional balance in development is necessary to realize the goals set by the champions of United Karnataka. A regional Development policy is

also recommended by Nanjundappa Committee.

- Effective action plans need to be prepared at grass roots level in participatory mode taking into consideration the local requirements of development.

Financing Human Development

Investments in human development sectors require adequate resources. Karnataka's fiscal capability assessed in terms of the broad fiscal indicators such as fiscal and revenue deficits has revealed that the State has had a sharp fiscal recovery during the last decade as compared to that of nineties, hence is in a better position to support human development interventions. State's revenue position has substantially improved. Further, the government's priorities have undergone a substantial change in favor of social sectors and community services by assigning thrust sector status to select sectors such as Education, Health etc. The compound annual rates of growth of the functional categories of expenditure reveal that social and community services have experienced the highest rate of growth. The current decade has seen a good gain in the social and community and economic services as opposed to the highest rate of growth revealed by the general services expenditure in the decade of nineties. However, fluctuations are observed in it that is largely caused by revenue uncertainties. The requirements are:

- It is important to secure social sectors from budgetary fluctuations, by earmarking a prescribed share in the GSDP to ensure sustained improvements in human development.
- Though the per capita real expenditure of Karnataka has been on the increase and is comparable with States like Tamil Nadu and Kerala, but the State does not compare well with reference to the indicators of human development. As development is influenced by total investment (public and private) in a sector. The relatively smaller per capita private sector expenditure in Karnataka as compared to the neighboring States is a cause for concern in the context of human development. The issue related to the role of government in financing human development assumes greater significance as the State has to fill up the gaps in human development sectors.
- The State has to develop effective PPP models in social sectors. The Corporate Social Responsibility as a source, needs to be utilized optimally in financing human development.
- The regional imbalances observed in the development of sectors like Health and education need to be addressed not by merely earmarking increased allocations but also linking them with the performance indicators. This necessitates toning up of cost effectiveness of public spending in Karnataka especially in some districts which are pulling down the overall performance of the State.
- In the context of expenditure planning for the districts it is imperative to move away from the strategy of enhancing share in total allocations to need based planning.
- Performance based budgeting needs to be strengthened in human development sectors to attain the Sustainable Development Goals.

The State is half way on the journey towards human development. It needs

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Accelerating equitable human development in the State is surmounted by many challenges. While caste, class and gender are serious concerns, inequities across the regions also need to be addressed adequately.

conscious and concerted actions on various fronts to reach the goal of human development for all. Accelerating equitable human development in the State is surmounted by many challenges. While caste, class and gender are serious concerns, inequities across the regions also need to be addressed adequately. The programmes and policies to promote human development should take into account the regional practical needs along with the strategic needs. The State has to ensure large scale resource transfers in the field of health, education and provision of secured livelihood for growing population. The effective implementation of policies in partnership with civil society institutions is essential to achieve better outcomes in human development and in attaining the targets set by Sustainable Development Goals.

Appendix: Statistical Tables

1. Inter-state Comparison of Key Indicators

State		HDI		HDI Rank	
		1999-2000	2007-08	1999-2000	2007-08
1		2	3	4	5
1	KERALA	0.677	0.790	2	1
2	DELHI	0.783	0.750	1	2
3	HIMACHAL PRADESH	0.581	0.652	4	3
4	GOA	0.595	0.617	3	4
5	PUNJAB	0.543	0.605	5	5
6	NE (EXCLUDING ASSAM)	0.473	0.573	9	6
7	MAHARASHTRA	0.501	0.572	6	7
8	TAMIL NADU	0.480	0.570	8	8
9	HARYANA	0.501	0.552	7	9
10	JAMMU AND KASHMIR	0.465	0.529	11	10
11	GUJARAT	0.466	0.527	10	11
12	**KARNATAKA**	**0.432**	**0.519**	**12**	**12**
13	WEST BENGAL	0.422	0.492	13	13
14	UTTARANCHAL	0.339	0.490	16	14
15	ANDHRA PRADESH	0.368	0.473	15	15
16	ASSAM	0.336	0.444	17	16
17	RAJASTHAN	0.387	0.434	14	17
18	UTTAR PRADESH	0.316	0.380	18	18
19	JHARKHAND	0.268	0.376	23	19
20	MADHYA PRADESH	0.285	0.375	20	20
21	BIHAR	0.292	0.367	19	21
22	ODISHA	0.275	0.362	22	22
23	CHHATTISGARH	0.278	0.358	21	23
INDIA		**0.387**	**0.467**		

Source: India Human Development Report 2011.

1. Inter-state Comparison of Key Indicators

State		Crude Birth Rate					
		2014			2015		
		Total	Rural	Urban	Total	Rural	Urban
1		6	7	8	9	10	11
1	ANDHRA PRADESH	17.0	17.3	16.3	16.8	17.1	16.1
2	ASSAM	22.4	23.6	15.5	22.0	23.2	15.3
3	BIHAR	25.9	26.9	19.9	26.3	27.1	20.6
4	CHHATTISGARH	23.4	25.0	18.4	23.2	24.8	18.3
5	DELHI	16.8	18.1	16.7	16.4	17.9	16.4
6	GUJARAT	20.6	22.6	18.2	20.4	22.4	18.0
7	HARYANA	21.2	22.6	18.7	20.9	22.3	18.4
8	JAMMU & KASHMIR	16.8	18.7	12.5	16.2	18.0	10.7
9	JHARKHAND	23.8	25.2	19.3	23.5	25.0	19.2
10	**KARNATAKA**	**18.1**	**19.0**	**16.6**	**17.9**	**18.8**	**16.5**
11	KERALA	14.8	14.9	14.8	14.8	14.8	14.8
12	MADHYA PRADESH	25.7	27.9	19.9	25.5	27.6	19.7
13	MAHARASHTRA	16.5	16.8	16.0	16.3	16.6	15.9
14	ODISHA	19.4	20.5	14.2	19.2	20.3	14.1
15	PUNJAB	15.5	16.2	14.5	15.2	15.9	14.2
16	RAJASTHAN	25.0	26.0	22.1	24.8	25.7	22.0
17	TAMIL NADU	15.4	15.5	15.4	15.2	15.3	15.2
18	TELANGANA	18.0	18.4	17.4	17.8	18.2	17.2
19	UTTAR PRADESH	27.0	28.3	23.3	26.7	27.9	23.0
20	UTTARAKHAND	18.2	18.5	17.3	17.8	18.0	17.1
INDIA		**21.0**	**22.7**	**17.4**	**20.8**	**22.4**	**17.3**

Source: SRS Bulletins/Reports RGI.

1. Inter-state Comparison of Key Indicators

State		Crude Death Rate					
		2014			2015		
		Total	Rural	Urban	Total	Rural	Urban
1		12	13	14	15	16	17
1	ANDHRA PRADESH	7.3	8.1	5.0	7.1	7.9	5.0
2	ASSAM	7.2	7.6	5.3	7.1	7.4	5.1
3	BIHAR	6.2	6.4	5.2	6.2	6.3	5.1
4	CHHATTISGARH	7.7	8.3	5.8	7.5	8.1	5.6
5	DELHI	3.8	4.4	3.8	3.6	4.3	3.5
6	GUJARAT	6.2	6.6	5.7	6.1	6.5	5.6
7	HARYANA	6.1	6.6	5.4	6.1	6.3	5.7
8	JAMMU & KASHMIR	5.1	5.4	4.5	4.9	5.1	4.4
9	JHARKHAND	5.9	6.2	5.0	5.8	6.1	4.9
10	**KARNATAKA**	**6.8**	**7.8**	**5.1**	**6.6**	**7.7**	**5.0**
11	KERALA	6.6	6.8	6.5	6.6	6.7	6.4
12	MADHYA PRADESH	7.8	8.4	6.0	7.5	8.1	5.9
13	MAHARASHTRA	6.0	6.8	4.8	5.8	6.6	4.7
14	ODISHA	7.9	8.2	6.4	7.6	7.9	6.3
15	PUNJAB	6.4	7.2	5.2	6.2	6.9	5.1
16	RAJASTHAN	6.4	6.8	5.3	6.3	6.7	5.2
17	TAMIL NADU	7.0	7.9	6.2	6.7	7.6	6.0
18	TELANGANA	6.7	7.8	4.9	6.5	7.5	4.9
19	UTTAR PRADESH	7.4	8.0	5.8	7.2	7.7	5.7
20	UTTARAKHAND	6.0	6.3	5.2	6.4	6.8	5.6
INDIA		**6.7**	**7.3**	**5.5**	**6.5**	**7.1**	**5.4**

Source: SRS Bulletins/Reports RGI.

1. Inter-state Comparison of Key Indicators

State		Total fertility rate		
		2015		
		Total	Rural	Urban
1		18	19	20
1	ANDHRA PRADESH	1.7	1.8	1.6
2	ASSAM	2.3	2.4	1.6
3	BIHAR	3.2	3.3	2.5
4	CHHATTISGARH	2.5	2.7	1.9
5	DELHI	1.7	1.8	1.7
6	GUJARAT	2.2	2.5	1.9
7	HARYANA	2.2	2.4	2.0
8	HIMACHAL PRADESH	1.7	1.7	1.2
9	JAMMU & KASHMIR	1.6	1.9	1.0
10	JHARKHAND	2.7	2.9	2.1
11	**KARNATAKA**	**1.8**	**1.9**	**1.7**
12	KERALA	1.8	1.8	1.8
13	MADHYA PRADESH	2.8	3.0	2.1
14	MAHARASHTRA	1.8	2.0	1.6
15	ODISHA	2.0	2.1	1.4
16	PUNJAB	1.7	1.7	1.5
17	RAJASTHAN	2.7	2.8	2.3
18	TAMIL NADU	1.6	1.7	1.6
19	UTTAR PRADESH	3.1	3.4	2.4
20	WEST BENGAL	1.6	1.7	1.2
INDIA		**2.3**	**2.5**	**1.8**

Source: SRS Bulletins / Reports RGI.

1. Inter-state Comparison of Key Indicators

State		Infant mortality rate					
		2014			2015		
		Total	Rural	Urban	Total	Rural	Urban
1		21	22	23	24	25	26
1	ANDHRA PRADESH	39	43	28	37	41	26
2	ASSAM	49	52	27	47	50	25
3	BIHAR	42	43	37	42	42	44
4	CHHATTISGARH	43	45	34	41	43	32
5	DELHI	20	31	20	18	27	18
6	GUJARAT	35	43	23	33	41	21
7	HARYANA	36	40	29	36	39	30
8	JAMMU & KASHMIR	34	36	29	26	27	24
9	JHARKHAND	34	37	22	32	35	22
10	**KARNATAKA**	**29**	**31**	**24**	**28**	**30**	**23**
11	KERALA	12	14	10	12	13	10
12	MADHYA PRADESH	52	57	35	50	54	34
13	MAHARASHTRA	22	27	14	21	26	14
14	ODISHA	49	51	36	46	48	35
15	PUNJAB	24	26	21	23	24	20
16	RAJASTHAN	46	52	27	43	48	27
17	TAMIL NADU	20	23	16	19	22	16
18	TELANGANA	35	39	28	34	37	27
19	UTTAR PRADESH	48	51	37	46	48	36
20	UTTARAKHAND	33	32	35	34	31	44
INDIA		**39**	**43**	**26**	**37**	**41**	**25**

Source: SRS Bulletins / Reports RGI.

1. Inter-state Comparison of Key Indicators

State		Infant mortality rate		
		Neonetal mortality rate 2015		
		Total	Rural	Urban
1		27	28	29
1	ANDHRA PRADESH	24	29	12
2	ASSAM	25	26	14
3	BIHAR	28	29	20
4	CHHATTISGARH	27	28	21
5	DELHI	14	20	13
6	GUJARAT	23	29	15
7	HARYANA	24	26	19
8	HIMACHAL PRADESH	19	19	14
9	JAMMU & KASHMIR	20	21	16
10	JHARKHAND	23	25	15
11	**KARNATAKA**	**19**	**24**	**11**
12	KERALA	6	8	4
13	MADHYA PRADESH	34	37	21
14	MAHARASHTRA	15	19	10
15	ODISHA	35	36	25
16	PUNJAB	13	14	13
17	RAJASTHAN	30	34	15
18	TAMIL NADU	14	17	10
19	TELANGANA	23	27	17
20	UTTAR PRADESH	31	34	20
21	UTTARAKHAND	28	24	37
22	WEST BENGAL	18	18	15
INDIA		**25**	**29**	**15**

Source: SRS Bulletins / Reports RGI.

1. Inter-state Comparison of Key Indicators

State		Child Mortality Rate (Under-Five Mortality Rates by Sex), 2015								
		Total			Rural			Urban		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
1		**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**
1	ANDHRA PRADESH	39	37	42	43	42	44	29	25	35
2	ASSAM	62	58	66	65	62	70	27	25	29
3	BIHAR	48	43	54	48	43	54	47	40	56
4	CHHATTISGARH	48	45	51	51	47	55	35	36	34
5	DELHI	20	18	23	27	27	28	20	18	22
6	GUJARAT	39	38	41	47	49	45	26	21	33
7	HARYANA	43	41	46	47	44	51	36	34	37
8	HIMACHAL PRADESH	33	34	32	33	34	32	26	34	16
9	JAMMU & KASHMIR	28	25	31	28	25	32	24	25	24
10	JHARKHAND	39	35	44	43	38	48	26	25	26
11	**KARNATAKA**	**31**	**31**	**32**	**35**	**34**	**35**	**25**	**25**	**26**
12	KERALA	13	12	14	14	12	16	11	12	11
13	MADHYA PRADESH	62	63	61	67	68	65	43	43	43
14	MAHARASHTRA	24	21	26	29	26	33	15	15	16
15	ODISHA	56	56	55	59	59	59	37	41	34
16	PUNJAB	27	27	26	30	31	29	21	21	22
17	RAJASTHAN	50	44	56	55	49	62	31	29	33
18	TAMIL NADU	20	20	21	25	25	25	16	15	18
19	TELANGANA	34	33	35	37	38	37	28	26	30
20	UTTAR PRADESH	51	49	53	54	52	56	40	37	42
21	UTTARAKHAND	38	36	41	35	32	39	47	48	47
22	WEST BENGAL	30	28	31	31	29	33	26	26	26
INDIA		**43**	**40**	**45**	**48**	**46**	**50**	**28**	**26**	**31**

Source: SRS Bulletins/Reports RGI.

1. Inter-state Comparison of Key Indicators

India & Major States		Maternal Mortality Ratio (MMR), Maternal Mortality Rate and Life time risk					
		2010-12			2011-13		
		MMR	Maternal Mortality Rate	Lifetime Risk (%)	MMR	Maternal Mortality Rate	Lifetime Risk (%)
1		39	40	41	42	43	44
1	ASSAM	328	21.5	0.8	300	19.6	0.7
2	BIHAR/JHARKHAND	219	22.8	0.8	208	21.4	0.7
3	MADHYA PRADESH/CHHATTISGARH	230	21.1	0.7	221	20.2	0.7
4	ODISHA	235	16.0	0.6	222	15.1	0.5
5	RAJASTHAN	255	25.2	0.9	244	23.9	0.8
6	UTTAR PRADESH/UTTARAKHAND	292	28.7	1.0	285	27.6	1.0
7	ANDHRA PRADESH	110	6.9	0.2	92	5.9	0.2
8	**KARNATAKA**	**144**	**8.1**	**0.3**	**133**	**7.5**	**0.3**
9	KERALA	66	3.3	0.1	61	3.2	0.1
10	TAMIL NADU	90	5.0	0.2	79	4.5	0.2
11	GUJARAT	122	9.5	0.3	112	8.7	0.3
12	HARYANA	146	11.6	0.4	127	10.0	0.4
13	MAHARASHTRA	87	5.2	0.2	68	4.1	0.1
14	PUNJAB	155	9.0	0.3	141	8.2	0.3
15	WEST BENGAL	117	6.6	0.2	113	6.3	0.2
INDIA		**178**	**12.4**	**0.4**	**167**	**11.7**	**0.4**

Source: SRS Bulletins/Reports RGI.

1. Inter-state Comparison of Key Indicators

India & Major States		Sex ratio		Sex ratio (0-6 years)	
		2001	2011	2001	2011
1		45	46	47	48
1	ANDHRA PRADESH	978	993	961	939
2	ASSAM	935	958	965	962
3	BIHAR	919	918	942	935
4	GUJARAT	920	919	883	890
5	HARYANA	861	879	819	834
6	**KARNATAKA**	**965**	**973**	**946**	**948**
7	KERALA	1058	1084	960	964
8	MADHYA PRADESH	919	931	932	918
9	MAHARASHTRA	922	929	913	894
10	ODISHA	972	979	953	941
11	PUNJAB	876	895	798	846
12	RAJASTHAN	921	928	909	888
13	TAMIL NADU	987	996	942	943
14	UTTAR PRADESH	898	912	916	902
15	WEST BENGAL	934	950	960	956
INDIA		**933**	**943**	**927**	**919**

Sources: Census 2001 and 2011

1. Inter-state Comparison of Key Indicators

State		Percentage distribution of current live births by Birth order			
		2015			
		1st	2nd	3rd	4th & above
1		49	50	51	52
1	ANDHRA PRADESH	63.7	28.2	6.9	1.2
2	ASSAM	52.9	26.0	13.5	7.5
3	BIHAR	36.7	24.2	20.9	18.2
4	CHHATTISGARH	44.7	33.6	13.7	8.0
5	DELHI	63.8	23.8	8.6	3.9
6	GUJARAT	55.4	30.6	9.8	4.2
7	HARYANA	50.6	31.6	12.4	5.4
8	HIMACHAL PRADESH	60.3	31.1	6.5	2.1
9	JAMMU & KASHMIR	55.7	25.7	11.7	6.8
10	JHARKHAND	38.3	31.9	18.5	11.2
11	**KARNATAKA**	**53.4**	**33.0**	**10.7**	**2.8**
12	KERALA	49.0	37.1	11.3	2.7
13	MADHYA PRADESH	42.7	31.8	15.2	10.3
14	MAHARASHTRA	51.0	34.7	10.4	3.9
15	ODISHA	50.3	32.2	11.8	5.8
16	PUNJAB	61.2	26.8	9.5	2.5
17	RAJASTHAN	46.0	28.6	14.8	10.6
18	TAMIL NADU	56.1	36.6	6.3	1.0
19	UTTAR PRADESH	44.8	23.2	15.5	16.5
20	WEST BENGAL	62.3	25.4	9.1	3.3
INDIA		**48.6**	**28.5**	**13.4**	**9.4**

Source: SRS Bulletins / Reports RGI.

1. Inter-state Comparison of Key Indicators

State		Medical attention at birth 2015			
		Govt.Hospital	Pvt.Hospital	Qualified Professional	Untrained Functionary and others
1		**53**	**54**	**55**	**56**
1	ANDHRA PRADESH	51.3	44.2	4.3	0.2
2	ASSAM	52.2	27.2	13.4	7.3
3	BIHAR	43.3	22.8	11.1	22.8
4	CHHATTISGARH	48.1	25.5	18.3	8.1
5	DELHI	63.5	30.1	6.0	0.4
6	GUJARAT	44.8	47.5	6.7	1.1
7	HARYANA	41.4	40.4	16.6	1.6
8	HIMACHAL PRADESH	58.6	16.8	19.0	5.6
9	JAMMU & KASHMIR	67.5	17.3	7.4	7.8
10	JHARKHAND	37.3	21.0	17.7	24.0
11	**KARNATAKA**	**65.8**	**30.7**	**2.4**	**1.1**
12	KERALA	44.0	55.7	0.2	0.1
13	MADHYA PRADESH	55.7	24.7	11.0	8.6
14	MAHARASHTRA	55.3	40.7	3.1	0.9
15	ODISHA	61.7	16.6	9.9	11.8
16	PUNJAB	38.2	49.3	11.6	0.9
17	RAJASTHAN	69.8	16.9	11.2	2.1
18	TAMIL NADU	61.3	34.0	4.5	0.3
19	UTTAR PRADESH	45.9	17.3	20.1	16.8
20	WEST BENGAL	66.8	16.7	6.9	9.6
INDIA		**52.6**	**26.7**	**10.9**	**9.8**

Source: SRS Bulletins / Reports RGI.

1. Inter-state Comparison of Key Indicators

State		Life expectancy at birth			Mean age at marriage		Literacy rate					
		2010-14			2014		2001			2011		
		Persons	Male	Female	Male	Female	Total	Male	Female	Total	Male	Female
1		57	58	59	60	61	62	63	64	65	66	67
1	ANDHRA PRADESH	68.5	66.3	70.8	23.4	19.7	60.5	70.9	51.2	67.0	74.9	59.1
2	ASSAM	63.9	62.7	65.5	25.2	20.9	63.3	71.9	56.0	72.2	77.8	66.3
3	BIHAR	68.1	67.8	68.4	22.2	19.5	47.0	60.3	33.6	61.8	71.2	51.5
4	GUJARAT	68.7	66.6	71	22.3	19.8	69.1	76.5	55.6	78.0	85.8	69.7
5	HARYANA	68.6	66.3	71.3	22.4	20.0	67.9	79.3	56.3	75.6	84.1	65.9
6	**KARNATAKA**	**68.8**	**66.9**	**70.8**	**25.2**	**20.6**	**66.6**	**76.1**	**56.9**	**75.4**	**82.5**	**68.1**
7	KERALA	74.9	72.0	77.8	27.3	21.4	90.9	94.2	87.9	94.0	96.1	92.1
8	MADHYA PRADESH	64.2	62.5	66.0	21.8	19.6	63.7	76.5	50.5	69.3	78.7	59.2
9	MAHARASHTRA	71.6	69.9	73.6	24.0	20.6	76.9	86.3	67.5	82.3	88.4	75.9
10	ODISHA	65.8	64.7	67.4	25.2	20.4	63.1	75.9	51.0	72.9	81.6	64.0
11	PUNJAB	71.6	69.7	73.8	23.6	21.0	69.7	75.6	63.5	75.8	80.4	70.7
12	RAJASTHAN	67.7	65.5	70.2	21.3	19.4	60.4	76.5	44.3	66.1	79.2	52.1
13	TAMIL NADU	70.6	68.6	72.7	25.6	21.2	73.5	82.3	64.5	80.1	86.8	73.4
14	UTTAR PRADESH	64.1	62.9	65.4	21.4	19.4	56.3	70.2	43.0	67.7	77.3	57.2
15	WEST BENGAL	70.2	68.9	71.6	23.9	19.3	68.6	77.6	60.2	76.3	81.7	70.5
INDIA		**67.9**	**66.4**	**69.6**	**23.2**	**20.0**	**64.8**	**75.8**	**54.2**	**73.0**	**80.9**	**64.6**

Source:
1. Col no :57 to 59 Office of The Registrar General , India. (India includes all States / UT's and Andrapradesh includes Telangana).
2. col 60 & 61 SRS Base line Survey 2014.
3. Col no 62 to 67 census 2001 & 2011.

1. Inter-state Comparison of Key Indicators

India & Major States		Percapita NSDP at Current Prices (in Rs)		GSDP at Current Prices (in crores)		Work Participation Rate
		2014-15	2015-16	2014-15	2015-16	2011
1		68	69	70	71	72
1	ANDHRA PRADESH	93699	108163	526468	609934	46.6
2	ASSAM	54618	60952	198098	224234	38.4
3	BIHAR	28671	31454	342951	381501	33.4
4	GUJARAT	127017	141504	921773	1033791	41.0
5	HARYANA	148485	162034	437462	485184	35.2
6	**KARNATAKA**	**129823**	**142906**	**912647**	**1016910**	**45.6**
7	KERALA	135537	147190	512564	556616	34.8
8	MADHYA PRADESH	56182	62334	481982	543975	43.5
9	MAHARASHTRA	132341	147399	1773744	2001223	44.0
10	ODISHA	64869	68293	321971	341887	41.8
11	PUNJAB	108897	119261	354908	391543	35.7
12	RAJASTHAN	76881	NA	612194	NA	43.6
13	TAMIL NADU	128385	137837	1072775	1161963	45.6
14	UTTAR PRADESH	42267	46299	1011790	1120836	32.9
15	WEST BENGAL'1	------	------	------	------	38.1
INDIA		**86454**	**94130**	**12445128**	**13682035**	**39.8**

Source: Col: 68-71Directorate of Economics & Statistics of respective State Governments, and for All-India -- Central Statistics Office. col.60.'1The estimates of West Bengal for new series with base year 2011-12 compiled by the DES, West Bengal are under examination.col.72 census 2011 data Office of the Registrar General, India.

1. Inter-state Comparison of Key Indicators

State		Unemployment Rate (ps+ss)					
		2013-14			2015-16		
		Male	Female	Persons	Male	Female	Persons
1		**73**	**74**	**75**	**76**	**77**	**78**
1	ANDHRA PRADESH	26	34	29	33	37	35
2	ASSAM	18	58	29	26	84	40
3	BIHAR	53	75	56	45	39	44
4	GUJARAT	8	8	8	7	5	6
5	HARYANA	26	38	29	27	55	33
6	**KARNATAKA**	**14**	**23**	**17**	**12**	**18**	**14**
7	KERALA	36	199	93	37	245	106
8	MADHYA PRADESH	23	20	23	22	63	30
9	MAHARASHTRA	21	23	22	14	17	15
10	ODISHA	39	53	43	29	66	38
11	PUNJAB	37	176	54	39	187	58
12	RAJASTHAN	33	26	31	24	28	25
13	TAMIL NADU	26	48	33	29	54	38
14	UTTAR PRADESH	34	97	40	45	139	58
15	WEST BENGAL'1	34	77	42	28	68	36
INDIA		**29**	**49**	**34**	**30**	**58**	**37**

Source: Employment and Un-employment Survey 2013-14 & 2015-16,Ministry of Labour & employment,labour bureau,chandigarh.

1. Inter-state Comparison of Key Indicators

State		Percentage of population below poverty line (Tendulkar Methodology)					
		2009-10			2011-12		
		Rural	Urban	Combined	Rural	Urban	Combined
1		**79**	**80**	**81**	**82**	**83**	**84**
1	ANDHRA PRADESH	22.80	17.70	21.10	10.96	5.81	9.20
2	ASSAM	39.90	26.10	37.90	33.89	20.49	31.98
3	BIHAR	55.30	39.40	53.50	34.06	31.23	33.74
4	GUJARAT	26.70	17.90	23.00	21.54	10.14	16.63
5	HARYANA	18.60	23.00	20.10	11.64	10.28	11.16
6	**KARNATAKA**	**26.10**	**19.60**	**23.60**	**24.53**	**15.25**	**20.91**
7	KERALA	12.00	12.10	12.00	9.14	4.97	7.05
8	MADHYA PRADESH	42.00	22.90	36.70	35.74	21.00	31.65
9	MAHARASHTRA	29.50	18.30	24.50	24.22	9.12	17.35
10	ODISHA	39.20	25.90	37.00	35.69	17.29	32.59
11	PUNJAB	14.60	18.10	15.90	7.66	9.24	8.26
12	RAJASTHAN	26.40	19.90	24.80	16.05	10.69	14.71
13	TAMIL NADU	21.20	12.80	17.10	15.83	6.54	11.28
14	UTTAR PRADESH	39.40	31.70	37.70	30.40	26.06	29.43
15	WEST BENGAL	28.80	22.00	26.70	22.52	14.66	19.98
INDIA		**33.80**	**20.90**	**29.80**	**25.70**	**13.70**	**21.92**

Source: Press note on Poverty estimates 2009-10 & 2011-12,Planning Commission,GOI

1. Population as on 1st March 2010 has been used for estimating number of persons below poverty line.(interpolated between 2001 and 2011 population census)

2. Poverty line of Tamil Nadu is used for Andaman and Nicobar Island.

3. Urban Poverty Line of Punjab is used for both rural and urban areas of Chandigarh.

4. Poverty Line of Maharashtra is used for Dadra & Nagar Haveli

5. Poverty line of Goa is used for Daman & Diu.

6. Poverty Line of Kerala is used for Lakshadweep.

2. Population and Demography

District		Area (in sq.km)	2001			2011		
			Person	Male	Female	Person	Male	Female
1		2	3	4	5	6	7	8
1	BAGALKOTE	6552	1651892	834247	817645	1889752	950111	939641
2	BALLARI	8461	2027140	1029714	997426	2452595	1236954	1215641
3	BELAGAVI	13433	4214505	2150090	2064415	4779661	2423063	2356598
4	BENGALURU RURAL	2298	850968	437489	413479	990923	509172	481751
5	BENGALURU URBAN	2196	6537124	3426599	3110525	9621551	5022661	4598890
6	BIDAR	5448	1502373	771022	731351	1703300	870665	832635
7	CHAMARAJANAGARA	5648	965462	489940	475522	1020791	512231	508560
8	CHIKKABALLAPURA	4244	1149007	584516	564491	1255104	636437	618667
9	CHIKKAMAGALURU	7202	1140905	574911	565994	1137961	566622	571339
10	CHITRADURGA	8436	1517896	776221	741675	1659456	840843	818613
11	DAKSHINA KANNADA	4861	1897730	938434	959296	2089649	1034714	1054935
12	DAVANAGERE	5924	1790952	917705	873247	1945497	986400	959097
13	DHARWAD	4260	1604253	823204	781049	1847023	937206	909817
14	GADAG	4657	971835	493533	478302	1064570	537147	527423
15	HASSAN	6814	1721669	859086	862583	1776421	883667	892754
16	HAVERI	4823	1439116	740469	698647	1597668	819128	778540
17	KALABURAGI	10954	2174742	1110442	1064300	2566326	1301755	1264571
18	KODAGU	4102	548561	274831	273730	554519	274608	279911
19	KOLAR	3979	1387062	701677	685385	1536401	776396	760005
20	KOPPAL	5570	1196089	603312	592777	1389920	699926	689994
21	MANDYA	4962	1763705	888034	875671	1805769	905085	900684
22	MYSURU	6307	2641027	1344670	1296357	3001127	1511600	1489527
23	RAICHUR	8442	1669762	841840	827922	1928812	964511	964301
24	RAMANAGARA	3516	1030546	524694	505852	1082636	548008	534628
25	SHIVAMOGGA	8478	1642545	830559	811986	1752753	877415	875338
26	TUMAKURU	10597	2584711	1313801	1270910	2678980	1350594	1328386
27	UDUPI	3582	1112243	522231	590012	1177361	562131	615230
28	UTTARA KANNADA	10277	1353644	686876	666768	1437169	726256	710913
29	VIJAYAPURA	10498	1806918	926424	880494	2177331	1111022	1066309
30	YADGIR	5270	956180	482347	473833	1174271	590329	583942
KARNATAKA		**191791**	**52850562**	**26898918**	**25951644**	**61095297**	**30966657**	**30128640**

Source: Census of 2001 and 2011 (Primary census Abstract)

2. Population and Demography

District		Projected population				
		2012	2013	2014	2015	2016
1		9	10	11	12	13
1	BAGALKOTE	1915709	1942091	1968907	1996163	2023869
2	BALLARI	2500205	2548821	2598467	2649164	2700939
3	BELAGAVI	4840453	4902069	4964519	5027817	5091974
4	BENGALURU RURAL	1006749	1022948	1039532	1056512	1073899
5	BENGALURU URBAN	10005251	10405028	10821568	11255581	11707811
6	BIDAR	1725040	1747099	1769484	1792199	1815251
7	CHAMARAJANAGARA	1026640	1032551	1038523	1044558	1050657
8	CHIKKABALLAPURA	1266675	1278436	1290391	1302546	1314904
9	CHIKKAMAGALURU	1137771	1137599	1137448	1137316	1137204
10	CHITRADURGA	1674527	1689774	1705199	1720807	1736599
11	DAKSHINA KANNADA	2113979	2139357	2165814	2193382	2222094
12	DAVANAGERE	1961889	1978460	1995212	2012150	2029273
13	DHARWAD	1873399	1900182	1927379	1954997	1983042
14	GADAG	1074327	1084176	1094118	1104152	1114280
15	HASSAN	1782795	1789346	1796079	1802997	1810105
16	HAVERI	1614571	1631676	1648984	1666498	1684221
17	KALABURAGI	2609235	2652875	2697257	2742395	2788301
18	KODAGU	555142	555771	556405	557044	557688
19	KOLAR	1552371	1568541	1584913	1601491	1618276
20	KOPPAL	1410958	1432316	1453998	1476009	1498354
21	MANDYA	1810116	1814490	1818890	1823318	1827773
22	MYSURU	3041068	3081790	3123310	3165648	3208821
23	RAICHUR	1956844	1985285	2014143	2043422	2073129
24	RAMANAGARA	1088513	1094522	1100667	1106950	1113374
25	SHIVAMOGGA	1764215	1775759	1787386	1799098	1810894
26	TUMAKURU	2689299	2699791	2710459	2721307	2732338
27	UDUPI	1187844	1199186	1211426	1224607	1238771
28	UTTARA KANNADA	1445811	1454507	1463257	1472063	1480923
29	VIJAYAPURA	2218412	2260287	2302971	2346481	2390833
30	YADGIR	1198786	1223839	1249444	1275612	1302358
KARNATAKA		**62048594**	**63028573**	**64036151**	**65072282**	**66137958**

Source: Karnataka At a Glance 2016-17, DES

2. Population and Demography

District		Projected population				
		2017	2018	2019	2020	2021
1		14	15	16	17	18
1	BAGALKOTE	2052034	2080665	2109772	2139364	2169451
2	BALLARI	2753815	2807817	2862973	2919307	2976848
3	BELAGAVI	5157003	5222917	5289729	5357451	5426097
4	BENGALURU RURAL	1091707	1109948	1128635	1147781	1167401
5	BENGALURU URBAN	12179032	12670052	13181713	13714893	14270507
6	BIDAR	1838645	1862387	1886483	1910938	1935760
7	CHAMARAJANAGARA	1056820	1063049	1069345	1075708	1082140
8	CHIKKABALLAPURA	1327470	1340249	1353244	1366463	1379908
9	CHIKKAMAGALURU	1137111	1137039	1136986	1136954	1136942
10	CHITRADURGA	1752577	1768746	1785107	1801665	1818420
11	DAKSHINA KANNADA	2251987	2283093	2315452	2349100	2384077
12	DAVANAGERE	2046587	2064091	2081790	2099686	2117782
13	DHARWAD	2011521	2040442	2069812	2099638	2129928
14	GADAG	1124504	1134823	1145239	1155753	1166365
15	HASSAN	1817406	1824905	1832605	1840512	1848630
16	HAVERI	1702157	1720307	1738675	1757264	1776077
17	KALABURAGI	2834990	2882474	2930768	2979885	3029841
18	KODAGU	558338	558993	559653	560319	560990
19	KOLAR	1635273	1652485	1669914	1687564	1705437
20	KOPPAL	1521039	1544069	1567448	1591183	1615278
21	MANDYA	1832255	1836766	1841304	1845871	1850466
22	MYSURU	3252850	3297753	3343551	3390264	3437914
23	RAICHUR	2103270	2133852	2164882	2196365	2228308
24	RAMANAGARA	1119943	1126661	1133529	1140552	1147733
25	SHIVAMOGGA	1822776	1834744	1846798	1858940	1871170
26	TUMAKURU	2743555	2754962	2766560	2778355	2790349
27	UDUPI	1253966	1270240	1287643	1306228	1326053
28	UTTARA KANNADA	1489838	1498810	1507837	1516921	1526062
29	VIJAYAPURA	2436043	2482128	2529107	2576997	2625815
30	YADGIR	1329694	1357634	1386193	1415385	1445226
KARNATAKA		**67234207**	**68362100**	**69522748**	**70717307**	**71946976**

Source: Karnataka At a Glance 2016-17, DES

2. Population and Demography

District		Decadal population growth (%)				2001					
		1971 to 1981	1981 to 1991	1991 to 2001	2001 to 2011	Rural			Urban		
						Male	Female	Total	Male	Female	Total
1		19	20	21	22	23	24	25	26	27	28
1	BAGALKOTE	23.54	20.79	18.82	14.46	591400	581972	1173372	242847	235673	478520
2	BALLARI	33.64	26.84	22.41	24.92	668534	651756	1320290	361180	345670	706850
3	BELAGAVI	22.94	20.30	17.61	13.38	1630756	1571058	3201814	519334	493357	1012691
4	BENGALURU RURAL	25.48	17.91	18.60	16.02	337965	320669	658634	99524	92810	192334
5	BENGALURU URBAN	59.08	38.44	35.09	46.68	406201	370936	777137	3020398	2739589	5759987
6	BIDAR	20.83	26.12	19.63	13.16	591653	565845	1157498	179369	165506	344875
7	CHAMARAJANAGARA	24.61	14.99	9.29	5.75	414783	402589	817372	75157	72933	148090
8	CHIKKABALLAPURA	24.78	16.72	14.33	9.17	471170	456815	927985	113346	107676	221022
9	CHIKKAMAGALURU	23.77	11.57	12.15	-0.28	461286	456895	918181	113625	109099	222724
10	CHITRADURGA	21.13	20.51	15.63	9.39	635442	608216	1243658	140779	133459	274238
11	DAKSHINA KANNADA	22.72	15.98	14.59	9.80	574657	593771	1168428	363777	365525	729302
12	DAVANAGERE	32.44	23.07	14.86	8.71	637670	610284	1247954	280035	262963	542998
13	DHARWAD	31.26	19.64	16.68	15.13	371275	351061	722336	451929	429988	881917
14	GADAG	19.37	15.56	13.13	9.61	319629	310023	629652	173904	168279	342183
15	HASSAN	23.10	15.67	9.68	3.17	703957	713039	1416996	155129	149544	304673
16	HAVERI	24.76	20.53	13.39	11.08	586935	553161	1140096	153534	145486	299020
17	KALABURAGI	19.39	23.84	21.76	17.94	752987	732189	1485176	357455	332111	689566
18	KODAGU	22.10	5.75	12.31	1.13	236270	236909	473179	38561	36821	75382
19	KOLAR	26.35	16.03	14.46	11.04	497083	485478	982561	204594	199907	404501
20	KOPPAL	22.27	28.05	24.84	16.32	502732	495065	997797	100580	97712	198292
21	MANDYA	22.85	15.96	7.26	2.55	744276	736714	1480990	143758	138957	282715
22	MYSURU	25.12	24.84	15.75	13.39	845379	813520	1658899	499291	482837	982128
23	RAICHUR	28.84	30.53	23.52	15.27	626859	622066	1248925	214981	205856	420837
24	RAMANAGARA	23.46	13.30	7.84	5.06	414112	401372	815484	110582	104480	215062
25	SHIVAMOGGA	27.59	15.11	13.10	6.88	540238	531297	1071535	290321	280689	571010
26	TUMAKURU	21.51	16.58	12.10	3.74	1052113	1025396	2077509	261688	245514	507202
27	UDUPI	22.31	9.42	7.14	5.90	421056	484834	905890	101175	105178	206353
28	UTTARA KANNADA	26.38	13.66	10.93	6.15	489908	475823	965731	196968	190945	387913
29	VIJAYAPURA	18.68	22.94	17.51	20.38	723276	687553	1410829	203148	192941	396089
30	YADGIR	20.17	24.69	20.12	22.67	399356	393769	793125	82991	80064	163055
KARNATAKA		**26.75**	**21.12**	**17.51**	**15.67**	**17648958**	**17240075**	**34889033**	**9249960**	**8711569**	**17961529**

Source: Census of 2001 (Primary census Abstract)

2. Population and Demography

District		2011 population						Percentage share of rural population	
		Rural			Urban				
		Male	Female	Total	Male	Female	Total	2001	2011
1		29	30	31	32	33	34	35	36
1	BAGALKOTE	1291906	650267	641639	597846	299844	298002	71.03	68.36
2	BALLARI	1532356	774093	758263	920239	462861	457378	65.13	62.48
3	BELAGAVI	3568466	1811094	1757372	1211195	611969	599226	75.97	74.66
4	BENGALURU RURAL	722179	371369	350810	268744	137803	130941	77.40	72.88
5	BENGALURU URBAN	871607	464256	407351	8749944	4558405	4191539	11.89	9.06
6	BIDAR	1277348	651250	626098	425952	219415	206537	77.04	74.99
7	CHAMARAJANAGARA	845817	424884	420933	174974	87347	87627	84.66	82.86
8	CHIKKABALLAPURA	973985	494463	479522	281119	141974	139145	80.76	77.60
9	CHIKKAMAGALURU	898453	447545	450908	239508	119077	120431	80.48	78.95
10	CHITRADURGA	1329923	675573	654350	329533	165270	164263	81.93	80.14
11	DAKSHINA KANNADA	1093563	541484	552079	996086	493230	502856	61.57	52.33
12	DAVANAGERE	1316487	668267	648220	629010	318133	310877	69.68	67.67
13	DHARWAD	797484	409416	388068	1049539	527790	521749	45.03	43.18
14	GADAG	685261	347585	337676	379309	189562	189747	64.79	64.37
15	HASSAN	1399658	695583	704075	376763	188084	188679	82.30	78.79
16	HAVERI	1242167	638450	603717	355501	180678	174823	79.22	77.75
17	KALABURAGI	1730775	877144	853631	835551	424611	410940	68.29	67.44
18	KODAGU	473531	234161	239370	80988	40447	40541	86.26	85.39
19	KOLAR	1056328	535431	520897	480073	240965	239108	70.84	68.75
20	KOPPAL	1156216	582958	573258	233704	116968	116736	83.42	83.19
21	MANDYA	1497407	751243	746164	308362	153842	154520	83.97	82.92
22	MYSURU	1755714	887500	868214	1245413	624100	621313	62.81	58.50
23	RAICHUR	1438464	717972	720492	490348	246539	243809	74.80	74.58
24	RAMANAGARA	814877	412438	402439	814877	412438	402439	79.13	75.27
25	SHIVAMOGGA	1129026	565821	563205	623727	311594	312133	65.24	64.41
26	TUMAKURU	2079902	1048710	1031192	599078	301884	297194	80.38	77.64
27	UDUPI	843300	398847	444453	334061	163284	170777	81.45	71.63
28	UTTARA KANNADA	1018188	514910	503278	418981	211346	207635	71.34	70.85
29	VIJAYAPURA	1675353	857562	817791	501978	253460	248518	78.08	76.95
30	YADGIR	953594	479078	474516	220677	111251	109426	82.95	81.21
KARNATAKA		**37469335**	**18929354**	**18539981**	**23625962**	**12037303**	**11588659**	**66.01**	**61.33**

Source: Census of 2011 (Primary census Abstract)

2. Population and Demography

District		Density		Sex ratio				Sex ratio(0-6 age group)	
		2001	2011	2001	2011			2001	2011
					Total	Rural	Urban		
1		37	38	39	40	41	42	43	44
1	BAGALKOTE	251	288	980	989	987	994	940	935
2	BALLARI	240	290	969	983	980	988	947	960
3	BELAGAVI	314	356	960	973	970	979	921	934
4	BENGALURU RURAL	377	431	945	946	945	950	939	950
5	BENGALURU URBAN	2979	4381	908	916	877	920	943	944
6	BIDAR	276	313	949	956	961	941	941	942
7	CHAMARAJANAGARA	189	181	971	993	991	1003	964	953
8	CHIKKABALLAPURA	270	296	966	972	970	980	952	953
9	CHIKKAMAGALURU	158	158	984	1008	1008	1011	959	969
10	CHITRADURGA	179	197	955	974	969	994	946	947
11	DAKSHINA KANNADA	416	430	1022	1020	1020	1020	952	947
12	DAVANAGERE	302	328	952	972	970	977	946	948
13	DHARWAD	376	434	949	971	948	989	943	944
14	GADAG	209	229	969	982	971	1001	952	947
15	HASSAN	253	261	1004	1010	1012	1003	958	973
16	HAVERI	298	331	944	950	946	968	957	946
17	KALABURAGI	197	234	958	971	973	968	938	943
18	KODAGU	133	135	996	1019	1022	1002	977	978
19	KOLAR	348	386	972	979	973	992	965	962
20	KOPPAL	166	250	983	986	983	998	953	958
21	MANDYA	355	364	986	995	993	1004	934	939
22	MYSURU	383	476	964	985	978	996	962	961
23	RAICHUR	241	228	983	1000	1004	989	964	950
24	RAMANAGARA	290	308	964	976	976	975	945	962
25	SHIVAMOGGA	193	207	978	998	995	1002	956	960
26	TUMAKURU	243	253	967	984	983	984	949	959
27	UDUPI	286	329	1130	1094	1114	1046	958	958
28	UTTARA KANNADA	132	140	971	979	977	982	946	955
29	VIJAYAPURA	172	207	950	960	954	981	928	931
30	YADGIR	182	223	982	989	990	984	952	951
KARNATAKA		**276**	**319**	**965**	**973**	**979**	**963**	**946**	**948**

Source: Census of 2001 and 2011 (Primary census Abstract)

2. Population and Demography

District		Total fertility rate		Mean age at marriage		% of birth order 2 and above
		2001	2011	2012-13		
				Male	Female	
1		45	46	47	48	49
1	BAGALKOTE	3.1	2.7	25.6	19.1	62.9
2	BALLARI	3.1	2.7	24.4	19.4	57.1
3	BELAGAVI	2.7	2.4	25.1	19.6	63
4	BENGALURU RURAL	2.2	1.9	27.0	21.0	58
5	BENGALURU URBAN	1.9	1.7	26.7	20.8	47
6	BIDAR	3.4	2.7	25.3	19.7	62.9
7	CHAMARAJANAGAR	2.0	1.6	26.7	20.7	58.3
8	CHIKKABALLAPURA	2.5	1.8	25.8	19.8	52.7
9	CHIKKAMAGALURU	1.9	1.4	27.1	22.4	50.3
10	CHITRADURGA	2.3	2	26.4	20.9	53.4
11	DAKSHINA KANNADA	1.7	1.5	29.0	23.5	45.6
12	DAVANAGERE	2.4	1.9	27.2	21.2	54.8
13	DHARWAD	2.5	2.1	26.3	20.2	55.5
14	GADAG	2.6	2.3	26.1	19.3	56.6
15	HASSAN	1.9	1.5	27.2	22.1	46.6
16	HAVERI	2.6	2.2	26.7	20.4	57.4
17	KALABURAGI	3.5	3	24.7	18.9	64.1
18	KODAGU	2.0	1.5	28.4	22.2	49.1
19	KOLAR	2.5	1.9	26.3	20.1	51.5
20	KOPPAL	3.4	2.9	25.7	19.8	60.7
21	MANDYA	1.9	1.5	27.9	20.6	45.2
22	MYSURU	2.1	1.7	27.6	20.7	48.7
23	RAICHUR	3.3	2.9	23.9	19.5	64.8
24	RAMANAGARA	2.2	1.6	26.6	20.9	55.5
25	SHIVAMOGGA	2.0	1.7	28.1	22.2	49.1
26	TUMAKURU	2.2	1.7	27.3	20.8	44.9
27	UDUPI	1.5	1.2	30.2	24.3	45.3
28	UTTARA KANNADA	2.2	1.7	29.0	22.5	46.9
29	VIJAYAPURA	3.0	3	24.6	19.5	65.2
30	YADGIR	3.5	3.5	24.0	18.5	63.2
KARNATAKA		**2.4**	**2.0**	**26.4**	**20.6**	**56.6**

Source: Col.- 45 & 46 Men and Women in Karnataka, DES 2015-16 Col.- 47,48 & 49 DLHS 4.

3. Education Profile

District		Total Literacy rate		Male Literacy rate		Female literacy rate		Compound growth rate of literacy 2001-2011		
		2001	2011	2001	2011	2001	2011	Total	Male	Female
1		2	3	4	5	6	7	8	9	10
1	BAGALKOTE	57.30	68.82	70.88	79.23	43.56	58.40	1.85	1.12	2.98
2	BALLARI	57.40	67.43	69.20	76.64	45.28	58.09	1.62	1.03	2.52
3	BELAGAVI	64.21	73.48	75.70	82.20	52.32	64.58	1.36	0.83	2.13
4	BENGALURU RURAL	69.59	77.93	78.99	84.82	59.67	70.63	1.14	0.71	1.70
5	BENGALURU URBAN	82.96	87.67	87.92	91.01	77.48	84.01	0.55	0.35	0.81
6	BIDAR	60.94	70.51	72.46	79.09	48.81	61.55	1.47	0.88	2.35
7	CHAMARAJANAGAR	50.87	61.43	59.03	67.93	42.48	54.92	1.90	1.41	2.60
8	CHIKKABALLAPURA	59.24	69.76	69.80	77.75	48.33	61.55	1.65	1.08	2.45
9	CHIKKAMAGALURU	72.20	79.25	80.29	85.41	64.01	73.16	0.94	0.62	1.35
10	CHITRADURGA	64.45	73.71	74.66	81.37	53.78	65.88	1.35	0.86	2.05
11	DAKSHINA KANNADA	83.35	88.57	89.70	93.13	77.21	84.13	0.61	0.38	0.86
12	DAVANAGERE	67.43	75.74	76.37	82.40	58.04	68.91	1.17	0.76	1.73
13	DHARWAD	71.61	80.00	80.82	86.37	61.92	73.46	1.11	0.67	1.72
14	GADAG	66.11	75.12	79.32	84.66	52.52	65.44	1.29	0.65	2.22
15	HASSAN	68.63	76.07	78.37	83.64	59.00	68.60	1.03	0.65	1.52
16	HAVERI	67.79	77.40	77.61	84.00	57.37	70.46	1.33	0.79	2.08
17	KALABURAGI	54.34	64.85	66.18	74.38	42.06	55.09	1.78	1.17	2.74
18	KODAGU	77.99	82.61	83.70	87.19	72.26	78.14	0.58	0.41	0.79
19	KOLAR	65.84	74.39	75.99	81.81	55.46	66.84	1.23	0.74	1.88
20	KOPPAL	54.1	68.09	68.42	78.54	39.61	57.55	2.33	1.39	3.81
21	MANDYA	61.05	70.40	70.50	78.27	51.53	62.54	1.44	1.05	1.96
22	MYSURU	63.48	72.79	70.88	78.46	55.81	67.06	1.38	1.02	1.85
23	RAICHUR	48.81	59.56	61.52	70.47	35.93	48.73	2.01	1.37	3.09
24	RAMANAGARA	60.71	69.22	69.88	76.76	51.22	61.50	1.32	0.94	1.85
25	SHIVAMOGGA	74.52	80.45	82.01	86.07	66.88	74.84	0.77	0.48	1.13
26	TUMAKURU	67.01	75.14	76.78	82.81	56.94	67.38	1.15	0.76	1.70
27	UDUPI	81.25	86.24	88.23	91.41	75.19	81.58	0.60	0.35	0.82
28	UTTARA KANNADA	76.60	84.06	84.53	89.63	68.47	78.39	0.93	0.59	1.36
29	VIJAYAPURA	57.01	67.15	69.94	77.21	43.47	56.72	1.65	0.99	2.70
30	YADGIR	39.90	51.83	51.35	62.25	28.32	41.38	2.65	1.94	3.87
KARNATAKA		**66.64**	**75.36**	**76.10**	**82.47**	**56.87**	**68.08**	**1.24**	**0.81**	**1.82**

Source: Census 2001 and 2011 (Primary Census Abstract)
1. Col 2, 4, 6 census of India 2011, Primary Census Abstract Data Highlights, KARNATAKA Series 30.
2. Col 3, 5, 7 Karnataka at a Glance, 2015-16, DES Bengaluru

3. Education Profile

District		Rural literacy rate					
		2001			2011		
		Total	Male	Female	Total	Male	Female
1		11	12	13	14	15	16
1	BAGALKOTE	51.23	66.01	36.33	64.20	75.77	52.58
2	BALLARI	50.29	63.49	36.82	61.81	72.42	51.02
3	BELAGAVI	58.85	71.53	45.80	69.28	79.12	59.2
4	BENGALURU RURAL	67.23	77.57	56.35	75.16	83.06	66.8
5	BENGALURU URBAN	70.24	78.82	60.78	78.21	84.54	70.92
6	BIDAR	56.71	69.22	43.64	66.73	76.28	56.82
7	CHAMARAJANAGARA	47.24	55.64	38.59	57.95	64.8	51.06
8	CHIKKABALLAPURA	55.20	66.68	43.39	66.39	75.41	57.1
9	CHIKKAMAGALURU	69.59	78.42	60.70	76.95	83.82	70.15
10	CHITRADURGA	60.72	71.84	49.12	70.68	79.19	61.91
11	DAKSHINA KANNADA	79.72	87.07	72.69	85.33	90.97	79.83
12	DAVANAGERE	62.75	73.04	52.02	71.77	79.63	63.69
13	DHARWAD	60.77	73.13	47.70	72.09	80.98	62.72
14	GADAG	61.55	76.40	46.28	71.86	82.83	60.62
15	HASSAN	65.23	75.94	54.72	72.79	81.41	64.29
16	HAVERI	65.91	76.61	54.52	75.69	83.05	67.89
17	KALABURAGI	46.14	59.31	32.70	58.09	69.08	46.86
18	KODAGU	76.10	82.14	70.10	81.09	85.94	76.37
19	KOLAR	58.88	70.97	46.51	69.08	78.11	59.82
20	KOPPAL	51.01	66.10	35.81	66.05	77.12	54.82
21	MANDYA	57.74	67.82	47.65	67.78	76.34	59.21
22	MYSURU	51.84	61.01	42.31	63.29	70.64	55.78
23	RAICHUR	42.49	56.09	28.86	54.11	66.01	42.37
24	RAMANAGARA	57.15	67.31	46.70	65.26	73.96	56.36
25	SHIVAMOGGA	69.61	78.45	60.66	76.37	83.14	69.6
26	TUMAKURU	63.39	74.25	52.29	71.66	80.48	62.71
27	UDUPI	79.35	86.85	72.97	83.91	89.85	78.65
28	UTTARA KANNADA	72.65	81.56	63.52	81.31	87.63	74.87
29	VIJAYAPURA	51.97	65.95	37.32	62.81	74.03	51.1
30	YADGIR	34.88	46.49	23.20	47.05	58.02	36.05
KARNATAKA		**59.33**	**70.45**	**48.01**	**68.73**	**77.61**	**59.71**

Source: Census 2001 and 2011 (Primary Census Abstract)
1. Col 11, 12, 13 census of India 2011, Primary Census Abstract Data Highlights, KARNATAKA Series 30.
2. Col 14, 15, 16 Karnataka at a Glance, 2015-16, DES Bengaluru

3. Education Profile

District		Urban literacy rate					
		2001			2011		
		Total	Male	Female	Total	Male	Female
1		17	18	19	20	21	22
1	BAGALKOTE	71.75	82.40	60.87	78.58	86.55	70.65
2	BALLARI	70.24	79.41	60.69	76.63	83.58	69.62
3	BELAGAVI	80.66	88.43	72.53	85.56	91.1	79.95
4	BENGALURU RURAL	77.71	83.81	71.17	85.37	89.57	80.95
5	BENGALURU URBAN	84.65	89.13	79.70	88.61	91.66	85.27
6	BIDAR	75.14	83.14	66.47	81.81	87.42	75.88
7	CHAMARAJANAGARA	70.88	77.69	63.86	78.39	83.29	73.54
8	CHIKKABALLAPURA	76.16	82.71	69.28	81.57	86.01	77.06
9	CHIKKAMAGALURU	82.87	87.77	77.78	87.93	91.4	84.51
10	CHITRADURGA	81.14	87.21	74.74	85.89	90.22	81.55
11	DAKSHINA KANNADA	89.10	93.78	84.47	92.12	95.5	88.83
12	DAVANAGERE	78.08	83.90	71.89	84.02	88.19	79.77
13	DHARWAD	80.31	87.00	73.28	85.92	90.49	81.31
14	GADAG	74.40	84.60	63.88	80.94	88.01	73.92
15	HASSAN	84.43	89.34	79.35	88.36	91.94	84.81
16	HAVERI	74.98	81.44	68.17	83.39	87.39	79.29
17	KALABURAGI	71.64	80.33	62.31	78.61	85.12	71.91
18	KODAGU	89.74	93.19	86.11	91.48	94.41	88.58
19	KOLAR	82.58	88.10	76.95	86.13	90.05	82.18
20	KOPPAL	69.14	79.67	58.34	78.03	85.48	70.59
21	MANDYA	78.39	84.31	72.26	83.24	87.78	78.75
22	MYSURU	82.80	87.33	78.12	86.09	89.5	82.67
23	RAICHUR	66.86	76.76	56.54	75.12	83.1	67.1
24	RAMANAGARA	74.42	79.64	68.89	81.54	85.47	77.51
25	SHIVAMOGGA	83.60	88.53	78.50	87.79	91.35	84.24
26	TUMAKURU	81.80	86.91	76.35	87.32	90.93	83.67
27	UDUPI	89.47	93.83	85.31	92.13	95.22	89.21
28	UTTARA KANNADA	86.27	91.79	80.59	90.73	94.49	86.91
29	VIJAYAPURA	74.59	83.86	64.89	81.33	87.8	74.79
30	YADGIR	63.59	74.07	52.80	72.01	80.03	63.92
KARNATAKA		**80.58**	**86.66**	**74.12**	**85.78**	**90.04**	**81.36**

Source: Census 2001 and 2011 (Primary Census Abstract)
1. Col 17, 18, 19 census of India 2011, Primary Census Abstract Data Highlights, KARNATAKA Series 30.
2. Col 20, 21, 22 Karnataka at a Glance, 2015-16, DES Bengaluru

3. Education Profile

District		Management-wise primary schools (standard 1-8)							
		2012-13							
		Govt.	Govt. %	private				Total	Total %
				Aided	Aided %	Unaided	Unaided %		
1		23	24	25	26	27	28	29	30
1	BAGALKOTE	1331	76.41	96	5.51	315	18.08	1742	2.91
2	BALLARI	1389	71.16	71	3.64	492	25.20	1952	3.26
3	BELAGAVI*	3300	77.30	220	5.15	749	17.55	4269	7.12
4	BENGALURU RURAL	1125	84.27	12	0.90	198	14.83	1335	2.23
5	BENGALURU URBAN*	1412	32.15	410	9.34	2570	58.52	4392	7.33
6	BIDAR	1286	64.46	188	9.42	521	26.12	1995	3.33
7	CHAMARAJANAGARA	795	82.64	40	4.16	127	13.20	962	1.61
8	CHIKKABALLAPURA	1526	84.78	41	2.28	233	12.94	1800	3.00
9	CHIKKAMAGALURU	1465	87.20	27	1.61	188	11.19	1680	2.80
10	CHITRADURGA	1708	85.19	80	3.99	217	10.82	2005	3.35
11	DAKSHINA KANNADA	952	65.52	224	15.42	277	19.06	1453	2.42
12	DAVANAGERE	1375	72.64	147	7.77	371	19.60	1893	3.16
13	DHARWAD	782	68.42	87	7.61	274	23.97	1143	1.91
14	GADAG	631	74.50	48	5.67	168	19.83	847	1.41
15	HASSAN	2419	87.58	48	1.74	295	10.68	2762	4.61
16	HAVERI	1191	81.08	48	3.27	230	15.66	1469	2.45
17	KALABURAGI	1836	67.25	167	6.12	727	26.63	2730	4.55
18	KODAGU	424	79.55	11	2.06	98	18.39	533	0.89
19	KOLAR	1881	85.73	43	1.96	270	12.31	2194	3.66
20	KOPPAL	985	77.32	16	1.26	273	21.43	1274	2.13
21	MANDYA	1770	84.53	38	1.81	286	13.66	2094	3.49
22	MYSURU	1971	75.52	122	4.67	517	19.81	2610	4.35
23	RAICHUR	1521	77.48	42	2.14	400	20.38	1963	3.28
24	RAMANAGARA	1359	87.79	24	1.55	165	10.66	1548	2.58
25	SHIVAMOGGA	1904	82.64	86	3.73	314	13.63	2304	3.84
26	TUMAKURU*	3443	88.94	63	1.63	365	9.43	3871	6.46
27	UDUPI	619	64.35	218	22.66	125	12.99	962	1.61
28	UTTARA KANNADA*	2135	92.87	40	1.74	124	5.39	2299	3.84
29	VIJAYAPURA	1899	71.31	122	4.58	642	24.11	2663	4.44
30	YADGIR	949	79.61	29	2.43	214	17.95	1192	1.99
KARNATAKA		**45383**	**75.72**	**2808**	**4.68**	**11745**	**19.60**	**59936**	**100**

Source: Commissioner for Public Instruction , Karnataka.

** Belagavi includes Bekagavi & Chikkodi , * Bengaluru Urban includes North & South*

** Tumakuru inclides Tumakuru & Madhugiri , * Uttara Kannada includes Uttara Kannada & sirsi*

3. Education Profile

District		Management-wise primary schools (standard 1-8)							
		2016-17							
		Govt.	Govt. %	private				Total	Total %
				Aided	Aided %	Unaided	Unaided %		
1		31	32	33	34	35	36	37	38
1	BAGALKOTE	1324	70	113	6	453	24	1890	3.1
2	BALLARI	1388	67	77	4	593	29	2058	3.4
3	BELAGAVI*	3247	75	240	6	863	20	4350	7.1
4	BENGALURU RURAL	1106	83	15	1	209	16	1330	2.2
5	BENGALURU URBAN*	1380	29	376	8	2926	62	4682	7.7
6	BIDAR	1278	61	206	10	615	29	2099	3.4
7	CHAMARAJANAGARA	792	82	44	5	131	14	967	1.6
8	CHIKKABALLAPURA	1494	84	51	3	240	13	1785	2.9
9	CHIKKAMAGALURU	1427	87	32	2	186	11	1645	2.7
10	CHITRADURGA	1680	84	77	4	247	12	2004	3.3
11	DAKSHINA KANNADA	944	64	216	15	314	21	1474	2.4
12	DAVANAGERE	1376	70	166	8	434	22	1976	3.2
13	DHARWAD	777	63	106	9	345	28	1228	2.0
14	GADAG	632	72	52	6	196	22	880	1.4
15	HASSAN	2330	87	54	2	296	11	2680	4.4
16	HAVERI	1191	78	65	4	265	17	1521	2.5
17	KALABURAGI	1819	63	219	8	836	29	2874	4.7
18	KODAGU	417	78	11	2	109	20	537	0.9
19	KOLAR	1840	84	44	2	312	14	2196	3.6
20	KOPPAL	987	75	27	2	305	23	1319	2.2
21	MANDYA	1685	82	60	3	302	15	2047	3.3
22	MYSURU	1957	74	142	5	533	20	2632	4.3
23	RAICHUR	1497	74	56	3	478	24	2031	3.3
24	RAMANAGARA	1305	86	25	2	187	12	1517	2.5
25	SHIVAMOGGA	1883	81	103	4	334	14	2320	3.8
26	TUMAKURU*	3352	88	71	2	390	10	3813	6.2
27	UDUPI	611	63	204	21	151	16	966	1.6
28	UTTARA KANNADA*	2090	92	43	2	138	6	2271	3.7
29	VIJAYAPURA	1884	67	141	5	771	28	2796	4.6
30	YADAGIR	947	75	36	3	279	22	1262	2.1
KARNATAKA		**44640**	**73**	**3072**	**5**	**13438**	**22**	**61150**	**100**

Source: Commissioner for Public Instruction, Karnataka.

** Belagavi includes Bekagavi & Chikkodi , * Bengaluru Urban includes North & South*

** Tumakuru inclides Tumakuru & Madhugiri , * Uttara Kannada includes Uttara Kannada & sirsi*

3. Education Profile

District		High schools by management							
		2012-13							
		Govt.	Govt. %	private				Total	Total %
				Aided	Aided %	Unaided	Unaided %		
1		39	40	41	42	43	44	45	46
1	BAGALKOTE	174	43.94	118	29.80	104	26.26	396	2.81
2	BALLARI	186	39.74	88	18.80	194	41.45	468	3.32
3	BELAGAVI*	321	34.04	344	36.48	278	29.48	943	6.69
4	BENGALURU RURAL	67	31.90	39	18.57	104	49.52	210	1.49
5	BENGALURU URBAN*	173	8.23	279	13.27	1651	78.51	2103	14.91
6	BIDAR	169	35.50	115	24.16	192	40.34	476	3.37
7	CHAMARAJANAGARA	95	47.03	41	20.30	66	32.67	202	1.43
8	CHIKKABALLAPURA	120	44.61	36	13.38	113	42.01	269	1.91
9	CHIKKAMAGALURU	136	41.72	116	35.58	74	22.70	326	2.31
10	CHITRADURGA	130	31.18	191	45.80	96	23.02	417	2.96
11	DAKSHINA KANNADA	172	33.53	119	23.20	222	43.27	513	3.64
12	DAVANAGERE	175	35.35	178	35.96	142	28.69	495	3.51
13	DHARWAD	116	30.37	125	32.72	141	36.91	382	2.71
14	GADAG	120	42.86	95	33.93	65	23.21	280	1.99
15	HASSAN	266	50.00	129	24.25	137	25.75	532	3.77
16	HAVERI	156	40.21	148	38.14	84	21.65	388	2.75
17	KALABURAGI	291	41.93	98	14.12	305	43.95	694	4.92
18	KODAGU	53	31.36	48	28.40	68	40.24	169	1.20
19	KOLAR	135	42.06	54	16.82	132	41.12	321	2.28
20	KOPPAL	159	60.46	26	9.89	78	29.66	263	1.86
21	MANDYA	236	54.00	68	15.56	133	30.43	437	3.10
22	MYSURU	248	38.63	122	19.00	272	42.37	642	4.55
23	RAICHUR	202	52.20	33	8.53	152	39.28	387	2.74
24	RAMANAGARA	124	44.77	70	25.27	83	29.96	277	1.96
25	SHIVAMOGGA	179	39.34	139	30.55	137	30.11	455	3.23
26	TUMAKURU*	255	34.27	298	40.05	191	25.67	744	5.27
27	UDUPI	111	39.50	70	24.91	100	35.59	281	1.99
28	UTTARA KANNADA*	134	37.96	146	41.36	73	20.68	353	2.50
29	VIJAYAPURA	152	31.47	199	41.20	132	27.33	483	3.42
30	YADAGIR	133	66.83	15	7.54	51	25.63	199	1.41
KARNATAKA		**4988**	**35.36**	**3547**	**25.15**	**5570**	**39.49**	**14105**	**100**

Source: Commissioner for Public Instruction, Karnataka.

** Belagavi includes Bekagavi & Chikkodi , * Bengaluru Urban includes North & South*

** Tumakuru inclides Tumakuru & Madhugiri , * Uttara Kannada includes Uttara Kannada & sirsi*

3. Education Profile

District		High schools by management							
		2016-17							
		Govt.	Govt. %	private				Total	Total %
				Aided	Aided %	Unaided	Unaided %		
1		47	48	49	50	51	52	53	54
1	BAGALKOTE	200	44.05	124	27.31	130	28.63	454	2.99
2	BALLARI	226	41.39	89	16.30	231	42.31	546	3.59
3	BELAGAVI*	346	33.72	359	34.99	321	31.29	1,026	6.75
4	BENGALURU RURAL	68	27.87	49	20.08	127	52.05	244	1.60
5	BENGALURU URBAN*	179	7.53	285	11.99	1,913	80.48	2,377	15.63
6	BIDAR	182	34.15	136	25.52	215	40.34	533	3.50
7	CHAMARAJANAGARA	99	47.37	55	26.32	55	26.32	209	1.37
8	CHIKKABALLAPURA	124	42.61	45	15.46	122	41.92	291	1.91
9	CHIKKAMAGALURU	136	41.34	113	34.35	80	24.32	329	2.16
10	CHITRADURGA	132	29.86	202	45.70	108	24.43	442	2.91
11	DAKSHINA KANNADA	180	32.91	120	21.94	247	45.16	547	3.60
12	DAVANAGERE	177	34.77	189	37.13	143	28.09	509	3.35
13	DHARWAD	123	29.43	143	34.21	152	36.36	418	2.75
14	GADAG	126	43.15	99	33.90	67	22.95	292	1.92
15	HASSAN	269	50.95	135	25.57	124	23.48	528	3.47
16	HAVERI	160	39.90	158	39.40	83	20.70	401	2.64
17	KALABURAGI	321	42.63	118	15.67	314	41.70	753	4.95
18	KODAGU	54	31.21	49	28.32	70	40.46	173	1.14
19	KOLAR	140	39.77	59	16.76	153	43.47	352	2.31
20	KOPPAL	170	59.03	29	10.07	89	30.90	288	1.89
21	MANDYA	239	51.96	100	21.74	121	26.30	460	3.02
22	MYSURU	257	37.09	139	20.06	297	42.86	693	4.56
23	RAICHUR	224	53.33	33	7.86	163	38.81	420	2.76
24	RAMANAGARA	126	41.14	74	24.75	99	33.11	299	1.97
25	SHIVAMOGGA	180	38.38	148	31.56	141	30.06	469	3.08
26	TUMAKURU*	256	34.27	313	41.90	178	23.83	747	4.91
27	UDUPI	111	38.28	74	25.52	105	36.21	290	1.91
28	UTTARA KANNADA*	135	37.09	148	40.66	81	22.25	364	2.39
29	VIJAYAPURA	168	31.34	208	38.81	160	29.85	536	3.52
30	YADAGIR	136	61.10	17	7.76	66	30.14	219	1.44
KARNATAKA		**5,244**	**34.48**	**3810**	**25.05**	**6155**	**40.47**	**15209**	**100**

Source: Commissioner for Public Instruction, Karnataka.

** Belagavi includes Bekagavi & Chikkodi , * Bengaluru Urban includes North & South*

** Tumakuru inclides Tumakuru & Madhugiri , * Uttara Kannada includes Uttara Kannada & sirsi*

3. Education Profile

District		Enrolment of students in primary schools (All) (standard 1-8)						Growth of enrolment in primary schools (all) (%) 2012-13 to 2016-17		
		2012-13			2016-17					
		Boys	Girls	Total	Boys	Girls	Total	Total	Boys	Girls
1		55	56	57	58	59	60	61	62	63
1	BAGALKOTE	161150	149062	310212	163638	151349	314987	1.54	1.54	1.53
2	BALLARI	195864	180585	376449	202970	189207	392177	4.18	3.63	4.77
3	BELAGAVI*	367882	335854	703736	371355	341678	713033	1.32	0.94	1.73
4	BENGALURU RURAL	60512	57337	117849	64742	60174	124916	6.00	6.99	4.95
5	BENGALURU URBAN*	600105	565586	1165691	680049	625108	1305157	11.96	13.32	10.52
6	BIDAR	169762	157949	327711	146828	135093	281921	-13.97	-13.51	-14.47
7	CHAMARAJANAGARA	60143	56392	116535	55706	52211	107917	-7.40	-7.38	-7.41
8	CHIKKABALLAPURA	82863	76509	159372	77524	72379	149903	-5.94	-6.44	-5.40
9	CHIKKAMAGALURU	68339	63962	132301	62246	58243	120489	-8.93	-8.92	-8.94
10	CHITRADURGA	112644	105130	217774	107552	100611	208163	-4.41	-4.52	-4.30
11	DAKSHINA KANNADA	137338	128219	265557	132181	122173	254354	-4.22	-3.75	-4.72
12	DAVANAGERE	140859	131376	272235	132748	124267	257015	-5.59	-5.76	-5.41
13	DHARWAD	131639	124261	255900	134811	125580	260391	1.75	2.41	1.06
14	GADAG	81994	76794	158788	77631	72754	150385	-5.29	-5.32	-5.26
15	HASSAN	101561	97265	198826	93301	89429	182730	-8.10	-8.13	-8.06
16	HAVERI	116322	110731	227053	113868	107075	220943	-2.69	-2.11	-3.30
17	KALABURAGI	237897	215307	453204	234599	215195	449794	-0.75	-1.39	-0.05
18	KODAGU	35847	34103	69950	32692	31239	63931	-8.60	-8.80	-8.40
19	KOLAR	100427	96345	196772	97716	91953	189669	-3.61	-2.70	-4.56
20	KOPPAL	113970	105113	219083	118898	109944	228842	4.45	4.32	4.60
21	MANDYA	101748	93688	195436	95627	86646	182273	-6.74	-6.02	-7.52
22	MYSURU	188673	178695	367368	184304	174241	358545	-2.40	-2.32	-2.49
23	RAICHUR	165674	150344	316018	165234	152275	317509	0.47	-0.27	1.28
24	RAMANAGARA	62090	57956	120046	60267	56153	116420	-3.02	-2.94	-3.11
25	SHIVAMOGGA	116027	109091	225118	110221	103592	213813	-5.02	-5.00	-5.04
26	TUMAKURU*	164831	151029	315860	156845	143585	300430	-4.89	-4.89	-4.93
27	UDUPI	67798	63568	131366	64852	60022	124874	-4.94	-4.35	-5.58
28	UTTARA KANNADA*	93463	86890	180353	88713	83282	171995	-4.63	-5.08	-4.15
29	VIJAYAPURA	217953	191345	409298	211913	191002	402915	-1.56	-2.77	-0.18
30	YADAGIR	102128	87600	189728	110526	97865	208391	9.84	8.22	11.72
KARNATAKA		**4357503**	**4038086**	**8395589**	**4349557**	**4024325**	**8373882**	**-0.26**	**-0.18**	**-0.34**

Source: Commissioner for Public Instruction, Karnataka.

** Belagavi includes Bekagavi & Chikkodi , * Bengaluru Urban includes North & South*

** Tumakuru inclides Tumakuru & Madhugiri , * Uttara Kannada includes Uttara Kannada & sirsi*

3. Education Profile

District		Enrolment of students in primary schools (SC) (standard 1-8)						Growth of SC enrolment in primary schools(%) 2012-13 to 2016-17		
		2012-13			2016-17					
		Boys	Girls	Total	Boys	Girls	Total	Total	Boys	Girls
1		64	65	66	67	68	69	70	71	72
1	BAGALKOTE	30571	27702	58273	31680	29859	61539	5.6	3.6	7.8
2	BALLARI	46372	41871	88243	48022	45282	93304	5.7	3.6	8.1
3	BELAGAVI*	47098	43972	91070	46716	44350	91066	-0.004	-0.8	0.9
4	BENGALURU RURAL	14649	14151	28800	14995	14317	29312	1.8	2.4	1.2
5	BENGALURU URBAN*	93437	90797	184234	100136	96586	196722	6.8	7.2	6.4
6	BIDAR	45269	41566	86835	39081	36518	75599	-12.9	-13.7	-12.1
7	CHAMARAJANAGARA	15906	14783	30689	14257	13309	27566	-10.2	-10.4	-10.0
8	CHIKKABALLAPURA	22166	21031	43197	20765	19963	40728	-5.7	-6.3	-5.1
9	CHIKKAMAGALURU	17615	16825	34440	15663	15245	30908	-10.3	-11.1	-9.4
10	CHITRADURGA	29302	27727	57029	27711	26462	54173	-5.0	-5.4	-4.6
11	DAKSHINA KANNADA	10822	10235	21057	10047	9398	19445	-7.7	-7.2	-8.2
12	DAVANAGERE	32259	30058	62317	30718	29042	59760	-4.1	-4.8	-3.4
13	DHARWAD	15287	13650	28937	14397	13802	28199	-2.6	-5.8	1.1
14	GADAG	14626	13334	27960	14677	13779	28456	1.8	0.3	3.3
15	HASSAN	22945	22313	45258	21041	20852	41893	-7.4	-8.3	-6.5
16	HAVERI	17785	16518	34303	17740	16443	34183	-0.3	-0.3	-0.5
17	KALABURAGI	66873	57438	124311	61498	56033	117531	-5.5	-8.0	-2.4
18	KODAGU	5171	5228	10399	4694	4595	9289	-10.7	-9.2	-12.1
19	KOLAR	31721	30722	62443	30570	29237	59807	-4.2	-3.6	-4.8
20	KOPPAL	23406	20908	44314	24766	22544	47310	6.8	5.8	7.8
21	MANDYA	15582	14907	30489	14145	13477	27622	-9.4	-9.2	-9.6
22	MYSURU	35134	33937	69071	33098	31987	65085	-5.8	-5.8	-5.7
23	RAICHUR	37099	32024	69123	37755	34077	71832	3.9	1.8	6.4
24	RAMANAGARA	12378	11736	24114	11932	11154	23086	-4.3	-3.6	-5.0
25	SHIVAMOGGA	22607	21713	44320	21877	20926	42803	-3.4	-3.2	-3.6
26	TUMAKURU*	33835	31180	65015	31340	29148	60488	-7.0	-7.4	-6.5
27	UDUPI	5160	4844	10004	4703	4457	9160	-8.4	-8.9	-8.0
28	UTTARA KANNADA*	8805	7936	16741	8226	7404	15630	-6.6	-6.6	-6.7
29	VIJAYAPURA	49314	42202	91516	48508	44118	92626	1.2	-1.6	4.5
30	YADAGIR	25818	20598	46416	27554	23483	51037	10.0	6.7	14.0
KARNATAKA		**849012**	**781906**	**1630918**	**828312**	**777847**	**1606159**	**-1.5**	**-2.4**	**-0.5**

Source: Commissioner for Public Instruction, Karnataka.

** Belagavi includes Bekagavi & Chikkodi , * Bengaluru Urban includes North & South*

** Tumakuru inclides Tumakuru & Madhugiri , * Uttara Kannada includes Uttara Kannada & sirsi*

3. Education Profile

District		Enrolment of students in primary schools (ST) (standard 1-8)						Growth of ST enrolment in primary schools(%) 2012-13 to 2016-17		
		2012-13			2016-17					
		Boys	Girls	Total	Boys	Girls	Total	Total	Boys	Girls
1		73	74	75	76	77	78	79	80	81
1	BAGALKOTE	8173	7759	15932	8530	8196	16726	5.0	4.4	5.6
2	BALLARI	38663	35649	74312	40142	37589	77731	4.6	3.8	5.4
3	BELAGAVI*	24484	22358	46842	25700	24243	49943	6.6	5.0	8.4
4	BENGALURU RURAL	3574	3247	6821	3800	3386	7186	5.4	6.3	4.3
5	BENGALURU URBAN*	15460	14859	30319	14227	12628	26855	-11.4	-8.0	-15.0
6	BIDAR	23670	22518	46188	21298	20180	41478	-10.2	-10.0	-10.4
7	CHAMARAJANAGARA	7469	7124	14593	6924	6494	13418	-8.1	-7.3	-8.8
8	CHIKKABALLAPURA	10863	10320	21183	10251	10050	20301	-4.2	-5.6	-2.6
9	CHIKKAMAGALURU	3357	3219	6576	2975	2854	5829	-11.4	-11.4	-11.3
10	CHITRADURGA	21854	20372	42226	21209	19833	41042	-2.8	-3.0	-2.6
11	DAKSHINA KANNADA	5445	5169	10614	5227	4839	10066	-5.2	-4.0	-6.4
12	DAVANAGERE	17627	16639	34266	16472	15584	32056	-6.4	-6.6	-6.3
13	DHARWAD	6751	6403	13154	6841	6410	13251	0.7	1.3	0.1
14	GADAG	4678	4397	9075	4460	4243	8703	-4.1	-4.7	-3.5
15	HASSAN	2243	2190	4433	2101	2140	4241	-4.3	-6.3	-2.3
16	HAVERI	10475	10077	20552	9755	9398	19153	-6.8	-6.9	-6.7
17	KALABURAGI	4511	3928	8439	4393	3784	8177	-3.1	-2.6	-3.7
18	KODAGU	4641	4627	9268	4622	4851	9473	2.2	-0.4	4.8
19	KOLAR	5997	5600	11597	5837	5461	11298	-2.6	-2.7	-2.5
20	KOPPAL	14495	13559	28054	14862	14132	28994	3.4	2.5	4.2
21	MANDYA	1782	1577	3359	1810	1634	3444	2.5	1.6	3.6
22	MYSURU	22715	21799	44514	22465	21653	44118	-0.9	-1.1	-0.7
23	RAICHUR	32137	28096	60233	33380	30559	63939	6.2	3.9	8.8
24	RAMANAGARA	1797	1659	3456	1989	1858	3847	11.3	10.7	12.0
25	SHIVAMOGGA	4703	4637	9340	4927	4457	9384	0.5	4.8	-3.9
26	TUMAKURU*	13240	12135	25375	12835	11921	24756	-2.4	-3.1	-1.8
27	UDUPI	3735	3368	7103	3393	3138	6531	-8.1	-9.2	-6.8
28	UTTARA KANNADA*	2761	2564	5325	2668	2638	5306	-0.4	-3.4	2.9
29	VIJAYAPURA	3892	3278	7170	3433	3126	6559	-8.5	-11.8	-4.6
30	YADAGIR	11806	10296	22102	13293	11729	25022	13.2	12.6	13.9
KARNATAKA		**332998**	**309423**	**642421**	**329819**	**309008**	**638827**	**-0.6**	**-1.0**	**-0.1**

Source: Commissioner for Public Instruction, Karnataka.CU1:DE38

** Belagavi includes Bekagavi & Chikkodi , * Bengaluru Urban includes North & South*

** Tumakuru inclides Tumakuru & Madhugiri , * Uttara Kannada includes Uttara Kannada & sirsi*

3. Education Profile

District		Enrolment of students in High schools (All) (standard 9-10)						Growth of SC enrolment in High schools (%) 2012-13 to 2016-17		
		2012-13			2016-17					
		Boys	Girls	Total	Boys	Girls	Total	All	Boys	Girls
1		82	83	84	85	86	87	88	89	90
1	BAGALKOTE	27802	23840	51642	33406	29469	62875	21.75	20.16	23.61
2	BALLARI	31863	26345	58208	39017	33627	72644	24.80	22.45	27.64
3	BELAGAVI*	75739	65759	141498	83827	72964	156791	10.81	10.68	10.96
4	BENGALURU RURAL	13469	12132	25601	14801	13703	28504	11.34	9.89	12.95
5	BENGALURU URBAN*	117258	115335	232593	134154	127278	261432	12.40	14.41	10.36
6	BIDAR	25057	24566	49623	28085	26340	54425	9.68	12.08	7.22
7	CHAMARAJANAGARA	12653	12049	24702	12466	11952	24418	-1.15	-1.48	-0.81
8	CHIKKABALLAPURA	18684	17547	36231	17747	16686	34433	-4.96	-5.01	-4.91
9	CHIKKAMAGALURU	17035	16516	33551	15616	14996	30612	-8.76	-8.33	-9.20
10	CHITRADURGA	24904	23428	48332	24921	22999	47920	-0.85	0.07	-1.83
11	DAKSHINA KANNADA	34814	33448	68262	35625	33058	68683	0.62	2.33	-1.17
12	DAVANAGERE	28080	27087	55167	29749	28591	58340	5.75	5.94	5.55
13	DHARWAD	27924	26274	54198	30772	28621	59393	9.59	10.20	8.93
14	GADAG	15070	14925	29995	16461	15607	32068	6.91	9.23	4.57
15	HASSAN	25853	26082	51935	23968	23293	47261	-9.00	-7.29	-10.69
16	HAVERI	21604	21747	43351	24033	23399	47432	9.41	11.24	7.60
17	KALABURAGI	36206	31711	67917	44274	37775	82049	20.81	22.28	19.12
18	KODAGU	8744	8742	17486	8532	8051	16583	-5.16	-2.42	-7.90
19	KOLAR	22728	22122	44850	22505	21363	43868	-2.19	-0.98	-3.43
20	KOPPAL	17406	15314	32720	22911	20840	43751	33.71	31.63	36.08
21	MANDYA	25407	24229	49636	24482	21885	46367	-6.59	-3.64	-9.67
22	MYSURU	43591	42398	85989	43636	41745	85381	-0.71	0.10	-1.54
23	RAICHUR	23051	18928	41979	29740	24725	54465	29.74	29.02	30.63
24	RAMANAGARA	14918	14615	29533	14479	13503	27982	-5.25	-2.94	-7.61
25	SHIVAMOGGA	26029	25864	51893	26790	25523	52313	0.81	2.92	-1.32
26	TUMAKURU*	42873	38068	80941	41091	36024	77115	-4.73	-4.16	-5.37
27	UDUPI	17291	16654	33945	17029	15947	32976	-2.85	-1.52	-4.25
28	UTTARA KANNADA*	21811	21267	43078	22689	21230	43919	-1.95	4.03	-0.17
29	VIJAYAPURA	34533	27074	61607	38434	31348	69782	13.27	11.30	15.79
30	YADAGIR	11628	8403	20031	17691	12896	30587	52.70	52.14	53.47
KARNATAKA		**864025**	**802469**	**1666494**	**938931**	**855438**	**1794369**	**7.67**	**8.67**	**6.60**

Source: Commissioner for Public Instruction, Karnataka.

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3. Education Profile

District		Enrolment of students in High schools (SC) (standard 9-10)						Growth of SC enrolment in High schools(%) 2012-13 to 2016-17		
		2012-13			2016-17					
		Boys	Girls	Total	Boys	Girls	Total	Total	Boys	Girls
1		91	92	93	94	95	96	97	98	99
1	BAGALKOTE	4460	3400	7860	5714	4846	10560	34.4	28.1	42.5
2	BALLARI	6206	4508	10714	8506	6873	15379	43.5	37.1	52.5
3	BELAGAVI*	8813	7478	16291	10077	8650	18727	15.0	14.3	15.7
4	BENGALURU RURAL	3212	2965	6177	3550	3343	6893	11.6	10.5	12.7
5	BENGALURU URBAN*	20194	19861	40055	21234	21304	42538	6.2	5.2	7.3
6	BIDAR	6115	5489	11604	7150	6058	13208	13.8	16.9	10.4
7	CHAMARAJANAGARA	3632	3545	7177	3634	3312	6946	-3.2	0.1	-6.6
8	CHIKKABALLAPURA	4635	4480	9115	4608	4414	9022	-1.0	-0.6	-1.5
9	CHIKKAMAGALURU	3784	3854	7638	3623	3600	7223	-5.4	-4.3	-6.6
10	CHITRADURGA	6248	5683	11931	6362	5973	12335	3.4	1.8	5.1
11	DAKSHINA KANNADA	2217	2473	4690	2591	2577	5168	10.2	16.9	4.2
12	DAVANAGERE	5619	5055	10674	6298	5989	12287	15.1	12.1	18.5
13	DHARWAD	2969	2550	5519	3262	2964	6226	12.8	9.9	16.2
14	GADAG	2237	1786	4023	2711	2307	5018	24.7	21.2	29.2
15	HASSAN	5562	5433	10995	5341	5253	10594	-3.6	-4.0	-3.3
16	HAVERI	3141	2551	5692	3406	3124	6530	14.7	8.4	22.5
17	KALABURAGI	8953	6833	15786	11050	8325	19375	22.7	23.4	21.8
18	KODAGU	1204	1301	2505	1232	1261	2493	-0.5	2.3	-3.1
19	KOLAR	7315	6918	14233	6835	6779	13614	-4.3	-6.6	-2.0
20	KOPPAL	2856	2097	4953	4168	3469	7637	54.2	45.9	65.4
21	MANDYA	3757	3710	7467	3425	3320	6745	-9.7	-8.8	-10.5
22	MYSURU	8026	8357	16383	8198	8111	16309	-0.5	2.1	-2.9
23	RAICHUR	4987	3429	8416	6514	4881	11395	35.4	30.6	42.3
24	RAMANAGARA	2923	2829	5752	2749	2696	5445	-5.3	-6.0	-4.7
25	SHIVAMOGGA	4344	4430	8774	4716	4658	9374	6.8	8.6	5.1
26	TUMAKURU*	8701	7590	16291	8129	7098	15227	-6.5	-6.6	-6.5
27	UDUPI	1104	1154	2258	1263	1171	2434	7.8	14.4	1.5
28	UTTARA KANNADA*	1800	1713	3513	1957	1809	3766	7.2	8.7	5.6
29	VIJAYAPURA	7019	4982	12001	8496	6238	14734	22.8	21.0	25.2
30	YADAGIR	2799	1471	4270	4335	2646	6981	63.5	54.9	79.9
KARNATAKA		**154832**	**137925**	**292757**	**171134**	**153049**	**324183**	**10.7**	**10.5**	**11.00**

Source: Commissioner for Public Instruction, Karnataka.

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** Tumakuru inclides Tumakuru & Madhugiri , * Uttara Kannada includes Uttara Kannada & sirsi*

3. Education Profile

District		Enrolment of students in High schools (ST) (standard 9-10)						Growth of ST enrolment in High schools (%) 2012-13 to 2016-17		
		2012-13			2016-17					
		Boys	Girls	Total	Boys	Girls	Total	Total	Boys	Girls
1		100	101	102	103	104	105	106	107	108
1	BAGALKOTE	1297	997	2294	1691	1431	3122	36.1	30.4	43.5
2	BALLARI	5689	4223	9912	7022	6031	13053	31.7	23.4	42.8
3	BELAGAVI*	4332	3240	7572	4798	3975	8773	15.9	10.8	22.7
4	BENGALURU RURAL	980	773	1753	897	722	1619	-7.6	-8.5	-6.6
5	BENGALURU URBAN*	2729	3271	6000	2559	2425	4984	-16.9	-6.2	-25.9
6	BIDAR	3469	3332	6801	4012	3982	7994	17.5	15.7	19.5
7	CHAMARAJANAGARA	1333	1253	2586	1340	1424	2764	6.9	0.5	13.6
8	CHIKKABALLAPURA	2484	2258	4742	2347	2157	4504	-5.0	-5.5	-4.5
9	CHIKKAMAGALURU	757	805	1562	691	708	1399	-10.4	-8.7	-12.0
10	CHITRADURGA	4483	4203	8686	4780	4311	9091	4.7	6.6	2.6
11	DAKSHINA KANNADA	1256	1262	2518	1369	1334	2703	7.3	9.0	5.7
12	DAVANAGERE	3401	3379	6780	3639	3476	7115	4.9	7.0	2.9
13	DHARWAD	1339	1268	2607	1480	1333	2813	7.9	10.5	5.1
14	GADAG	980	898	1878	1008	925	1933	2.9	2.9	3.0
15	HASSAN	465	457	922	512	471	983	6.6	10.1	3.1
16	HAVERI	1948	2011	3959	2141	2118	4259	7.6	9.9	5.3
17	KALABURAGI	706	516	1222	755	590	1345	10.1	6.9	14.3
18	KODAGU	520	551	1071	696	708	1404	31.1	33.8	28.5
19	KOLAR	1321	1205	2526	1292	1210	2502	-1.0	-2.2	0.4
20	KOPPAL	2076	1755	3831	2832	2545	5377	40.4	36.4	45.0
21	MANDYA	415	318	733	441	356	797	8.7	6.3	11.9
22	MYSURU	4659	4369	9028	4803	4704	9507	5.3	3.1	7.7
23	RAICHUR	3370	2301	5671	5250	3731	8981	58.4	55.8	62.1
24	RAMANAGARA	317	235	552	354	308	662	19.9	11.7	31.1
25	SHIVAMOGGA	976	1014	1990	1044	1007	2051	3.1	7.0	-0.7
26	TUMAKURU*	3416	3157	6573	3265	2861	6126	-6.8	-4.4	-9.4
27	UDUPI	807	793	1600	909	792	1701	6.3	12.6	-0.1
28	UTTARA KANNADA*	430	510	940	594	535	1129	20.1	38.1	4.9
29	VIJAYAPURA	691	446	1137	646	463	1109	-2.5	-6.5	3.8
30	YADAGIR	1116	726	1842	1927	1295	3222	74.9	72.7	78.4
KARNATAKA		**57762**	**51526**	**109288**	**65094**	**57928**	**123022**	**12.6**	**12.7**	**12.4**

Source: Commissioner for Public Instruction, Karnataka.

** Belagavi includes Bekagavi & Chikkodi , * Bengaluru Urban includes North & South*

** Tumakuru inclides Tumakuru & Madhugiri , * Uttara Kannada includes Uttara Kannada & sirsi*

3. Education Profile

District		Gross enrolment ratio: 2016-17			Gross enrolment ratio:2016-17		
		Elementary			Secondary		
		Boys	Girls	Total	Boys	Girls	Total
1		109	110	111	112	113	114
1	BAGALKOTE	98.54	98.81	98.67	86.19	82.93	84.63
2	BALLARI	98.78	97.23	98.03	78.48	74.9	76.78
3	BELAGAVI	99.14	99.65	99.38	91.16	90.06	90.65
4	BENGALURU RURAL	100.52	100.07	100.3	85.29	89.32	87.18
5	BENGALURU URBAN	112.28	111.65	111.98	92.62	98.58	95.43
6	BIDAR	104.58	103.32	103.98	76.56	79	77.71
7	CHAMARAJANAGARA	89.57	89.98	89.76	73.44	77.42	75.34
8	CHIKKABALLAPURA	91.59	91.02	91.32	75.25	77.77	76.45
9	CHIKKAMANGALURU	93.36	93.23	93.3	77.45	80.84	79.08
10	CHITRADURGA	94.12	94.82	94.45	81.88	83.09	82.45
11	DAKSHINA KANNADA	103.93	103.03	103.49	104.58	108.22	106.3
12	DAVANAGERE	99.12	99.57	99.34	83.99	88.85	86.3
13	DHARWAD	103.88	103.82	103.85	90.09	93.41	91.66
14	GADAG	98.25	98.47	98.36	83.18	86.96	84.98
15	HASSAN	91.69	92.15	91.91	81.54	85.04	83.23
16	HAVERI	96.32	97.01	96.65	78.26	84.47	81.2
17	KALBURGI	102.65	103.01	102.82	76.4	72.7	74.65
18	KODAGU	94.28	93.93	94.11	83.11	84.39	83.73
19	KOLAR	90.58	91.03	90.8	76.87	79.43	78.09
20	KOPPAL	96.47	94.63	95.58	81.09	77.96	79.6
21	MANDYA	88.99	88.03	88.53	80.85	81.87	81.33
22	MYSURU	98.08	98.61	98.34	84.8	88.29	86.47
23	RAICHUR	94.2	92.96	93.6	70.6	64.72	67.8
24	RAMANAGARA	90.7	91.37	91.02	79.15	82.49	80.72
25	SHIVAMOGGA	97.57	97.4	97.49	84.07	89.09	86.45
26	TUMAKURU	94.21	92.31	93.29	87.07	87.19	87.13
27	UDUPI	104.17	102.25	103.24	98.13	101.14	99.56
28	UTTARA KANNADA	96.16	97.94	97.01	88.78	92.96	90.75
29	VIJAYAPURA	107.74	106.37	107.09	82.83	75.37	79.31
30	YADAGIRI	94.48	89.82	92.23	65.57	53.19	59.71
KARNATAKA		**99.89**	**99.42**	**99.66**	**84.01**	**84.92**	**84.44**

Source: Commissioner for Public Instruction, Karnataka.

3. Education Profile

District		Percentage of Children out of school in age group 6-14 years as per children census					
		2012-13			2016-17		
		Children 6-14 years	Out -of school children 6-14 years	% of children out of school	children 6-14 years	Out -of school children 6-14 years	% of children out of school
1		115	116	117	118	119	120
1	BAGALKOTE	310212	1142	0.37	314987	1463	0.46
2	BALLARI	376449	6868	1.82	392177	817	0.21
3	BELAGAVI*	703736	1157	0.16	713033	293	0.04
4	BENGALURU RURAL	117849	1089	0.92	124916	84	0.07
5	BENGALURU URBAN*	1165691	5925	0.51	1305157	2118	0.16
6	BIDAR	327711	2194	0.67	281921	259	0.09
7	CHAMARAJANAGARA	116535	1795	1.54	107917	638	0.59
8	CHIKKABALLAPURA	159372	599	0.38	149903	80	0.05
9	CHIKKAMAGALURU	132301	4899	3.70	120489	2334	1.94
10	CHITRADURGA	217774	5094	2.34	208163	77	0.04
11	DAKSHINA KANNADA	265557	2722	1.03	254354	411	0.16
12	DAVANAGERE	272235	725	0.27	257015	7317	2.85
13	DHARWAD	255900	791	0.31	260391	4729	1.82
14	GADAG	158788	2235	1.41	150385	9029	6.00
15	HASSAN	198826	1337	0.67	182730	95	0.05
16	HAVERI	227053	19770	8.71	220943	116	0.05
17	KALABURAGI	453204	3621	0.80	449794	1488	0.33
18	KODAGU	69950	403	0.58	63931	49	0.08
19	KOLAR	196772	2592	1.32	189669	46	0.02
20	KOPPAL	219083	20253	9.24	228842	347	0.15
21	MANDYA	195436	485	0.25	182273	167	0.09
22	MYSURU	367368	2638	0.72	358545	252	0.07
23	RAICHUR	316018	3467	1.10	317509	336	0.11
24	RAMANAGARA	120046	1653	1.38	116420	92	0.08
25	SHIVAMOGGA	225118	4736	2.10	213813	290	0.14
26	TUMAKURU*	315860	1849	0.59	300430	126	0.04
27	UDUPI	131366	101	0.08	124874	36	0.03
28	UTTARA KANNADA*	180353	4076	2.26	171995	55	0.03
29	VIJAYAPURA	409298	2026	0.49	402915	7	0.02
30	YADAGIR	189728	2155	1.14	208391	642	0.31
KARNATAKA		**8395589**	**108397**	**1.29**	**8373882**	**33793**	**0.40**

Source: Commissioner for Public Instruction, Karnataka.

** Belagavi includes Bekagavi & Chikkodi , * Bengaluru Urban includes North & South*

** Tumakuru inclides Tumakuru & Madhugiri , * Uttara Kannada includes Uttara Kannada & sirsi*

3. Education Profile

District		Student Dropout Rates (standard 1-8)					
		2012-13			2016-17		
		Boys	Girls	Total	Boys	Girls	Total
1		121	122	123	124	125	126
1	BAGALKOTE	4.22	4.97	4.58	2.76	4.06	3.39
2	BALLARI	3.87	5.47	4.64	2.93	3.94	3.42
3	BELAGAVI*	2.46	3.46	2.94	1.25	4.60	2.65
4	BENGALURU RURAL	1.96	2.36	2.16	0.65	1.31	0.97
5	BENGALURU URBAN*	0.00	0.00	0.00	0.00	0.00	0.00
6	BIDAR	9.71	9.04	9.39	4.25	7.53	5.85
7	CHAMARAJANAGARA	1.54	2.55	2.03	2.58	3.09	2.83
8	CHIKKABALLAPURA	3.15	5.03	4.06	1.14	2.40	1.75
9	CHIKKAMAGALURU	1.21	2.02	1.61	1.02	1.15	1.08
10	CHITRADURGA	3.68	3.80	3.74	0.44	0.98	0.71
11	DAKSHINA KANNADA	0.42	0.43	0.42	0.00	0.06	0.00
12	DAVANAGERE	3.95	4.14	4.04	3.16	2.96	3.06
13	DHARWAD	8.13	9.48	8.79	0.62	1.87	1.23
14	GADAG	3.36	3.41	3.39	1.98	2.84	2.40
15	HASSAN	2.07	1.87	1.97	0.78	0.83	0.80
16	HAVERI	3.89	2.98	3.45	1.64	2.34	1.98
17	KALABURAGI	7.34	8.69	7.98	3.81	5.40	4.57
18	KODAGU	2.18	2.16	2.17	0.84	0.90	0.87
19	KOLAR	3.75	3.31	3.53	2.56	2.66	2.61
20	KOPPAL	7.92	8.03	7.97	2.26	4.47	3.33
21	MANDYA	2.82	2.84	2.83	0.00	0.00	0.00
22	MYSURU	2.66	2.93	2.79	0.00	0.00	0.00
23	RAICHUR	4.64	5.02	4.82	5.62	6.79	6.18
24	RAMANAGARA	2.53	2.71	2.61	0.00	0.91	0.28
25	SHIVAMOGGA	2.31	2.66	2.48	2.05	2.25	2.15
26	TUMAKURU*	2.19	2.33	2.25	1.03	3.37	1.86
27	UDUPI	0.00	0.00	0.00	0.00	0.00	0.00
28	UTTARA KANNADA*	1.80	2.19	1.99	0.00	0.51	0.00
29	VIJAYAPURA	5.62	7.10	6.31	1.64	3.37	2.47
30	YADAGIR	11.10	11.25	11.17	7.64	9.83	8.67
KARNATAKA		**3.34**	**3.83**	**3.58**	**1.03**	**2.30**	**1.64**

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** Tumakuru inclides Tumakuru & Madhugiri , * Uttara Kannada includes Uttara Kannada & sirsi*

3. Education Profile

District		Primary school Teachers (Standard 1-8)							
		2012-13				2016-17			
		Male	Female	Total	% of Female Teachers	Male	Female	Total	% of Female Teachers
1		127	128	129	130	131	132	133	134
1	BAGALKOTE	5066	4119	9185	44.84	4969	4424	9393	47.10
2	BALLARI	5448	6026	11474	52.52	4995	6158	11153	55.21
3	BELAGAVI*	11017	10602	21619	49.4	10450	11225	21675	51.79
4	BENGALURU RURAL	2072	3368	5440	61.91	1940	3166	5106	62.01
5	BENGALURU URBAN*	3504	26958	30462	88.50	5542	29882	35424	84.36
6	BIDAR	5286	5408	10694	50.57	4949	5334	10283	51.87
7	CHAMARAJANAGARA	1934	2279	4213	54.09	1759	2319	4078	56.87
8	CHIKKABALLAPURA	3305	3413	6718	50.80	2927	3580	6507	55.02
9	CHIKKAMAGALURU	3214	3635	6849	53.07	2747	3409	6156	55.38
10	CHITRADURGA	4203	4190	8393	49.92	3845	4757	8602	55.30
11	DAKSHINA KANNADA	1491	6305	7796	80.87	1323	6223	7546	82.47
12	DAVANAGERE	4840	5330	10170	52.41	4508	5576	10084	55.30
13	DHARWAD	2531	5303	7834	67.69	2658	5285	7943	66.54
14	GADAG	2515	2502	5017	49.87	2432	2445	4877	50.13
15	HASSAN	4334	5357	9691	55.28	3844	5260	9104	57.78
16	HAVERI	4353	3816	8169	46.71	3875	3979	7854	50.66
17	KALABURAGI	6448	8222	14670	56.05	6202	8545	14747	57.94
18	KODAGU	496	2189	2685	81.53	449	1941	2390	81.21
19	KOLAR	3181	5249	8430	62.27	2942	5207	8149	63.90
20	KOPPAL	3309	2451	5760	42.55	3305	2518	5823	43.24
21	MANDYA	3410	4371	7781	56.18	3032	4207	7239	58.12
22	MYSURU	4553	8558	13111	65.27	4168	8440	12608	66.94
23	RAICHUR	5261	5149	10410	49.46	4601	5203	9804	53.07
24	RAMANAGARA	2149	3246	5395	60.17	1932	3405	5337	63.80
25	SHIVAMOGGA	3592	5296	8888	59.59	3521	5419	8940	60.62
26	TUMAKURU*	5899	7876	13775	57.18	5233	8149	13382	60.90
27	UDUPI	1474	3012	4486	67.14	1211	3194	4405	72.51
28	UTTARA KANNADA*	2512	5120	7632	67.09	2375	5004	7379	67.81
29	VIJAYAPURA	7026	5447	12473	43.67	7156	5452	12608	43.24
30	YADAGIR	2999	2177	5176	42.06	2872	2454	5326	46.08
KARNATAKA		**117422**	**166974**	**284396**	**58.71**	**111762**	**172160**	**283922**	**60.64**

Source: Commissioner for Public Instruction, Karnataka.

** Belagavi includes Bekagavi & Chikkodi , * Bengaluru Urban includes North & South*

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3. Education Profile

District		High school Teachers (Standard 9-10)							
		2012-13				2016-17			
		Male	Female	Total	% of Female	Male	Female	Total	% of Female
1		135	136	137	138	139	140	141	142
1	BAGALKOTE	2171	821	2992	27.44	2089	1229	3318	37.04
2	BALLARI	1970	1410	3380	41.72	1999	1536	3535	43.45
3	BELAGAVI*	4830	2078	6908	30.08	4786	2952	7738	38.15
4	BENGALURU RURAL	733	764	1497	51.04	928	888	1816	48.90
5	BENGALURU URBAN*	2439	11573	14012	82.59	3454	10616	14070	75.45
6	BIDAR	2364	1216	3580	33.97	2434	1308	3742	34.95
7	CHAMARAJANAGARA	1014	542	1556	34.83	949	569	1518	37.48
8	CHIKKABALLAPURA	1090	600	1690	35.50	1188	914	2102	43.48
9	CHIKKAMAGALURU	1606	891	2497	35.68	1509	949	2458	38.61
10	CHITRADURGA	2243	862	3105	27.76	1776	1382	3158	43.76
11	DAKSHINA KANNADA	1336	2555	3891	65.66	1375	2629	4004	65.66
12	DAVANAGERE	2591	1484	4075	36.42	2591	1406	3997	35.18
13	DHARWAD	1240	1634	2874	56.85	1378	1676	3054	54.88
14	GADAG	1337	629	1966	31.99	1247	929	2176	42.69
15	HASSAN	2255	1723	3978	43.31	2307	1628	3935	41.37
16	HAVERI	1917	746	2663	28.01	1957	1014	2971	34.13
17	KALABURAGI	2702	2130	4832	44.08	2379	2869	5248	54.67
18	KODAGU	478	752	1230	61.14	475	706	1181	59.78
19	KOLAR	1219	1253	2472	50.69	1239	1418	2657	53.37
20	KOPPAL	1079	462	1541	29.98	1161	638	1799	35.46
21	MANDYA	1735	1585	3320	47.74	1961	1325	3286	40.32
22	MYSURU	2295	2469	4764	51.83	2340	3036	5376	56.47
23	RAICHUR	1372	1080	2452	44.05	1614	1190	2804	42.44
24	RAMANAGARA	1074	719	1793	40.10	1022	1079	2101	51.36
25	SHIVAMOGGA	2082	1374	3456	39.76	1951	1643	3594	45.72
26	TUMAKURU*	3958	1902	5860	32.46	2712	2962	5674	52.20
27	UDUPI	961	1384	2345	59.02	966	1377	2343	58.77
28	UTTARA KANNADA*	1433	1169	2602	44.93	1389	1276	2665	47.88
29	VIJAYAPURA	2626	872	3498	24.93	2793	904	3697	24.45
30	YADAGIR	959	448	1407	31.84	1014	496	1510	32.85
KARNATAKA		**55109**	**47127**	**102236**	**46.10**	**54983**	**52544**	**107527**	**48.87**

Source: Commissioner for Public Instruction, Karnataka.

** Belagavi includes Bekagavi & Chikkodi , * Bengaluru Urban includes North & South*

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3. Education Profile

District		Total No.of PUC Institutions	
		2011-12	2016-17
1		143	144
1	BAGALKOTE	107	132
2	BALLARI	126	141
3	BELAGAVI	259	337
4	BENGALURU RURAL	42	71
5	BENGALURU URBAN	536	772
6	BIDAR	134	180
7	CHAMARAJANAGARA	56	62
8	CHIKKABALLAPURA	75	111
9	CHIKKAMAGALURU	78	88
10	CHITRADURGA	121	135
11	DAKSHINA KANNADA	169	208
12	DAVANAGERE	145	167
13	DHARWAD	131	170
14	GADAG	86	100
15	HASSAN	151	175
16	HAVERI	104	126
17	KALABURAGI	192	256
18	KODAGU	55	67
19	KOLAR	85	118
20	KOPPAL	71	87
21	MANDYA	134	153
22	MYSURU	197	244
23	RAICHUR	110	158
24	RAMANAGARA	72	79
25	SHIVAMOGGA	114	126
26	TUMAKURU	213	239
27	UDUPI	99	109
28	UTTARA KANNADA	88	99
29	VIJAYAPURA	153	220
30	YADAGIR	46	75
KARNATAKA		**3949**	**5005**

Source: Department of Pre-University Examination , Karnataka.

3. Education Profile

District		Enrolment of students in PUC (All)						Growth of enrolment in PUC 2011-12 to 2016-17		
		2011-12			2016-17					
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1		145	146	147	148	149	150	151	152	153
1	BAGALKOTE	20511	15014	35525	23100	19508	42608	12.62	29.93	19.94
2	BALLARI	19115	16436	35551	20228	19350	39578	5.82	17.73	11.33
3	BELAGAVI	53172	35753	88925	53819	43274	97093	1.22	21.04	9.19
4	BENGALURU RURAL	7418	7881	15299	7390	9492	16882	-0.38	20.44	10.35
5	BENGALURU URBAN	94433	91917	186350	107429	108463	215892	13.76	18.00	15.85
6	BIDAR	13549	13639	27188	19083	19286	38369	40.84	41.40	41.12
7	CHAMARAJANAGARA	8295	7859	16154	7636	7975	15611	-7.94	1.48	-3.36
8	CHIKKABALLAPURA	15607	13373	28980	14703	14779	29482	-5.79	10.51	1.73
9	CHIKKAMAGALURU	9701	11395	21096	9671	11621	21292	-0.31	1.98	0.93
10	CHITRADURGA	15630	15819	31449	14569	16579	31148	-6.79	4.80	-0.96
11	DAKSHINA KANNADA	29647	32217	61864	38632	38605	77237	30.31	19.83	24.85
12	DAVANAGERE	21514	20380	41894	20767	22584	43351	-3.47	10.81	3.48
13	DHARWAD	23453	19940	43393	26092	24711	50803	11.25	23.93	17.08
14	GADAG	13280	9521	22801	10970	10409	21379	-17.39	9.33	-6.24
15	HASSAN	16354	19044	35398	15096	19270	34366	-7.69	1.19	-2.92
16	HAVERI	11895	11457	23352	12315	13957	26272	3.53	21.82	12.50
17	KALABURAGI	22804	22019	44823	27014	25745	52759	18.46	16.92	17.71
18	KODAGU	5520	5985	11505	5880	6814	12694	6.52	13.85	10.33
19	KOLAR	18187	16581	34768	15508	16663	32171	-14.73	0.49	-7.47
20	KOPPAL	9215	7799	17014	10717	10363	21080	16.30	32.88	23.90
21	MANDYA	16211	18622	34833	14277	17349	31626	-11.93	-6.84	-9.21
22	MYSURU	31930	30596	62526	34642	37428	72070	8.49	22.33	15.26
23	RAICHUR	16041	11334	27375	19654	15407	35061	22.52	35.94	28.08
24	RAMANAGARA	8840	9515	18355	8092	10136	18228	-8.46	6.53	-0.69
25	SHIVAMOGGA	16126	19914	36040	16443	21704	38147	1.97	8.99	5.85
26	TUMAKURU	27458	28496	55954	25824	30002	55826	-5.95	5.28	-0.23
27	UDUPI	14241	15448	29689	15771	16728	32499	10.74	8.29	9.46
28	UTTARA KANNADA	12482	15000	27482	14092	17064	31156	12.90	13.76	13.37
29	VIJAYAPURA	27557	17183	44740	28747	19095	47842	4.32	11.13	6.93
30	YADAGIR	7105	5063	12168	9933	6683	16616	39.80	32.00	36.55
KARNATAKA		**607291**	**565200**	**1172491**	**648094**	**651044**	**1299138**	**6.72**	**15.19**	**10.80**

Source: Department of Pre-University Examination , Karnataka.

3. Education Profile

District		Enrolment of SC students in PUC						Enrolment of ST students in PUC					
		2011			2016-17			2011-12			2016-17		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1		154	155	156	157	158	159	160	161	162	163	164	165
1	BAGALKOTE	3294	1905	5199	3585	2766	6351	1042	573	1615	1133	802	1935
2	BALLARI	3538	2474	6012	3980	3061	7041	2946	1943	4889	3174	2653	5827
3	BELAGAVI	6268	3914	10182	6518	5119	11637	2970	1345	4315	3372	1991	5363
4	BENGALURU RURAL	1868	1832	3700	1997	2365	4362	417	423	840	420	550	970
5	BENGALURU URBAN	15303	15073	30376	16918	18148	35066	1768	1731	3499	2010	2167	4177
6	BIDAR	3433	2919	6352	4791	4453	9244	1640	1528	3168	2697	2768	5465
7	CHAMARAJANAGARA	2999	2963	5962	2530	2749	5279	823	670	1493	822	799	1621
8	CHIKKABALLAPURA	3747	2911	6658	3706	3574	7280	1966	1466	3432	1867	1680	3547
9	CHIKKAMAGALURU	2138	2307	4445	2258	2725	4983	363	479	842	418	584	1002
10	CHITRADURGA	3844	3597	7441	3601	3768	7369	2832	2601	5433	2652	2824	5476
11	DAKSHINA KANNADA	1277	1611	2888	2220	2486	4706	803	1110	1913	1200	1482	2682
12	DAVANAGERE	4535	3356	7891	4310	3992	8302	2414	2238	4652	2419	2543	4962
13	DHARWAD	2728	1976	4704	3053	2545	5598	1107	826	1933	1379	1089	2468
14	GADAG	1982	1017	2999	1696	1244	2940	976	598	1574	817	697	1514
15	HASSAN	3509	3759	7268	3391	3945	7336	303	326	629	299	358	657
16	HAVERI	1739	1105	2844	1747	1603	3350	1168	1035	2203	1133	1286	2419
17	KALABURAGI	6464	4992	11456	7237	5938	13175	405	275	680	492	366	858
18	KODAGU	776	827	1603	866	1092	1958	212	264	476	275	374	649
19	KOLAR	5948	5283	11231	4941	5284	10225	1046	729	1775	921	843	1764
20	KOPPAL	1655	1105	2760	2002	1516	3518	1173	812	1985	1456	1223	2679
21	MANDYA	2735	2963	5698	2246	2727	4973	291	236	527	272	279	551
22	MYSURU	6299	6141	12440	6770	7705	14475	2996	2504	5500	3443	3481	6924
23	RAICHUR	3638	2202	5840	4542	3260	7802	2504	1130	3634	3512	1965	5477
24	RAMANAGARA	1848	1847	3695	1796	1988	3784	118	113	231	139	135	274
25	SHIVAMOGGA	2548	2805	5353	2708	3446	6154	523	730	1253	607	914	1521
26	TUMAKURU	5545	5159	10704	5325	5585	10910	2068	2049	4117	2110	2285	4395
27	UDUPI	669	909	1578	930	1135	2065	565	675	1240	749	833	1582
28	UTTARA KANNADA	913	1158	2071	1100	1361	2461	219	278	497	318	362	680
29	VIJAYAPURA	6261	3041	9302	6504	3652	10156	470	217	687	531	297	828
30	YADAGIR	1750	887	2637	2596	1339	3935	872	427	1299	1155	614	1769
KARNATAKA		**109251**	**92038**	**201289**	**115864**	**110571**	**226435**	**37000**	**29331**	**66331**	**41792**	**38244**	**80036**

Source: Department of Pre-University Examination, Karnataka.

3. Education Profile

District		University - Wise no of Government Degree College							
		Arts		Science		Commerce		Total	
		2011-12	2016-17	2011-12	2016-17	2011-12	2016-17	2011-12	2016-17
1		166	167	168	169	170	171	172	173
1	BAGALKOTE	13	16	7	9	11	14	31	39
2	BALLARI	16	17	15	16	17	18	48	51
3	BELAGAVI	7	9	4	5	7	9	18	23
4	BENGALURU RURAL	17	21	7	10	17	21	41	52
5	BENGALURU URBAN	12	13	7	10	12	14	31	37
6	BIDAR	5	9	5	9	5	9	15	27
7	CHAMARAJANAGARA	5	11	3	5	4	10	12	26
8	CHIKKABALLAPURA	4	9	2	5	4	9	10	23
9	CHIKKAMAGALURU	12	14	8	10	11	13	31	37
10	CHITRADURGA	9	9	8	8	9	9	26	26
11	DAKSHINA KANNADA	7	12	5	10	8	13	20	35
12	DAVANAGERE	15	19	8	8	16	19	39	46
13	DHARWAD	10	11	7	9	10	11	27	31
14	GADAG	6	9	2	5	5	9	13	23
15	HASSAN	8	10	7	8	6	9	21	27
16	HAVERI	12	16	10	13	11	13	33	42
17	KALABURAGI	20	27	7	10	17	24	44	61
18	KODAGU	8	13	3	5	8	13	19	31
19	KOLAR	8	9	7	7	8	8	23	24
20	KOPPAL	7	14	3	5	6	13	16	32
21	MANDYA	5	6	1	1	5	6	11	13
22	MYSURU	11	15	5	8	11	15	27	38
23	RAICHUR	15	21	10	11	15	22	40	54
24	RAMANAGARA	4	12	4	6	4	10	12	28
25	SHIVAMOGGA	10	11	5	5	9	10	24	26
26	TUMAKURU	11	15	10	12	11	15	32	42
27	UDUPI	15	20	10	11	15	20	40	51
28	UTTARA KANNADA	9	11	6	7	10	12	25	30
29	VIJAYAPURA	13	15	8	12	13	15	34	42
30	YADAGIR	1	7	1	5	1	7	3	19
KARNATAKA		295	401	185	245	286	390	766	1036

Source: Department of Collegiate Education, Karnataka.

3. Education Profile

District		Enrolment of Students in General Degree Colleges											
		Arts						Science					
		2011-12			2016-17			2011-12			2016-17		
		Men	Wo men	Total	Men	Wo men	Total	Men	Wo men	Total	Men	Wo men	Total
1		174	175	176	177	178	179	180	181	182	183	184	185
1	BAGALKOTE	1459	1420	2879	2198	2174	4372	59	70	129	24	154	178
2	BALLARI	2455	1876	4331	3257	2552	5809	107	99	206	282	321	603
3	BELAGAVI	2170	1575	3745	3071	2495	5566	91	58	149	379	354	733
4	BENGALURU RURAL	965	701	1666	952	1126	2078	22	25	47	100	140	240
5	BENGALURU URBAN	2908	3404	6312	2361	3266	5627	238	1281	1519	1452	2640	4092
6	BIDAR	269	299	568	838	1625	2463	237	125	362	533	676	1209
7	CHAMARAJANAGARA	569	119	688	1184	606	1790	119	49	168	162	119	281
8	CHIKKABALLAPURA	3000	2193	5193	1351	1558	2909	497	800	1297	564	1115	1679
9	CHIKKAMAGALURU	2566	2176	4742	1922	2238	4160	285	429	714	343	714	1057
10	CHITRADURGA	2674	1642	4316	2133	1834	3967	603	748	1351	907	1448	2355
11	DAKSHINA KANNADA	845	2720	3565	752	2432	3184	48	226	274	145	477	622
12	DAVANAGERE	2581	2240	4821	1939	2270	4209	510	520	1030	490	1086	1576
13	DHARWAD	914	694	1608	951	1069	2020	46	37	83	210	289	499
14	GADAG	1325	981	2306	922	1054	1976	64	97	161	135	268	403
15	HASSAN	2531	2973	5504	2592	3725	6317	595	689	1284	834	1586	2420
16	HAVERI	955	641	1596	1737	1956	3693	21	36	57	157	334	491
17	KALABURAGI	1581	1481	3062	2588	3241	5829	474	161	635	648	715	1363
18	KODAGU	481	574	1055	483	664	1147	0	0	0	0	0	0
19	KOLAR	3513	2946	6459	1802	1794	3596	272	701	973	522	1186	1708
20	KOPPAL	839	589	1428	2576	1881	4457	14	15	29	256	342	598
21	MANDYA	1105	1457	2562	1080	2296	3376	72	140	212	400	993	1393
22	MYSURU	4008	4454	8462	3145	5828	8973	186	1557	1743	410	2708	3118
23	RAICHUR	1194	558	1752	2633	1462	4095	103	140	243	231	335	566
24	RAMANAGARA	1726	2012	3738	1098	1774	2872	56	131	187	114	329	443
25	SHIVAMOGGA	1691	3023	4714	1862	3218	5080	205	536	741	459	1380	1839
26	TUMAKURU	3732	3638	7370	2607	3247	5854	293	393	686	590	1111	1701
27	UDUPI	596	1538	2134	492	1156	1648	97	312	409	139	467	606
28	UTTARA KANNADA	1254	2376	3630	1522	2865	4387	127	339	466	258	706	964
29	VIJAYAPURA	1209	652	1861	2119	1113	3232	197	129	326	368	185	553
30	YADAGIR	0	0	0	1434	749	2183	0	0	0	378	303	681
KARNATAKA		51115	50952	102067	53601	63268	116869	5638	9843	15481	11490	22481	33971

Source: Department of Collegiate Education, Karnataka.

3. Education Profile

District		Enrollment of Students in General Degree College											
		Commerce						TOTAL					
		2011-12			2016-17			2011-12			2016-17		
		Men	Wo men	Total	Men	Wo men	Total	Men	Wo men	Total	Men	Wo men	Total
1		186	187	188	189	190	191	192	193	194	195	196	197
1	BAGALKOTE	476	365	841	1137	1253	2390	1994	1855	3849	3359	3581	6940
2	BALLARY	1923	938	2861	3078	2036	5114	4485	2913	7398	6617	4909	11526
3	BELAGAVI	948	570	1518	1816	2349	4165	3209	2203	5412	5266	5198	10464
4	BANGALORE RURAL	747	604	1351	1111	1593	2704	1734	1330	3064	2163	2859	5022
5	BANGALORE URBAN	5071	5613	10684	5550	7717	13267	8217	10298	18515	9363	13623	22986
6	BIDAR	405	144	549	976	789	1765	911	568	1479	2347	3090	5437
7	CHAMARAJANAGARA	291	70	361	1080	704	1784	979	238	1217	2426	1429	3855
8	CHIKKABALLAPURA	1603	1257	2860	1652	2168	3820	5100	4250	9350	3567	4841	8408
9	CHIKKAMAGALUR	1779	1216	2995	2113	2601	4714	4630	3821	8451	4378	5553	9931
10	CHITRADURGA	1032	752	1784	1990	2590	4580	4309	3142	7451	5030	5872	10902
11	DAKSHINA KANNADA	1528	2107	3635	1587	3821	5408	2421	5053	7474	2484	6730	9214
12	DAVANAGERE	1339	1087	2426	2112	2416	4528	4430	3847	8277	4541	5772	10313
13	DHARWAD	590	319	909	1010	1191	2201	1550	1050	2600	2171	2549	4720
14	GADAG	416	256	672	681	831	1512	1805	1334	3139	1738	2153	3891
15	HASSAN	1219	1695	2914	2242	4314	6556	4345	5357	9702	5668	9625	15293
16	HAVERI	473	151	624	1866	1715	3581	1449	828	2277	3760	4005	7765
17	KALABURAGI	578	266	844	608	892	1500	2633	1908	4541	3844	4848	8692
18	KODAGU	507	350	857	564	691	1255	988	924	1912	1047	1355	2402
19	KOLAR	1679	2007	3686	2179	3204	5383	5464	5654	11118	4503	6184	10687
20	KOPPAL	147	61	208	1231	790	2021	1000	665	1665	4063	3013	7076
21	MANDYA	802	941	1743	1732	3862	5594	1979	2538	4517	3212	7151	10363
22	MYSURU	1793	3168	4961	2928	6389	9317	5987	9179	15166	6483	14925	21408
23	RAICHUR	564	145	709	1363	610	1973	1861	843	2704	4227	2407	6634
24	RAMANAGARA	1326	1417	2743	1454	2080	3534	3108	3560	6668	2666	4183	6849
25	SHIVAMOGGA	1641	2152	3793	2700	4287	6987	3537	5711	9248	5021	8885	13906
26	TUMAKURU	2861	2774	5635	3960	6473	10433	6886	6805	13691	7157	10831	17988
27	UDUPI	2039	2555	4594	1995	4115	6110	2732	4405	7137	2626	5738	8364
28	UTTARA KANNADA	1266	1372	2638	2842	4575	7417	2647	4087	6734	4622	8146	12768
29	VIJAYAPURA	293	114	407	743	427	1170	1699	895	2594	3230	1725	4955
30	YADGIR	0	0	0	665	419	1084	0	0	0	2477	1471	3948
KARNATAKA		**35336**	**34466**	**69802**	**54965**	**76902**	**131867**	**92089**	**95261**	**187350**	**120056**	**162651**	**282707**

Source: Department of Collegiate Education, Karnataka.

3. Education Profile

District		Professional degree colleges						Enrolment of students in engineering colleges (2016-17)		
		No. of engineering colleges								
		2015-16			2016-17					
		Govt.	Pvt.	Total	Govt.	Pvt.	Total	Boys	Girls	Total
1		198	199	200	201	202	203	204	205	206
1	BAGALKOTE	0	3	3	0	3	3	479	364	843
2	BALLARI	1	3	4	1	3	4	939	731	1670
3	BELAGAVI	0	10	10	0	11	11	2219	1431	3650
4	BENGALURU RURAL	2	92	94	2	90	92	22710	11721	34431
5	BENGALURU URBAN									
6	BIDAR	0	4	4	0	4	4	984	496	1480
7	CHAMARAJANAGARA	1	1	2	1	1	2	119	81	200
8	CHIKKABALLAPURA	0	3	3	0	3	3	488	338	826
9	CHIKKAMAGALURU	0	1	1	0	1	1	319	308	627
10	CHITRADURGA	0	1	1	0	1	1	148	146	294
11	DAKSHINA KANNADA	0	19	19	0	19	19	4799	2469	7268
12	DAVANAGERE	1	3	4	1	3	4	1066	912	1978
13	DHARWAD	0	4	4	0	4	4	741	554	1295
14	GADAG	0	3	3	0	3	3	481	375	856
15	HASSAN	1	4	5	1	4	5	854	690	1544
16	HAVERI	1	1	2	1	1	2	400	313	713
17	KALABURAGI	0	6	6	0	6	6	1222	934	2156
18	KODAGU	1	1	2	1	1	2	231	185	416
19	KOLAR	0	3	3	0	3	3	307	307	614
20	KOPPAL	0	0	0	0	0	0	0	0	0
21	MANDYA	1	5	6	1	5	6	1048	909	1957
22	MYSURU	0	14	14	0	15	15	2083	1744	3827
23	RAICHUR	1	2	3	1	2	3	257	243	500
24	RAMANAGARA	1	2	3	1	2	3	429	266	695
25	SHIVAMOGGA	0	2	2	0	2	2	613	563	1176
26	TUMAKURU	0	8	8	0	8	8	1295	942	2237
27	UDUPI	0	2	2	0	2	2	286	197	483
28	UTTARA KANNADA	1	3	4	1	3	4	498	257	755
29	VIJAYAPURA	0	3	3	0	3	3	630	429	1059
30	YADAGIR	0	1	1	0	1	1	170	60	230
KARNATAKA		**12**	**204**	**216**	**12**	**204**	**216**	**45815**	**27965**	**73780**

Source: Vishveshwaraiah Technological University, Belgaum.

3. Education Profile

District		Professional degree colleges (contd.)																	
		No of Medical colleges						No of Dental colleges						No of Indian System of Medicine					
		2015-16			2016-17			2015-16			2016-17			2015-16			2016-17		
		Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total
1		207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224
1	BAGALKOTE	0	1	1	0	1	1	0	1	1	0	1	1	0	5	5	0	6	6
2	BALLARI	1	0	1	1	0	1	0	0	0	1	0	1	1	1	2	1	1	2
3	BELAGAVI	1	1	2	1	1	2	0	1	1	0	1	1	0	11	11	0	10	10
4	BENGALURU RURAL	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
5	BENGALURU URBAN	2	7	9	2	10	12	1	15	16	1	15	16	3	7	10	3	9	12
6	BIDAR	1	0	1	1	0	1	0	2	2	0	2	2	0	1	1	0	2	2
7	CHAMARAJANAGAR	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	CHIKKABALLAPURA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	CHIKKAMAGALURU	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
10	CHITRADURGA	0	1	1	0	1	1	0	1	1	0	1	1	0	2	2	0	3	3
11	DAKSHINA KANNADA	0	6	6	0	7	7	0	3	3	0	3	3	0	6	6	0	7	7
12	DAVANAGERE	0	2	2	0	2	2	0	2	2	0	2	2	0	2	2	0	2	2
13	DHARWAD	1	1	2	1	1	2	0	1	1	0	1	1	0	4	4	0	2	2
14	GADAG	1	0	1	1	0	1	0	0	0	0	0	0	0	3	3	0	4	4
15	HASSAN	1	0	1	1	0	1	0	1	1	0	1	1	0	1	1	0	1	1
16	HAVERI	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
17	KALABURAGI	2	2	4	2	2	4	0	2	2	0	2	2	0	3	3	0	3	3
18	KODAGU	0	0	0	1	0	1	0	1	1	0	1	1	0	0	0	0	0	0
19	KOLAR	0	0	0	0	1	1	0	1	1	0	1	1	0	0	0	0	0	0
20	KOPPAL	1	0	1	1	0	1	0	0	0	0	0	0	0	1	1	0	1	1
21	MANDYA	1	1	2	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0
22	MYSURU	1	1	2	1	0	1	0	1	1	0	1	1	2	1	3	2	1	3
23	RAICHUR	1	1	2	1	1	2	0	2	2	0	2	2	0	1	1	0	1	1
24	RAMANAGARA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	SHIVAMOGGA	1	1	2	1	1	2	0	2	2	0	2	2	0	2	2	0	2	2
26	TUMAKURU	0	1	1	0	1	1	0	0	0	0	0	0	0	2	2	0	2	2
27	UDUPI	0	1	1	0	1	1	0	0	0	0	0	0	0	2	2	0	2	2
28	UTTARA KANNADA	0	0	0	1	0	1	0	0	0	0	0	0	0	1	1	0	2	2
29	VIJAYAPURA	0	1	1	0	1	1	0	1	1	0	1	1	0	3	3	0	4	4
30	YADGIR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
KARNATAKA		**15**	**28**	**43**	**18**	**32**	**50**	**1**	**37**	**38**	**2**	**37**	**39**	**6**	**62**	**68**	**6**	**69**	**75**

Source: Department of Medical Education, Karnataka.

3. Education Profile

District		Professional degree colleges (contd.)																	
		Enrolment of Students in Medical colleges						Enrolment of Students in Dental colleges						Enrolment of Students in Indian System of Medicine					
		2015-16			2016-17			2015-16			2016-17			2015-16			2016-17		
		Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total
1		225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242
1	BAGALKOTE	28	18	46	36	26	62	0	7	7	3	17	20	8	31	39	7	45	52
2	BALLARI	156	34	190	119	46	165	0	27	27	15	44	59	13	35	48	18	48	66
3	BELAGAVI	61	38	99	101	48	149	4	23	27	0	32	32	7	100	107	14	82	96
4	BENGALURU RURAL	12	8	20	12	24	36	0	2	2	4	10	14	3	7	10	6	4	10
5	BENGALURU URBAN	326	460	786	365	485	850	34	273	307	34	259	293	78	87	165	71	104	175
6	BIDAR	194	22	216	195	38	233	1	46	47	14	100	114	18	58	76	36	84	120
7	CHAMARAJANAGARA	12	8	20	15	5	20	0	9	9	0	4	4	8	5	13	3	10	13
8	CHIKKABALLAPURA	26	9	35	25	17	42	1	14	15	0	23	23	5	5	10	4	11	15
9	CHIKKAMAGALURU	24	16	40	45	24	69	0	10	10	0	11	11	5	20	25	1	20	21
10	CHITRADURGA	37	14	51	49	20	69	2	12	14	0	13	13	12	25	37	11	28	39
11	DAKSHINA KANNADA	26	65	91	36	80	116	4	50	54	2	55	57	9	55	64	10	60	70
12	DAVANAGERE	40	59	99	68	67	135	0	14	14	2	26	28	7	44	51	6	30	36
13	DHARWAD	49	21	70	38	39	77	0	25	25	4	24	28	7	21	28	5	41	46
14	GADAG	17	9	26	23	8	31	0	2	2	0	11	11	1	24	25	2	22	24
15	HASSAN	40	27	67	67	24	91	2	12	14	2	21	23	4	12	16	12	22	34
16	HAVERI	15	9	24	27	24	51	0	10	10	0	11	11	8	36	44	5	41	46
17	KALABURAGI	131	74	205	180	64	244	1	45	46	5	79	84	15	69	84	30	91	121
18	KODAGU	7	2	9	5	7	12	0	7	7	1	8	9	2	1	3	2	9	11
19	KOLAR	39	15	54	49	25	74	3	12	15	3	30	33	8	9	17	10	11	21
20	KOPPAL	40	12	52	62	19	81	0	10	10	6	14	20	11	12	23	11	33	44
21	MANDYA	26	8	34	42	14	56	1	7	8	0	15	15	12	21	33	16	19	35
22	MYSURU	71	39	110	92	44	136	1	40	41	0	21	21	22	34	56	19	26	45
23	RAICHUR	105	21	126	100	32	132	0	15	15	2	41	43	9	31	40	11	42	53
24	RAMANAGARA	8	5	13	6	12	18	0	3	3	0	6	6	2	7	9	3	7	10
25	SHIVAMOGGA	49	26	75	36	29	65	1	25	26	1	21	22	7	28	35	4	55	59
26	TUMAKURU	49	19	68	74	39	113	0	17	17	1	20	21	7	19	26	10	19	29
27	UDUPI	14	51	65	26	54	80	2	28	30	0	21	21	2	26	28	2	38	40
28	UTTARA KANNADA	23	8	31	22	14	36	1	14	15	0	11	11	2	17	19	3	13	16
29	VIJAYAPURA	57	32	89	78	54	132	0	21	21	2	46	48	8	54	62	15	52	67
30	YADGIR	39	10	49	44	6	50	0	8	8	1	19	20	12	41	53	19	48	67
KARNATAKA		1721	1139	2860	2037	1388	3425	58	788	846	102	1013	1115	312	934	1246	366	1115	1481

Source: Department of Medical Education, Karnataka.

4. Health profile

District		No.of Health/Medical institutions (Government):2016-17													
		No.of sub centres	No.of Urban PHC's		No.of Primary Health Centres (PHCs)		No.of Community Health Units (CHUs)		No.of Taluk Hospitals		Autonomous & Teaching Hospitals		Other Hosapitals Under HFW		District Hospitals	
		No's	No's	Beds	No's	Beds	No's	Beds	No's	Beds	No's	Beds	No's	Beds	No's	Beds
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	BAGALKOTE	234	1	6	49	326	8	280	5	500	-	-	-	-	1	300
2	BALLARI	272	1	6	73	348	11	350	6	600	2	1027	1	288	1	300
3	BELAGAVI	549	2	12	148	884	16	500	9	900	1	740	-	-	-	-
4	BENGALURU RURAL	167	-	-	48	328	2	60	4	400	-	-	-	-	-	-
5	BENGALURU URBAN	195	2	12	96	556	5	150	3	300	13	6154	6	1475	-	-
6	BIDAR	280	1	6	58	352	8	240	4	400	1	500	-	-	-	-
7	CHAMARAJANAGARA	245	-	-	64	460	3	90	3	350	1	300	-	-	1	250
8	CHIKKABALLAPURA	199	-	-	60	411	2	60	5	510	-	-	-	-	1	100
9	CHIKKAMAGALUR	375	2	12	90	668	5	150	6	600	-	-	-	-	1	400
10	CHITRADURGA	283	-	-	82	480	11	330	5	500	-	-	-	-	1	450
11	DAKSHINA KANNADA	440	-	-	72	402	8	240	4	400	-	-	1	100	1	965
12	DAVANAGERE	301	-	-	101	668	6	210	5	500	-	-	-	-	1	1030
13	DHARWAD	194	1	6	45	198	0	0	3	300	2	1412	-	-	1	250
14	GADAG	168	-	-	39	238	2	60	4	400	1	300	-	-	1	304
15	HASSAN	456	1	6	136	946	15	450	7	950	1	750	-	-	-	-
16	HAVERI	303	-	-	69	412	5	150	6	600	-	-	-	-	1	250
17	KALABURAGI	347	2	12	94	590	16	480	6	600	1	450	-	-	1	750
18	KODAGU	206	1	6	29	216	7	330	2	360	1	410	-	-	1	410
19	KOLAR	230	3	18	69	400	2	60	4	400	-	-	2	305	1	400
20	KOPPAL	185	1	6	49	286	9	270	3	300	1	300	-	-	1	250
21	MANDYA	385	2	12	115	940	10	300	6	600	1	650	-	-	-	-
22	MYSURU	438	2	12	147	1042	10	300	6	600	1	1940	1	50	-	-
23	RAICHUR	223	1	6	52	316	6	180	4	400	2	870	-	-	-	-
24	RAMANAGARA	275	-	-	63	432	4	120	3	300	-	-	-	-	1	100
25	SHIVAMOGGA	305	1	6	110	700	7	210	6	650	1	950	-	-	-	-
26	TUMAKURU	487	1	6	147	900	4	120	9	900	-	-	-	-	1	400
27	UDUPI	301	-	-	62	386	6	180	2	200	-	-	-	-	1	350
28	UTTARA KANNADA	343	2	12	83	506	3	110	10	1000	1	300	-	-	1	400
29	VIJAYAPURA	309	-	-	67	360	9	270	4	400	-	-	-	-	1	400
30	YADGIR	176	-	-	42	296	6	180	2	200	-	-	-	-	1	100
KARNATAKA		**8871**	**27**	**162**	**2359**	**15047**	**206**	**6430**	**146**	**15120**	**31**	**17053**	**11**	**2218**	**21**	**8159**

Source: Directorate of Health and Family welfare services.

4. Health profile

District		Population served as per HMIS 2016-17		Govt. Doctors* (As on 31.03.2017)	Projected Population 2017	Bed Strength	In patient	Headcount @ Midnight	"Bed Occupancy Rate
		sub-centre's	PHC's						
1		17	18	19	20	21	22	23	24
1	BAGALKOTE	1637288	1483296	103	2059019	1442	151223	174774	33.21
2	BALLARI	1908770	2339845	164	2778144	3222	121379	152882	13.00
3	BELAGAVI	3835606	4221597	248	5177358	3078	408093	586231	52.18
4	BENGALURU RURAL	1144799	863590	97	1133138	794	100798	251687	86.85
5	BENGALURU URBAN	3935704	12443559	314	12520771	9336	357887	1044148	30.64
6	BIDAR	1355380	1572217	133	1844588	1539	111087	77063	13.72
7	CHAMARAJANAGARA	1016321	864784	108	1056569	1456	77474	163529	30.77
8	CHIKKABALLAPURA	1149895	1251230	126	1326235	1097	67729	118025	29.48
9	CHIKKAMAGALURU	1031346	979761	149	1136187	1876	105222	179140	26.16
10	CHITRADURGA	1572425	1671379	161	1754546	1802	168130	191695	29.14
11	DAKSHINA KANNADA	1729531	2138266	140	2219654	2148	236663	480367	61.27
12	DAVANAGERE	1632705	1916744	187	2048433	2404	149188	253469	28.89
13	DHARWAD	943531	1935556	87	2021167	2205	199186	472467	58.70
14	GADAG	1037407	1162630	67	1126978	1338	107239	62760	12.85
15	HASSAN	1692163	1523266	240	1810382	3203	140707	322521	27.59
16	HAVERI	1470593	1599425	150	1706259	1434	268936	144600	27.63
17	KALABURAGI	2101384	2841139	228	2856433	2985	155305	168384	15.45
18	KODAGU	497975	509293	76	558155	1716	47802	139845	22.33
19	KOLAR	1185219	1437995	132	1642479	1577	242032	183148	31.82
20	KOPPAL	1257011	1126390	81	1530702	1438	111860	188943	36.00
21	MANDYA	1543272	1491183	206	1831709	2543	229918	660410	71.15
22	MYSURU	2035666	3211995	233	3255076	4231	338260	896805	58.07
23	RAICHUR	1590892	1707904	84	2110858	1817	115463	209387	31.57
24	RAMANAGARA	1056606	782874	115	1077004	982	66615	46044	12.85
25	SHIVAMOGGA	1808806	1676703	181	1824513	2640	212575	434167	45.06
26	TUMAKURU	2366531	2719518	294	2738188	2366	158630	159936	18.52
27	UDUPI	1162754	1045652	106	1219295	1140	149308	171008	41.10
28	UTTARA KANNADA	1555140	1460442	197	1491200	2352	90621	152878	17.81
29	VIJAYAPURA	2050680	1882131	122	2459249	1526	198125	192622	34.58
30	YADGIR	1010815	1106713	88	1344430	800	104809	62615	21.44
KARNATAKA		**48316215**	**60967077**	**4617**	**67658719**	**66487**	**4992264**	**8341550**	**34.37**

Note: As per IPHS Norms from Health and Planning Section, Health Department.1. Sub Centers Population served 3000-5000, Hill area below 3000 .2.PHC Population served 20000-30000, Hill area below 20000 ,
***Source** : HMIS,Directorate of Health and Family welfare services.*

4. Health profile

District		Health staffs			
		ANM	Health Worker (M)	Health Assistant	
				Junior	Senior
1		25	26	27	28
1	BAGALKOTE	220	37	186	34
2	BALLARI	243	31	224	19
3	BELAGAVI	499	62	410	89
4	BENGALURU RURAL	163	22	148	15
5	BENGALURU URBAN	298	32	253	45
6	BIDAR	253	27	214	39
7	CHAMARAJANAGARA	141	16	129	12
8	CHIKKABALLAPURA	108	15	99	9
9	CHIKKAMAGALURU	269	5	236	33
10	CHITRADURGA	290	20	260	30
11	DAKSHINA KANNADA	404	5	342	62
12	DAVANAGERE	269	36	239	30
13	DHARWAD	211	22	190	21
14	GADAG	167	16	153	14
15	HASSAN	362	39	314	48
16	HAVERI	224	21	194	30
17	KALABURAGI	281	61	225	56
18	KODAGU	164	4	145	19
19	KOLAR	181	8	167	14
20	KOPPAL	150	21	130	20
21	MANDYA	306	48	269	37
22	MYSURU	416	56	357	59
23	RAICHUR	157	25	134	23
24	RAMANAGARA	149	28	135	14
25	SHIVAMOGGA	280	27	231	49
26	TUMAKURU	408	48	356	52
27	UDUPI	254	13	220	34
28	UTTARA KANNADA	363	17	302	61
29	VIJAYAPURA	253	37	216	37
30	YADGIR	91	29	80	11
KARNATAKA		**7574**	**828**	**6558**	**1016**

Source: Directorate of Health and Family welfare services.

4. Health profile

District		Total antenatal cases (ANC) Registered		Total no.of Institutional Deliveries		Percentage of Safe Deliveries	
		2015-16	2016-17	2015-16	2016-17	2015-16	2016-17
1		29	30	31	32	33	34
1	BAGALKOTE	43112	41959	16634	16947	37	40
2	BALLARI	62921	59533	33123	34272	77	74
3	BELAGAVI	100024	100119	40983	40392	55	52
4	BENGALURU RURAL	16230	15904	4622	4931	52	57
5	BENGALURU URBAN	244959	168112	58268	55880	57	50
6	BIDAR	33604	35030	25056	25081	78	77
7	CHAMARAJANAGARA	14071	14259	8229	7884	80	84
8	CHIKKABALLAPURA	19323	19664	12072	12076	78	78
9	CHIKKAMAGALURU	15383	14684	9256	9321	67	69
10	CHITRADURGA	28992	28467	16376	16050	70	73
11	DAKSHINA KANNADA	30004	31276	8686	7937	32	29
12	DAVANAGERE	35928	34460	22063	22895	68	72
13	DHARWAD	36856	36275	21685	22349	58	60
14	GADAG	21970	21489	12360	13080	71	73
15	HASSAN	24310	23710	17721	15590	72	71
16	HAVERI	35841	31828	18597	17472	79	75
17	KALABURAGI	65862	64017	33404	33331	69	68
18	KODAGU	8339	8231	5720	6188	84	87
19	KOLAR	24094	23946	13562	14427	62	68
20	KOPPAL	34162	32135	22469	22387	89	87
21	MANDYA	24525	23852	11274	10843	57	59
22	MYSURU	39670	40529	28297	25734	73	62
23	RAICHUR	50645	51724	26324	26674	73	68
24	RAMANAGARA	14390	13840	4503	4043	46	47
25	SHIVAMOGGA	27271	25541	19997	19065	70	70
26	TUMAKURU	38126	36675	18366	17441	55	54
27	UDUPI	15868	15999	4526	3850	33	29
28	UTTARA KANNADA	22311	21327	12036	11755	52	54
29	VIJAYAPURA	55333	55967	23592	25152	49	53
30	YADGIR	35960	37122	18555	19117	83	89
KARNATAKA		**1220084**	**1127674**	**568356**	**562164**	**63**	**62**

Source: HMIS,Directorate of Health and Family Welfare Services.

4. Health profile

District		Institutions		Trained SBA		Untrained SBA	
		2015-16	2016-17	2015-16	2016-17	2015-16	2016-17
1		35	36	37	38	39	40
1	BAGALKOTE	16634	16947	89	41	21	20
2	BALLARI	33123	34272	231	119	340	255
3	BELAGAVI	40983	40392	205	129	61	43
4	BENGALURU RURAL	4622	4931	5	2	5	4
5	BENGALURU URBAN	58268	55880	0	2	1	0
6	BIDAR	25056	25081	98	62	109	71
7	CHAMARAJANAGARA	8229	7884	3	4	38	14
8	CHIKKABALLAPURA	12072	12076	46	23	96	42
9	CHIKKAMAGALURU	9256	9321	5	3	29	19
10	CHITRADURGA	16376	16050	34	35	79	55
11	DAKSHINA KANNADA	8686	7937	8	6	5	3
12	DAVANAGERE	22063	22895	23	16	12	6
13	DHARWAD	21685	22349	15	8	8	2
14	GADAG	12360	13080	143	53	22	16
15	HASSAN	17721	15590	6	9	48	48
16	HAVERI	18597	17472	38	21	29	17
17	KALABURAGI	33404	33331	401	286	458	276
18	KODAGU	5720	6188	18	17	53	29
19	KOLAR	13562	14427	35	26	48	28
20	KOPPAL	22469	22387	217	94	1059	516
21	MANDYA	11274	10843	2	3	4	9
22	MYSURU	28297	25734	3	4	2	0
23	RAICHUR	26324	26674	247	173	477	396
24	RAMANAGARA	4503	4043	39	26	0	0
25	SHIVAMOGGA	19997	19065	23	8	18	12
26	TUMAKURU	18366	17441	32	21	81	70
27	UDUPI	4526	3850	3	7	15	8
28	UTTARA KANNADA	12036	11755	40	23	28	14
29	VIJAYAPURA	23592	25152	86	45	77	34
30	YADGIR	18555	19117	233	164	505	330
KARNATAKA		**568356**	**562164**	**2328**	**1430**	**3728**	**2337**

Source: HMIS,Directorate of Health and Family Welfare Services.

4. Health profile

District		Total Fertility Rate		Infant Mortality Rate (IMR)	Child Mortality Rate (CMR)	Maternal Mortality Rate (MMR)	Crude birth Rate		Crude death Rate	
		2001	2011	2014	2014	2014	2015	2016	2015	2016
1		41	42	43	44	45	46	47	48	49
1	BAGALKOTE	3.1	2.7	43	49	163	21.13	21.76	5.51	5.72
2	BALLARI	3.1	2.7	55	63	227	20.92	20.3	6.25	5.87
3	BELAGAVI	2.7	2.4	37	42	155	17.31	18.33	6.16	6.62
4	BENGALURU RURAL	2.2	1.9	27	31	120	10.49	11.61	5.69	5.70
5	BENGALURU URBAN	1.9	1.7	15	17	73	14.02	13.61	5.35	5.27
6	BIDAR	3.4	2.7	31	35	134	21.19	24.7	5.74	5.27
7	CHAMARAJANAGARA	2.0	1.6	34	39	142	11.46	12.23	7.61	7.49
8	CHIKKABALLAPURA	2.5	1.8	34	39	137	11.03	13.21	5.21	5.34
9	CHIKKAMAGALURU	1.9	1.4	22	25	94	13.95	14.28	5.80	6.37
10	CHITRADURGA	2.3	2.0	42	53	170	14.69	13.88	6.22	6.1
11	DAKSHINA KANNADA	1.7	1.5	19	22	89	15.29	16.08	6.06	7.02
12	DAVANAGERE	2.4	1.9	38	44	163	19.57	19.81	7.47	7.27
13	DHARWAD	2.5	2.1	35	40	157	20.97	20.27	7.29	7.98
14	GADAG	2.6	2.3	50	57	215	15.06	15.56	7.74	8.21
15	HASSAN	1.9	1.5	20	23	98	15.06	13.31	6.44	7.91
16	HAVERI	2.6	2.2	35	41	163	15.33	15.32	5.61	5.84
17	KALABURAGI	3.5	3.0	49	56	182	23.61	23.62	5.46	4.88
18	KODAGU	2.0	1.5	29	33	101	14.61	16.26	6.21	6.15
19	KOLAR	2.5	1.9	34	39	140	15.05	14.37	3.56	4.03
20	KOPPAL	3.4	2.9	58	66	236	20.66	19.1	5.43	5.52
21	MANDYA	1.9	1.5	26	30	111	11.95	11.32	6.00	6.21
22	MYSURU	2.1	1.7	39	44	155	13.38	15.43	6.59	9.15
23	RAICHUR	3.3	2.9	67	77	244	17.71	13.72	5.42	4.78
24	RAMANAGARA	2.2	1.6	27	31	114	11.19	10.13	6.63	7.04
25	SHIVAMOGGA	2.0	1.7	24	27	106	14.50	15.67	6.39	6.48
26	TUMAKURU	2.2	1.7	34	39	124	13.01	13.19	8.74	8.58
27	UDUPI	1.5	1.2	11	13	50	16.26	15.54	8.43	8.03
28	UTTARA KANNADA	2.2	1.7	25	29	99	18.07	15.65	6.7	6.63
29	VIJAYAPURA	3.0	3.0	34	39	135	21.89	22.47	5.53	5.48
30	YADGIR	3.5	3.5	48	56	186	16.21	20.17	5.79	5.23
KARNATAKA		**2.4**	**2.0**	**35**	**40**	**144**	**16.44**	**16.42**	**6.15**	**6.28**

Source: Column No.42 & 43 Men and Women in Karnataka 2015-16. Col no.44 to 46 Human Development Performance of Districts, taluks and Urban Local Bodies in Karnataka,2014-A Snapshot.Col no.47 to 50 Office of the chief registrar of Births & Deaths and Directorate of Economics and Statistics.

4. Health profile

District		Immunisation (in lakh)							
		DPT - 2015-16			DPT 2016-17			Polio	
		DPT 1	DPT2	DPT3	DPT 1	DPT2	DPT3	2015-16	2016-17
1		50	51	52	53	54	55	56	57
1	BAGALKOTE	676	558	533	155	174	265	43263	41809
2	BALLARI	111	69	94	153	89	69	63071	58405
3	BELAGAVI	752	668	678	911	858	969	98632	92479
4	BENGALURU RURAL	16	9	6	8	14	1	13773	13661
5	BENGALURU URBAN	1865	1471	1334	1179	895	723	117292	125787
6	BIDAR	153	121	102	98	45	21	35471	34132
7	CHAMARAJANAGARA	2	3	3	585	341	480	13752	13562
8	CHIKKABALLAPURA	71	73	91	0	0	0	20860	20320
9	CHIKKAMAGALURU	5	5	2	1	0	0	16386	15145
10	CHITRADURGA	4	3	13	75	20	39	30050	28250
11	DAKSHINA KANNADA	6	16	7	0	0	0	30815	30283
12	DAVANAGERE	519	423	396	851	468	497	36945	35189
13	DHARWAD	25	6	4	0	0	14	38766	36879
14	GADAG	14	8	17	0	0	0	21251	19641
15	HASSAN	1	1	18	0	0	4	25407	25178
16	HAVERI	78	39	45	77	60	73	32951	31397
17	KALABURAGI	871	767	797	334	239	208	67498	64396
18	KODAGU	0	0	0	0	0	0	7745	7239
19	KOLAR	36	18	17	24	3	2	25505	23410
20	KOPPAL	193	163	119	350	320	345	31438	29320
21	MANDYA	1	2	2	1	2	0	24953	23542
22	MYSURU	0	0	0	13	12	14	43395	42435
23	RAICHUR	218	158	203	149	141	170	47454	44439
24	RAMANAGARA	0	0	0	0	0	0	14408	14319
25	SHIVAMOGGA	3	0	0	8	6	4	29131	27622
26	TUMAKURU	0	0	0	0	0	0	43824	40664
27	UDUPI	152	153	160	82	62	72	14470	15081
28	UTTARA KANNADA	2	1	2	2	1	3	22733	21819
29	VIJAYAPURA	415	337	374	445	336	275	55501	50786
30	YADGIR	1284	1022	1024	1406	1253	1060	30116	29219
KARNATAKA		**7473**	**6094**	**6041**	**6907**	**5339**	**5308**	**1096856**	**1056408**

Source: HMIS, Directorate of Health and Family Welfare Services.

4. Health profile

District		Immunisation (in lakh)							
		BCG		Measles		Fully immunisation		Percentage of Fully Immunisation	
		2015-16	2016-17	2015-16	2016-17	2015-16	2016-17	2015-16	2016-17
1		58	59	60	61	62	63	64	65
1	BAGALKOTE	45423	44212	41356	36304	41466	39392	92	91
2	BALLARI	62116	59392	61769	49769	58435	48077	136	105
3	BELAGAVI	105207	99826	96288	81269	90326	78466	122	101
4	BENGALURU RURAL	9378	9140	14298	12944	14477	12814	163	148
5	BENGALURU URBAN	122049	132521	123962	121735	131978	123531	128	112
6	BIDAR	34693	34295	32513	29522	33856	29505	106	90
7	CHAMARAJANAGARA	10345	9962	13692	12259	12726	11008	125	113
8	CHIKKABALLAPURA	16171	15374	21090	17523	23323	17628	150	114
9	CHIKKAMAGALURU	13722	13623	15231	12943	14407	12599	104	93
10	CHITRADURGA	25175	22756	29184	24264	28666	24571	123	112
11	DAKSHINA KANNADA	28632	27670	30561	27238	29665	26949	109	99
12	DAVANAGERE	37049	35561	35614	32275	43264	31676	133	99
13	DHARWAD	36851	38282	37640	32994	37344	34742	102	95
14	GADAG	17839	16930	20877	16607	20809	16904	121	95
15	HASSAN	24315	21152	24284	21794	24045	21552	98	98
16	HAVERI	29174	28466	30692	26940	30517	27213	128	118
17	KALABURAGI	70202	69815	61591	58412	58735	57283	121	118
18	KODAGU	7100	7499	7311	6295	7310	6375	107	90
19	KOLAR	22158	20720	26074	21090	24813	21167	114	101
20	KOPPAL	35396	34843	30291	25851	29848	25916	119	102
21	MANDYA	20609	18897	24502	19973	24484	21179	125	116
22	MYSURU	42042	42701	42582	38328	45255	37595	119	92
23	RAICHUR	53002	49312	47023	39137	45484	39671	127	101
24	RAMANAGARA	14124	11971	14291	12188	14287	12247	146	143
25	SHIVAMOGGA	27964	25612	28020	23110	28085	23110	98	85
26	TUMAKURU	33455	33622	41538	34954	39676	33514	119	104
27	UDUPI	14883	14478	15919	13577	14495	12291	100	86
28	UTTARA KANNADA	22671	21863	21907	19505	21823	19292	94	89
29	VIJAYAPURA	73920	62205	51938	42508	52769	41654	111	87
30	YADGIR	33891	35138	27942	25289	27544	25262	119	106
KARNATAKA		**1089556**	**1057838**	**1069980**	**936597**	**1069912**	**933183**	**118**	**102**

Source: HMIS,Directorate of Health and Family Welfare Services.

4. Health profile

District		Prevalence Rate of Leprocy		AIDS Cases					
				HIV + ve		AIDS cases		Deaths due to AIDS	
		2014-15	2015-16	2014-15	2015-16	2014-15	2015-16	2014-15	2015-16
1		66	67	68	69	70	71	72	73
1	BAGALKOTE	55	45	2306	1959	2306	1959	904	1033
2	BALLARI	333	295	1199	973	1199	973	184	432
3	BELAGAVI	214	216	2965	2411	2965	2411	633	151
4	BENGALURU RURAL	21	29	252	280	252	280	6	15
5	BENGALURU URBAN	402	427	4056	521	4056	521	261	6
6	BIDAR	141	146	540	472	540	472	178	273
7	CHAMARAJANAGARA	133	114	344	282	344	282	79	44
8	CHIKKABALLAPURA	91	86	420	226	420	226	29	16
9	CHIKKAMAGALURU	18	23	346	282	346	282	18	116
10	CHITRADURGA	69	62	609	529	609	529	11	227
11	DAKSHINA KANNADA	45	64	89	622	89	622	82	125
12	DAVANAGERE	161	119	758	595	758	595	209	232
13	DHARWAD	216	148	1070	870	1070	870	34	92
14	GADAG	89	86	567	492	567	492	325	46
15	HASSAN	20	13	613	505	613	505	30	27
16	HAVERI	112	101	518	372	518	372	19	31
17	KALABURAGI	102	134	847	682	847	682	136	203
18	KODAGU	5	4	159	163	159	163	50	54
19	KOLAR	24	31	636	476	636	476	111	114
20	KOPPAL	140	116	872	695	872	695	83	45
21	MANDYA	43	38	629	555	629	555	43	94
22	MYSURU	93	80	1401	910	1401	910	63	342
23	RAICHUR	186	192	1212	698	1212	698	520	296
24	RAMANAGARA	46	23	183	165	183	165	14	212
25	SHIVAMOGGA	53	41	475	411	475	411	162	126
26	TUMAKURU	102	106	1016	909	1016	909	40	31
27	UDUPI	31	43	475	401	475	401	88	142
28	UTTARA KANNADA	130	146	265	224	265	224	66	77
29	VIJAYAPURA	115	87	1517	1221	1517	1221	351	829
30	YADGIR	49	50	454	419	454	419	87	161
KARNATAKA		**3239**	**3065**	**26793**	**19320**	**26793**	**19320**	**4816**	**5592**

Source: Directorate of Health and Family welfare Services.

4. Health profile

District		Eligible couples protected (%)			No.of sterilisation cases			
		Permanent method	Temporary method	all method	Total		Females	
		2015-16	2015-16	2015-16	2015-16	2016-17	2015-16	2016-17
1		74	75	76	77	78	79	80
1	BAGALKOTE	54.3	0.4	54.9	10866	10319	10817	10315
2	BALLARI	49.6	1.1	50.8	17590	17153	17550	17134
3	BELAGAVI	56.8	1.8	60	27100	25051	27044	24972
4	BENGALURU RURAL	56.1	1.8	58.2	3990	4158	3964	4105
5	BENGALURU URBAN	38.9	5.3	45.3	52671	46790	52425	46539
6	BIDAR	57	2.1	59.9	7456	6630	7393	6579
7	CHAMARAJANAGARA	49.3	1.6	51.7	4633	4567	4632	4565
8	CHIKKABALLAPURA	64.1	0.6	64.7	6753	6859	6750	6824
9	CHIKKAMAGALURU	42.5	3.5	45.9	4679	4713	4676	4707
10	CHITRADURGA	61.1	2.9	64.1	9058	6723	9039	6708
11	DAKSHINA KANNADA	18	2.6	21	3554	3151	3513	3128
12	DAVANAGERE	55.1	2.1	57.7	15307	14989	15289	14962
13	DHARWAD	55.4	3.4	59.3	9578	10023	9475	9963
14	GADAG	57.9	1.6	59.6	4638	4579	4632	4576
15	HASSAN	51.1	5.1	56.7	7636	7784	7563	7748
16	HAVERI	48.4	0.2	48.6	7253	6554	7246	6552
17	KALABURAGI	53.4	0.3	53.7	15899	15575	15898	15560
18	KODAGU	39.2	2.2	41.9	2273	2225	2260	2198
19	KOLAR	60.4	2.3	62.7	6903	6675	6884	6660
20	KOPPAL	44.3	0.1	44.5	10501	9997	10496	9989
21	MANDYA	58.9	0.5	59.4	8235	7645	8217	7623
22	MYSURU	52.3	3	55.6	15784	13142	15754	13122
23	RAICHUR	53.3	1	54.3	10064	10523	10059	10511
24	RAMANAGARA	54.8	1.1	55.9	3724	3700	3724	3700
25	SHIVAMOGGA	33	3.4	36.8	9381	8950	9370	8936
26	TUMAKURU	59.8	2.6	62.7	11393	10926	11359	10898
27	UDUPI	27	4.5	32.4	4533	4474	4511	4447
28	UTTARA KANNADA	25.6	4.7	31.3	6255	6055	6235	6023
29	VIJAYAPURA	56.8	1.4	58.7	12450	9778	12399	9773
30	YADGIR	47	0	47	7804	6734	7748	6703
KARNATAKA		**49.38**	**2.1**	**51.84**	**317961**	**296442**	**316922**	**295520**

Source: Demography wing, Directorate of health and Family welfare services.

5. Economic Growth

District		District income (GDDP) at Current prices (in Rs.lakh)			District income (NDDP) at Current prices (in Rs.lakh)			Per capita district income (GDDP) at Current prices (in Rs)		
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
1		2	3	4	5	6	7	8	9	10
1	BAGALKOTE	1844985	2121399	2400975	1686529	1938212	2183007	95973	109164	122222
2	BALLARI	2392996	2816581	3178061	2170516	2547010	2856766	95913	111675	124653
3	BELAGAVI	3174121	3621128	4166794	2907591	3316213	3795695	65281	73673	83863
4	BENGALURU RURAL	1146785	1321104	1456454	1033872	1189382	1301632	113763	129646	141391
5	BENGALURU URBAN	23202779	27712360	31365570	21226487	25366571	28044249	237058	280085	313598
6	BIDAR	1117252	1254340	1340644	1026156	1153192	1224373	64479	71612	75716
7	CHAMARAJANAGARA	865035	992195	1121023	796817	913667	1028408	83302	94520	105644
8	CHIKKABALLAPURA	1015669	1187352	1278603	929658	1086719	1163826	79549	91994	97999
9	CHIKKAMAGALURU	1754098	2002171	2072575	1602827	1827253	1883673	151526	171094	175206
10	CHITRADURGA	1095654	1344263	1541526	1003352	1229984	1403026	64903	78773	89362
11	DAKSHINA KANNADA	4207887	4800531	5277737	3802603	4325958	4728324	197948	223397	242963
12	DAVANAGERE	1424494	1683250	1846858	1305998	1543965	1685096	71976	84136	91321
13	DHARWAD	1723442	2062420	2296256	1587613	1897135	2093592	91724	108584	119595
14	GADAG	762530	933678	1048589	700053	856319	956984	70411	85287	94754
15	HASSAN	1694824	1959302	2155022	1563731	1807652	1976953	93786	107255	116700
16	HAVERI	1106088	1338682	1433414	1016959	1231056	1311240	68055	81480	86308
17	KALABURAGI	1467848	1820666	2053702	1342511	1662461	1864922	56225	68989	76982
18	KODAGU	671005	716919	641801	615377	659712	589082	118951	125723	111340
19	KOLAR	1328772	1506460	1653387	1210205	1371760	1496015	85017	95349	103523
20	KOPPAL	941871	1074617	1158559	864473	986839	1057590	66613	75184	80185
21	MANDYA	1899284	2164659	2412802	1752140	1995524	2214807	103392	116571	128536
22	MYSURU	2401685	2856203	3215838	2193984	2611266	2911698	78667	92548	103080
23	RAICHUR	1274075	1499031	1629829	1167826	1374612	1487691	64933	75576	81286
24	RAMANAGARA	1125657	1308678	1493212	1022320	1186867	1345608	102208	117547	132680
25	SHIVAMOGGA	1988623	2353317	2638007	1819632	2162598	2410858	111530	130563	144784
26	TUMAKURU	2656802	3102971	3513603	2425554	2818573	3177062	97488	112634	126168
27	UDUPI	1894971	2182809	2435359	1730294	1990150	2204763	158217	180288	198984
28	UTTARA KANNADA	1272700	1449533	1688708	1172412	1335246	1546647	87052	98080	113035
29	VIJAYAPURA	1397315	1629043	1851018	1280054	1491336	1686650	63085	72756	81781
30	YADGIR	692058	850952	898728	634838	779670	820362	57934	70469	73625
KARNATAKA		**69541305**	**81666614**	**91264653**	**63592384**	**74656903**	**82450600**	**111891**	**129986**	**143701**

Note: Worked out at Constant Prices with reference to the base year 2011-12.
Source: Directorate of Economics and Statistics, Karnataka.

5. Economic Growth

District		Per capita District income (NDDP) at Current prices (in Rs)			District income (GDDP) at constant prices (in Rs.lakh)			District income (NDDP) at Conastant prices (in Rs.lakh)		
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
1		11	12	13	14	15	16	17	18	19
1	BAGALKOTE	87730	99737	111126	1676535	1857505	1956941	1528878	1687164	1768648
2	BALLARI	86996	100987	112051	2199188	2436964	2668098	1989152	2189570	2383135
3	BELAGAVI	59799	67469	76394	2869134	3196880	3384137	2623107	2910501	3064357
4	BENGALURU RURAL	102562	116719	126361	1051364	1146107	1189381	945704	1024453	1055162
5	BENGALURU URBAN	216867	256376	280391	21557401	24033180	25943395	19676805	21850940	23028237
6	BIDAR	59222	65837	69149	1019745	1080678	1098377	934654	988086	997731
7	CHAMARAJANAGARA	76733	87039	96916	803734	878437	906800	738682	804567	828050
8	CHIKKABALLAPURA	72812	84197	89202	925670	1015351	1043990	845435	923053	943539
9	CHIKKAMAGALURU	138458	156147	159237	1657882	1698540	1708356	1510436	1542341	1545320
10	CHITRADURGA	59436	72077	81333	1024960	1118506	1227454	935783	1016800	1108636
11	DAKSHINA KANNADA	178882	201312	217670	3922819	4215183	4460345	3535048	3775192	3971483
12	DAVANAGERE	65989	77174	83322	1287528	1387100	1498547	1176994	1264712	1357552
13	DHARWAD	84495	99882	109040	1595771	1789340	1929147	1466780	1637125	1749397
14	GADAG	64642	78221	86476	710882	792906	892364	651027	723098	809446
15	HASSAN	86532	98953	107057	1577917	1670570	1776950	1452458	1534035	1621788
16	HAVERI	62571	74929	78952	1021946	1146415	1188691	936903	1047746	1080363
17	KALABURAGI	51424	62994	69906	1351152	1504322	1666511	1232531	1365198	1502915
18	KODAGU	109090	115691	102194	646848	533944	453423	589919	489047	413764
19	KOLAR	77431	86823	93669	1218752	1357199	1355503	1106799	1226806	1217208
20	KOPPAL	61139	69043	73197	848733	895687	953312	776765	817286	864130
21	MANDYA	95382	107462	117988	1736822	1900145	1999005	1599742	1742537	1826152
22	MYSURU	71864	84611	93331	2216358	2469811	2645015	2019713	2242988	2378142
23	RAICHUR	59518	69303	74197	1166672	1236690	1353772	1066447	1127484	1227342
24	RAMANAGARA	92825	106606	119564	1039807	1144540	1202999	941997	1030841	1075893
25	SHIVAMOGGA	102052	119982	132317	1846653	2008201	2118831	1685568	1835336	1924221
26	TUMAKURU	89002	102311	114083	2474601	2708729	2879840	2253290	2445585	2587680
27	UDUPI	144467	164376	180143	1766318	1908807	2036341	1609140	1730251	1831598
28	UTTARA KANNADA	80192	90347	103526	1186552	1266865	1374128	1090106	1160516	1250449
29	VIJAYAPURA	57791	66606	74519	1289320	1392636	1517268	1177503	1267094	1373000
30	YADGIR	53144	64566	67205	638158	693631	761850	583714	631929	690865
KARNATAKA		**102319**	**118829**	**129823**	**64329222**	**70484869**	**75190767**	**58681081**	**64032281**	**67476203**

Note: Worked out at Constant Prices with reference to the base year 2011-12.
Source: Directorate of Economics and Statistics, Karnataka.

5. Economic Growth

District		Per Capita Distict income (GDDP) Constant prices (in Rs)			Per Capita Distict income (NDDP) at Constant prices (in Rs)		
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
1		20	21	22	23	24	25
1	BAGALKOTE	87210	95584	99618	79529	86819	90033
2	BALLARI	88145	96624	104651	79726	86815	93473
3	BELAGAVI	59008	65042	68111	53948	59215	61675
4	BENGALURU RURAL	104297	112473	115464	93816	100534	102434
5	BENGALURU URBAN	220247	242900	259387	201034	220844	230240
6	BIDAR	58852	61697	62033	53941	56411	56349
7	CHAMARAJANAGARA	77399	83683	85456	71135	76645	78034
8	CHIKKABALLAPURA	72500	78668	80017	66216	71517	72318
9	CHIKKAMAGALURU	143214	145148	144416	130477	131800	130634
10	CHITRADURGA	60716	65544	71155	55433	59584	64267
11	DAKSHINA KANNADA	184537	196157	205334	166296	175682	182829
12	DAVANAGERE	65056	69333	74098	59471	63215	67126
13	DHARWAD	84929	94207	100475	78064	86193	91113
14	GADAG	65642	72428	80637	60115	66052	73144
15	HASSAN	87317	91449	96227	80374	83975	87824
16	HAVERI	62878	69778	71573	57646	63772	65050
17	KALABURAGI	51755	57002	62469	47211	51730	56336
18	KODAGU	114669	93636	78660	104577	85762	71780
19	KOLAR	77978	85901	84871	70815	77648	76212
20	KOPPAL	60026	62665	65980	54936	57180	59807
21	MANDYA	94548	102326	106492	87086	93839	97284
22	MYSURU	72596	80028	84783	66155	72678	76229
23	RAICHUR	59459	62349	67518	54351	56844	61213
24	RAMANAGARA	94413	102804	106893	85532	92591	95599
25	SHIVAMOGGA	103568	111416	116290	94533	101825	105609
26	TUMAKURU	90802	98324	103410	82681	88772	92919
27	UDUPI	147475	157657	166382	134352	142909	149653
28	UTTARA KANNADA	81159	85720	91978	74562	78524	83700
29	VIJAYAPURA	58210	62198	67035	53161	56591	60661
30	YADGIR	53422	57441	62412	48864	52331	56597
KARNATAKA		**103505**	**112189**	**118392**	**94417**	**101918**	**106245**

Note: Worked out at Constant Prices with reference to the base year 2011-12.
Source: Directorate of Economics and Statistics, Karnataka.

5. Economic Growth

District		Percentage share of district income (GDDP) at					
		current prices			constant prices		
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
1		26	27	28	29	30	31
1	BAGALKOTE	2.7	2.6	2.6	2.6	2.6	2.6
2	BALLARI	3.4	3.4	3.5	3.4	3.5	3.5
3	BELAGAVI	4.6	4.4	4.6	4.5	4.5	4.5
4	BENGALURU RURAL	1.6	1.6	1.6	1.6	1.6	1.6
5	BENGALURU URBAN	33.4	33.9	34.4	33.5	34.1	34.5
6	BIDAR	1.6	1.5	1.5	1.6	1.5	1.5
7	CHAMARAJANAGARA	1.2	1.2	1.2	1.2	1.2	1.2
8	CHIKKABALLAPURA	1.5	1.5	1.4	1.4	1.4	1.4
9	CHIKKAMAGALURU	2.5	2.5	2.3	2.6	2.4	2.3
10	CHITRADURGA	1.6	1.6	1.7	1.6	1.6	1.6
11	DAKSHINA KANNADA	6.1	5.9	5.8	6.1	6.0	5.9
12	DAVANAGERE	2.0	2.1	2.0	2.0	2.0	2.0
13	DHARWAD	2.5	2.5	2.5	2.5	2.5	2.6
14	GADAG	1.1	1.1	1.1	1.1	1.1	1.2
15	HASSAN	2.4	2.4	2.4	2.5	2.4	2.4
16	HAVERI	1.6	1.6	1.6	1.6	1.6	1.6
17	KALABURAGI	2.1	2.2	2.3	2.1	2.1	2.2
18	KODAGU	1.0	0.9	0.7	1.0	0.8	0.6
19	KOLAR	1.9	1.8	1.8	1.9	1.9	1.8
20	KOPPAL	1.4	1.3	1.3	1.3	1.3	1.3
21	MANDYA	2.7	2.7	2.6	2.7	2.7	2.7
22	MYSURU	3.5	3.5	3.5	3.4	3.5	3.5
23	RAICHUR	1.8	1.8	1.8	1.8	1.8	1.8
24	RAMANAGARA	1.6	1.6	1.6	1.6	1.6	1.6
25	SHIVAMOGGA	2.9	2.9	2.9	2.9	2.8	2.8
26	TUMAKURU	3.8	3.8	3.8	3.8	3.8	3.8
27	UDUPI	2.7	2.7	2.7	2.7	2.7	2.7
28	UTTARA KANNADA	1.8	1.8	1.9	1.8	1.8	1.8
29	VIJAYAPURA	2.0	2.0	2.0	2.0	2.0	2.0
30	YADGIR	1.0	1.0	1.0	1.0	1.0	1.0
KARNATAKA		**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Note: Worked out at Constant Prices with reference to the base year 2011-12.
Source: Directorate of Economics and Statistics, Karnataka.

5. Economic Growth

District		Sector-wise percentage share in total district income (GDDP) at current prices								
		Primary sector			Secondary sector			Tertiary sector		
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
1		32	33	34	35	36	37	38	39	40
1	BAGALKOTE	21.1	21.2	23.4	32.5	31.2	28.4	46.3	47.7	48.2
2	BALLARI	23.3	24.6	26.1	23.5	22.1	20.1	53.2	53.2	53.7
3	BELAGAVI	23.7	22.8	25.9	26.8	26.0	23.4	49.4	51.1	50.7
4	BENGALURU RURAL	14.1	14.0	15.0	39.0	37.3	34.2	46.9	48.7	50.7
5	BENGALURU URBAN	1.0	0.9	1.1	24.1	22.3	20.3	75.0	76.8	78.7
6	BIDAR	23.5	20.9	17.3	19.6	19.3	18.8	56.9	59.8	63.9
7	CHAMARAJANAGARA	21.9	21.6	23.3	24.3	23.2	21.0	53.8	55.2	55.7
8	CHIKKABALLAPURA	23.5	23.8	22.0	26.1	24.9	23.5	50.4	51.3	54.5
9	CHIKKAMAGALURU	20.9	20.8	16.5	35.4	34.1	33.6	43.7	45.0	49.9
10	CHITRADURGA	23.9	27.5	30.0	21.1	19.3	16.9	55.1	53.2	53.1
11	DAKSHINA KANNADA	8.8	8.6	9.8	47.2	45.5	42.3	44.0	45.9	48.0
12	DAVANAGERE	27.8	29.4	29.0	27.1	25.2	23.8	45.1	45.3	47.2
13	DHARWAD	8.5	11.1	11.5	31.5	29.3	27.0	60.0	59.7	61.5
14	GADAG	15.0	19.7	20.6	24.0	21.6	19.6	61.0	58.8	59.8
15	HASSAN	20.6	20.3	19.1	20.4	19.6	18.3	59.0	60.1	62.6
16	HAVERI	24.2	27.1	24.2	20.4	18.6	17.9	55.5	54.2	57.9
17	KALABURAGI	27.8	32.4	33.2	18.3	16.3	14.9	53.9	51.3	51.9
18	KODAGU	51.0	46.5	33.8	14.3	14.8	16.9	34.7	38.7	49.2
19	KOLAR	26.6	25.2	24.5	26.5	25.8	24.3	46.9	49.0	51.1
20	KOPPAL	32.8	31.7	29.8	21.2	20.6	19.8	46.0	47.7	50.4
21	MANDYA	20.6	19.7	20.1	25.6	24.9	23.1	53.8	55.4	56.8
22	MYSURU	14.3	15.8	16.5	23.3	21.5	19.7	62.4	62.6	63.8
23	RAICHUR	28.5	29.4	27.5	18.1	17.1	16.3	53.3	53.5	56.2
24	RAMANAGARA	16.6	17.5	20.9	37.9	35.8	32.1	45.5	46.7	47.0
25	SHIVAMOGGA	16.2	19.5	20.7	32.3	28.7	26.4	51.6	51.7	52.9
26	TUMAKURU	15.4	15.5	18.3	36.5	35.7	32.4	48.1	48.8	49.3
27	UDUPI	13.2	13.2	14.4	35.3	33.8	31.0	51.5	53.0	54.6
28	UTTARA KANNADA	17.0	15.9	19.9	25.8	25.0	22.1	57.2	59.1	58.0
29	VIJAYAPURA	25.4	25.9	27.4	23.2	22.3	20.5	51.3	51.8	52.0
30	YADGIR	22.7	27.2	23.5	22.5	20.3	19.7	54.8	52.5	56.8
KARNATAKA		**13.6**	**13.9**	**14.1**	**27.3**	**25.7**	**23.6**	**59.1**	**60.4**	**62.2**

Note: Worked out at Constant Prices with reference to the base year 2011-12.
Source: Directorate of Economics and Statistics, Karnataka.

5. Economic Growth

District		Sector-wise percentage share in total district income (GDDP) at constant prices								
		Primary sector			Secondary sector			Tertiary sector		
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
1		41	42	43	44	45	46	47	48	49
1	BAGALKOTE	18.8	20.7	20.2	33.4	32.2	30.8	47.7	47.1	49.0
2	BALLARI	22.3	23.8	26.2	23.7	23.1	21.1	54.0	53.1	52.7
3	BELAGAVI	21.1	23.3	23.1	27.7	26.6	25.5	51.2	50.0	51.5
4	BENGALURU RURAL	12.5	13.0	12.2	40.0	38.9	37.1	47.6	48.1	50.7
5	BENGALURU URBAN	0.9	0.8	0.9	24.2	23.3	21.6	75.0	75.9	77.4
6	BIDAR	21.6	19.8	15.4	20.0	20.2	20.3	58.3	60.0	64.3
7	CHAMARAJANAGARA	21.2	22.0	19.5	24.5	23.8	23.0	54.3	54.2	57.5
8	CHIKKABALLAPURA	21.9	22.5	20.3	26.7	26.3	25.4	51.4	51.2	54.3
9	CHIKKAMAGALURU	21.5	17.2	13.2	35.1	36.5	36.2	43.4	46.3	50.6
10	CHITRADURGA	24.2	24.4	27.1	21.0	20.9	18.8	54.8	54.7	54.1
11	DAKSHINA KANNADA	8.4	7.7	8.6	47.5	47.1	44.4	44.1	45.2	47.0
12	DAVANAGERE	25.7	25.3	26.7	27.9	27.7	25.9	46.4	47.0	47.3
13	DHARWAD	8.0	10.2	11.3	31.6	30.5	28.4	60.4	59.3	60.3
14	GADAG	14.9	17.4	21.7	24.1	23.0	20.4	61.0	59.6	57.9
15	HASSAN	20.3	18.1	17.4	20.4	20.8	19.6	59.3	61.1	63.0
16	HAVERI	23.4	25.9	23.7	20.5	19.7	19.0	56.0	54.4	57.2
17	KALABURAGI	26.8	28.8	31.4	18.6	17.9	16.3	54.6	53.3	52.4
18	KODAGU	52.6	37.6	21.9	13.9	18.0	21.2	33.5	44.4	56.9
19	KOLAR	25.3	27.5	23.0	27.2	25.9	26.3	47.5	46.5	50.8
20	KOPPAL	30.5	28.7	28.6	21.9	22.3	21.2	47.6	49.1	50.2
21	MANDYA	18.5	19.1	17.7	26.1	25.7	24.6	55.3	55.2	57.7
22	MYSURU	13.4	15.4	15.4	23.6	22.5	21.2	62.9	62.1	63.4
23	RAICHUR	27.4	25.7	27.4	18.4	18.7	17.2	54.2	55.6	55.3
24	RAMANAGARA	15.7	17.1	17.2	38.5	37.2	35.3	45.8	45.7	47.5
25	SHIVAMOGGA	16.0	17.4	16.9	32.2	30.4	29.0	51.8	52.2	54.1
26	TUMAKURU	15.2	15.0	15.8	36.7	37.1	34.9	48.1	48.0	49.3
27	UDUPI	12.8	12.3	12.9	35.5	35.0	32.9	51.7	52.7	54.3
28	UTTARA KANNADA	16.8	15.5	17.0	25.7	25.9	24.0	57.5	58.6	59.0
29	VIJAYAPURA	24.6	24.2	25.7	23.4	23.5	22.1	52.0	52.2	52.3
30	YADGIR	21.9	22.1	24.4	22.7	22.5	20.6	55.4	55.4	55.0
KARNATAKA		**12.9**	**12.8**	**12.8**	**27.5**	**26.9**	**25.3**	**59.5**	**60.2**	**61.9**

Note: Worked out at Constant Prices with reference to the base year 2011-12.
Source: Directorate of Economics and Statistics, Karnataka.

5. Economic Growth

District		Growth in per capita income (NDDP) at constant prices			Ranking of growth in per capita income		
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
1		50	51	52	53	54	55
1	BAGALKOTE	1.9	9.2	3.7	16	9	19
2	BALLARI	2.5	8.9	7.7	14	10	5
3	BELAGAVI	-0.3	9.8	4.2	26	6	17
4	BENGALURU RURAL	-2.1	7.2	1.9	29	18	24
5	BENGALURU URBAN	8.2	9.9	4.3	2	3	16
6	BIDAR	8.7	4.6	-0.1	1	25	27
7	CHAMARAJANAGARA	0.4	7.7	1.8	25	14	25
8	CHIKKABALLAPURA	-0.6	8.0	1.1	27	12	26
9	CHIKKAMAGALURU	4.8	1.0	-0.9	9	29	28
10	CHITRADURGA	7.0	7.5	7.9	5	16	4
11	DAKSHINA KANNADA	6.5	5.6	4.1	6	23	18
12	DAVANAGERE	1.3	6.3	6.2	21	22	9
13	DHARWAD	1.7	10.4	5.7	17	2	10
14	GADAG	-0.7	9.9	10.7	28	3	1
15	HASSAN	1.6	4.5	4.6	18	27	14
16	HAVERI	-2.6	10.6	2.0	30	1	23
17	KALABURAGI	4.7	9.6	8.9	10	8	2
18	KODAGU	2.1	-18.0	-16.3	15	30	30
19	KOLAR	2.6	9.7	-1.8	13	7	29
20	KOPPAL	1.0	4.1	4.6	23	28	14
21	MANDYA	1.6	7.8	3.7	18	13	19
22	MYSURU	1.4	9.9	4.9	20	3	11
23	RAICHUR	4.6	4.6	7.7	11	25	5
24	RAMANAGARA	0.8	8.3	3.2	24	11	22
25	SHIVAMOGGA	7.5	7.7	3.7	3	14	19
26	TUMAKURU	1.1	7.4	4.7	22	17	12
27	UDUPI	5.1	6.4	4.7	8	21	12
28	UTTARA KANNADA	7.4	5.3	6.6	4	24	8
29	VIJAYAPURA	4.1	6.5	7.2	12	20	7
30	YADGIR	5.9	7.1	8.2	7	19	3
KARNATAKA		**4.6**	**7.9**	**4.2**			

Note: Worked out at Constant Prices with reference to the base year 2011-12.
Source: Directorate of Economics and Statistics, Karnataka.

5. Economic Growth

District		Growth rate of NDDP 2012-13 to 2014-15 at current prices				Growth rate of NDDP 2012-13 to 2014-15 at constant prices			
		Primary sector	Secondary sector	Tertiary sector	All sector	Primary sector	Secondary sector	Tertiary sector	All sector
1		56	57	58	59	60	61	62	63
1	BAGALKOTE	17.7	6.9	16.1	13.6	5.1	2.5	9.0	6.0
2	BALLARI	16.9	6.4	16.1	14.1	10.5	2.0	8.6	7.5
3	BELAGAVI	15.3	6.9	15.7	13.3	4.1	2.5	8.4	5.6
4	BENGALURU RURAL	4.8	6.4	16.9	10.8	-7.8	2.1	9.1	3.4
5	BENGALURU URBAN	15.9	6.7	18.8	15.9	4.6	2.4	10.6	8.6
6	BIDAR	11.1	6.9	15.9	12.9	-0.7	2.6	8.6	5.4
7	CHAMARAJANAGARA	10.5	6.2	15.6	12.1	-2.8	1.9	8.9	4.4
8	CHIKKABALLAPURA	5.4	7.1	16.5	11.4	-3.7	2.7	8.6	3.9
9	CHIKKAMAGALURU	1.5	6.6	15.9	9.7	-11.8	2.4	9.2	2.7
10	CHITRADURGA	28.1	6.7	16.3	17.4	14.4	2.2	8.3	8.6
11	DAKSHINA KANNADA	25.1	6.6	16.9	12.8	13.1	2.5	9.6	6.5
12	DAVANAGERE	15.5	6.6	16.2	13.5	4.8	2.3	8.4	5.7
13	DHARWAD	18.9	6.6	16.7	13.6	12.1	2.3	9.3	7.0
14	GADAG	19.3	6.5	16.0	13.9	14.7	2.3	8.6	7.7
15	HASSAN	5.1	6.5	16.0	11.7	-4.6	2.1	8.9	4.6
16	HAVERI	6.4	6.8	16.1	11.3	-1.0	2.4	8.6	4.4
17	KALABURAGI	24.9	6.7	15.9	16.9	13.9	2.4	8.3	8.9
18	KODAGU	-11.6	6.6	16.1	1.2	-30.0	2.3	8.4	-9.8
19	KOLAR	8.7	6.4	16.4	11.8	0.4	2.1	8.5	4.6
20	KOPPAL	7.9	7.0	15.9	11.5	-0.3	2.5	8.3	4.3
21	MANDYA	10.2	6.9	15.6	12.3	-0.4	2.5	9.1	5.4
22	MYSURU	13.5	6.7	16.7	13.9	4.6	2.4	9.0	6.5
23	RAICHUR	14.1	6.4	16.0	13.8	6.8	2.0	8.4	6.7
24	RAMANAGARA	17.4	6.8	16.8	13.2	2.3	2.6	8.9	5.2
25	SHIVAMOGGA	29.8	6.6	16.6	15.7	12.6	2.2	9.0	7.4
26	TUMAKURU	16.3	6.8	16.3	12.9	3.1	2.6	8.7	5.5
27	UDUPI	16.6	6.6	16.6	13.2	5.4	2.4	9.5	6.5
28	UTTARA KANNADA	28.4	6.5	15.8	15.4	12.7	2.2	8.7	7.5
29	VIJAYAPURA	18.5	7.1	15.8	14.5	8.3	2.6	8.4	7.0
30	YADGIR	20.2	7.0	15.9	14.7	13.0	2.7	8.4	8.2
KARNATAKA		**13.8**	**6.7**	**17.3**	**14.0**	**3.0**	**2.4**	**9.6**	**6.7**

Note: Worked out at Constant Prices with reference to the base year 2011-12.
Source: Directorate of Economics and Statistics, Karnataka.

6. Employment

District		Total workers 2011 (main + marginal)			Total workers 2001 (main + marginal)			Decadal growth of Total workers (2001-2011)		
		Persons	Male	Female	Persons	Male	Female	Persons	Male	Female
1		2	3	4	5	6	7	8	9	10
1	BAGALKOTE	818081	511575	306506	719659	447791	271868	13.7	14.2	12.7
2	BALLARI	1116880	703258	413622	920821	562323	358498	21.3	25.1	15.4
3	BELAGAVI	2105668	1372422	733246	1877774	1201858	675916	12.1	14.2	8.5
4	BENGALURU RURAL	459891	315499	144392	892531	573521	319010	-48.5	-45.0	-54.7
5	BENGALURU URBAN	4246927	3115361	1131566	2566914	1986327	580587	65.4	56.8	94.9
6	BIDAR	702608	459050	243558	557603	366228	191375	26.0	25.3	27.3
7	CHAMARAJANAGARA	481693	324326	157367	448369	300601	147768	7.4	7.9	6.5
8	CHIKKABALLAPURA *	639778	384452	255326	-	-	-	-	-	-
9	CHIKKAMAGALURU	565774	357889	207885	516677	341658	175019	9.5	4.8	18.8
10	CHITRADURGA	856587	513311	343276	721835	442408	279427	18.7	16.0	22.8
11	DAKSHINA KANNADA	997721	620903	376818	946390	546404	399986	5.4	13.6	-5.8
12	DAVANAGERE	875207	585639	289568	783781	520675	263106	11.7	12.5	10.1
13	DHARWAD	784833	543776	241057	684492	461120	223372	14.7	17.9	7.9
14	GADAG	495722	310412	185310	457817	277450	180367	8.3	11.9	2.7
15	HASSAN	903580	560452	343128	864711	522274	342437	4.5	7.3	0.2
16	HAVERI	730066	490731	239335	666714	431235	235479	9.5	13.8	1.6
17	KALABURAGI	1087028	680001	407027	1350072	813265	536807	-19.5	-16.4	-24.2
18	KODAGU	278938	172100	106838	266378	167404	98974	4.7	2.8	7.9
19	KOLAR	717872	454048	263824	1235028	747327	487701	-41.9	-39.2	-45.9
20	KOPPAL	654766	387974	266792	554506	323732	230774	18.1	19.8	15.6
21	MANDYA	871408	575203	296205	840419	543607	296812	3.7	5.8	-0.2
22	MYSURU	1314268	921803	392465	1110264	782593	327671	18.4	17.8	19.8
23	RAICHUR	903413	530373	373040	732762	445291	287471	23.3	19.1	29.8
24	RAMANAGARA *	531459	344349	187110	-	-	-	-	-	-
25	SHIVAMOGGA	780598	534487	246111	714671	487349	227322	9.2	9.7	8.3
26	TUMAKURU	1354646	837512	517134	1316939	791428	525511	2.9	5.8	-1.6
27	UDUPI	513241	335399	177842	488173	287951	200222	5.1	16.5	-11.2
28	UTTARA KANNADA	608526	430565	177961	581278	395869	185409	4.7	8.8	-4.0
29	VIJAYAPURA	927722	580111	347611	718213	467666	250547	29.2	24.0	38.7
30	YADGIR *	547696	317135	230561	-	-	-	-	-	-
KARNATAKA		**27872597**	**18270116**	**9602481**	**23534791**	**15235355**	**8299436**	**18.4**	**19.9**	**15.7**

Sources: 1. Primary Census Abstract (PCA)- 2001, GOI. 2. Primary Census Abstract (PCA)- 2011, GOI
** New Districts were created, 1. Chikballapur district from Kolar District. 2. Ramanagara District from Bengaluru District on 21 th June 2007 and 3. Yadgir District from Kolar District on 30 th Dec.2009*

District		Main workers 2011			Main workers 2001			Decadal growth of main workers (2001-2011)		
		Persons	Male	Female	Persons	Male	Female	Persons	Male	Female
1		11	12	13	14	15	16	17	18	19
1	BAGALKOTE	676407	455410	220997	561559	404358	157201	20.5	12.6	40.6
2	BALLARI	969388	282416	327707	801369	526849	274520	21.0	-46.4	19.4
3	BELAGAVI	1734501	2893953	496491	1537645	1116997	420648	12.8	159.1	18.0
4	BENGALURU RURAL	389989	1238010	107573	726652	521915	204737	-46.3	137.2	-47.5
5	BENGALURU URBAN	3858342	641681	964389	2378180	1878030	500150	62.2	-65.8	92.8
6	BIDAR	551763	384430	167333	424985	315448	109537	29.8	21.9	52.8
7	CHAMARAJANAGARA	381408	508406	109287	336961	251700	85261	13.2	102.0	28.2
8	CHIKKABALLAPURA *	535565	272121	194230	-	-	-	-	-	-
9	CHIKKAMAGALURU	480229	341335	153974	428830	312206	116624	12.0	9.3	32.0
10	CHITRADURGA	667479	326255	223455	576035	399609	176426	15.9	-18.4	26.7
11	DAKSHINA KANNADA	914476	444024	331978	841509	505962	335547	8.7	-12.2	-1.1
12	DAVANAGERE	705099	582498	200726	631726	466994	164732	11.6	24.7	21.9
13	DHARWAD	690948	504373	190048	587018	430193	156825	17.7	17.2	21.2
14	GADAG	423451	500900	141364	388763	260110	128653	8.9	92.6	9.9
15	HASSAN	752387	282087	239656	702827	485086	217741	7.1	-41.8	10.1
16	HAVERI	601951	573207	163191	531221	389602	141619	13.3	47.1	15.2
17	KALABURAGI	844237	512731	271030	1010430	712338	298092	-16.4	-28.0	-9.1
18	KODAGU	258753	438760	96,334	247574	159157	88417	4.5	175.7	9.0
19	KOLAR	584590	162419	190414	1014667	680376	334291	-42.4	-76.1	-43.0
20	KOPPAL	508089	394176	178997	422208	286867	135341	20.3	37.4	32.3
21	MANDYA	714901	329092	200753	682440	497231	185209	4.8	-33.8	8.4
22	MYSURU	1082108	514148	275077	926129	712159	213970	16.8	-27.8	28.6
23	RAICHUR	725985	807031	264564	544347	387221	157126	33.4	108.4	68.4
24	RAMANAGARA *	458841	461421	146223	-	-	-	-	-	-
25	SHIVAMOGGA	652789	312618	171793	586832	446288	140544	11.2	-30.0	22.2
26	TUMAKURU	1078431	480996	340307	1050291	722302	327989	2.7	-33.4	3.8
27	UDUPI	459446	738124	149448	417287	263235	154052	10.1	180.4	-3.0
28	UTTARA KANNADA	498304	309998	117559	455302	350762	104540	9.4	-11.6	12.5
29	VIJAYAPURA	760083	380745	251677	551972	413850	138122	37.7	-8.0	82.2
30	YADGIR *	437241	276472	160769	-	-	-	-	-	-
KARNATAKA		**23397181**	**16349837**	**7047344**	**19364759**	**13896845**	**5467914**	**20.8**	**17.7**	**28.9**

Sources: 1. Primary Census Abstract (PCA)- 2001, GOI 2. Primary Census Abstract (PCA)- 2011, GOI
** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Ruarl District on 2007 and 3. Yadgir District from Kalaburagi District on2009*

6. Employment

District		Marginal workers 2011			Marginal workers 2001			Decadal growth of marginal workers (2001-2011)		
		Persons	Male	Female	Persons	Male	Female	Persons	Male	Female
1		20	21	22	23	24	25	26	27	28
1	BAGALKOTE	141674	56165	85509	158100	43433	114667	-10.4	29.3	-25.4
2	BALLARI	147492	61577	85915	119452	35474	83978	23.5	73.6	2.3
3	BELAGAVI	371167	134412	236755	340129	84861	255268	9.1	58.4	-7.3
4	BENGALURU RURAL	69902	33083	36819	165879	51606	114273	-57.9	-35.9	-67.8
5	BENGALURU URBAN	388585	221408	167177	188734	108297	80437	105.9	104.4	107.8
6	BIDAR	150845	74620	76225	132618	50780	81838	13.7	46.9	-6.9
7	CHAMARAJANAGARA	100285	52205	48080	111408	48901	62507	-10.0	6.8	-23.1
8	CHIKKABALLAPURA *	104213	43117	61096	-	-	-	-	-	-
9	CHIKKAMAGALURU	85545	31634	53911	87847	29452	58395	-2.6	7.4	-7.7
10	CHITRADURGA	189108	69287	119821	145800	42799	103001	29.7	61.9	16.3
11	DAKSHINA KANNADA	83245	38405	44840	104881	40442	64439	-20.6	-5.0	-30.4
12	DAVANAGERE	170108	81266	88842	152055	53681	98374	11.9	51.4	-9.7
13	DHARWAD	93885	42876	51009	97474	30927	66547	-3.7	38.6	-23.3
14	GADAG	72271	28325	43946	69054	17340	51714	4.7	63.4	-15.0
15	HASSAN	151193	47721	103472	161884	37188	124696	-6.6	28.3	-17.0
16	HAVERI	128115	51971	76144	135493	41633	93860	-5.4	24.8	-18.9
17	KALABURAGI	242791	106794	135997	339642	100927	238715	-28.5	5.8	-43.0
18	KODAGU	20185	9681	10504	18804	8247	10557	7.3	17.4	-0.5
19	KOLAR	133282	59872	73410	220361	66951	153410	-39.5	-10.6	-52.1
20	KOPPAL	146677	58882	87795	132298	36865	95433	10.9	59.7	-8.0
21	MANDYA	156507	61055	95452	157979	46376	111603	-0.9	31.7	-14.5
22	MYSURU	232160	114772	117388	184135	70434	113701	26.1	62.9	3.2
23	RAICHUR	177428	68952	108476	188415	58070	130345	-5.8	18.7	-16.8
24	RAMANAGARA *	72618	31731	40887	-	-	-	-	-	-
25	SHIVAMOGGA	127809	53491	74318	127839	41061	86778	0.0	30.3	-14.4
26	TUMAKURU	276215	99388	176827	266648	69126	197522	3.6	43.8	-10.5
27	UDUPI	53795	25401	28394	70886	24716	46170	-24.1	2.8	-38.5
28	UTTARA KANNADA	110222	49820	60402	125976	45107	80869	-12.5	10.4	-25.3
29	VIJAYAPURA	167639	71705	95934	166241	53816	112425	0.8	33.2	-14.7
30	YADGIR *	110455	40663	69792	-	-	-	-	-	-
KARNATAKA		**4475416**	**1920279**	**2555137**	**4170032**	**1338510**	**2831522**	**7.3**	**43.5**	**-9.8**

Sources: 1. Primary Census Abstract (PCA)- 2001, GOI 2. Primary Census Abstract (PCA)- 2011, GOI

** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Ruarl District on 2007 and 3. Yadgir District from Kalaburagi District on2009*

6. Employment

District		Total workers 2011		Main workers 2011		Marginal workers 2011	
		Rural	Urban	Rural	Urban	Rural	Urban
1		29	30	31	32	33	34
1	BAGALKOTE	595392	222689	485014	191393	110378	31296
2	BALLARI	775319	341561	661534	307854	113785	33707
3	BELAGAVI	1675994	429674	1355409	379092	320585	50582
4	BENGALURU RURAL	350621	109270	292534	97455	58087	11815
5	BENGALURU URBAN	411407	3835520	362379	3495963	49028	339557
6	BIDAR	566299	136309	437926	113837	128373	22472
7	CHAMARAJANAGARA	414393	67300	323531	57877	90862	9423
8	CHIKKABALLAPURA*	529246	110532	440963	94602	88283	15930
9	CHIKKAMAGALURU	472818	92956	398443	81786	74375	11170
10	CHITRADURGA	733242	123345	560184	107295	173058	16050
11	DAKSHINA KANNADA	568551	429170	512709	401767	55842	27403
12	DAVANAGERE	640621	234586	513459	191640	127162	42946
13	DHARWAD	407220	377613	352687	338261	54533	39352
14	GADAG	346655	149067	294790	128661	51865	20406
15	HASSAN	763534	140046	628200	124187	135334	15859
16	HAVERI	599152	130914	489263	112688	109889	18226
17	KALABURAGI	807197	279831	617091	227146	190106	52685
18	KODAGU	246044	32894	228414	30339	17630	2555
19	KOLAR	545094	172778	431414	153176	113680	19602
20	KOPPAL	567783	86983	434543	73546	133240	13437
21	MANDYA	749665	121743	609829	105072	139836	16671
22	MYSURU	840952	473316	667491	414617	173461	58699
23	RAICHUR	726993	176420	575393	150592	151600	25828
24	RAMANAGARA *	425074	106385	364229	94612	60845	11773
25	SHIVAMOGGA	554351	226247	449946	202843	104405	23404
26	TUMAKURU	1120199	234447	876518	201913	243681	32534
27	UDUPI	376475	136766	333571	125875	42904	10891
28	UTTARA KANNADA	463305	145221	370334	127970	92971	17251
29	VIJAYAPURA	760560	167162	622769	137314	137791	29848
30	YADGIR *	468074	79622	370338	66903	97736	12719
KARNATAKA		**18502230**	**9370367**	**15060905**	**8336276**	**3441325**	**1034091**

6. Employment

District		Work participation rate: Proportion of Total workers to Total population					
		Total		Male		Female	
		2001	2011	2001	2011	2001	2011
1		35	36	37	38	39	40
1	BAGALKOTE	43.6	43.3	53.7	53.8	33.3	32.6
2	BALLARI	45.4	45.5	54.6	56.9	35.9	34.0
3	BELAGAVI	44.6	44.1	55.9	56.6	32.7	31.1
4	BENGALURU RURAL	47.4	46.4	59.6	62.0	34.7	30.0
5	BENGALURU URBAN	39.3	44.1	58.0	62.0	18.7	24.6
6	BIDAR	37.1	41.2	47.5	52.7	26.2	29.3
7	CHAMARAJANAGARA	46.4	47.2	61.4	63.3	31.1	30.9
8	CHIKKABALLAPURA*	-	51.0	-	60.4	-	41.3
9	CHIKKAMAGALURU	45.3	49.7	59.4	63.2	30.9	36.4
10	CHITRADURGA	47.6	51.6	57.0	61.0	37.7	41.9
11	DAKSHINA KANNADA	49.9	47.7	58.2	60.0	41.7	35.7
12	DAVANAGERE	43.8	45.0	56.7	59.4	30.1	30.2
13	DHARWAD	42.7	42.5	56.0	58.0	28.6	26.5
14	GADAG	47.1	46.6	56.2	57.8	37.7	35.1
15	HASSAN	50.2	50.9	60.8	63.4	39.7	38.4
16	HAVERI	46.3	45.7	58.2	59.9	33.7	30.7
17	KALABURAGI	43.1	42.4	51.1	52.2	34.9	32.2
18	KODAGU	48.6	50.3	60.9	62.7	36.2	38.2
19	KOLAR	48.7	46.7	58.1	58.5	39.0	34.7
20	KOPPAL	46.4	47.1	53.7	55.4	38.9	38.7
21	MANDYA	47.7	48.3	61.2	63.6	33.9	32.9
22	MYSURU	42.0	43.8	58.2	61.0	25.3	26.3
23	RAICHUR	43.9	46.8	52.9	55.0	34.7	38.7
24	RAMANAGARA *	-	49.1	-	62.8	-	35.0
25	SHIVAMOGGA	43.5	44.5	58.7	60.9	28.0	28.1
26	TUMAKURU	51.0	50.6	60.2	62.0	41.4	38.9
27	UDUPI	43.9	43.6	55.1	59.7	33.9	28.9
28	UTTARA KANNADA	42.9	42.3	57.6	59.3	27.8	25.0
29	VIJAYAPURA	39.7	42.6	50.5	52.2	28.5	32.6
30	YADGIR *	-	46.6	-	53.7	-	39.5
KARNATAKA		**44.5**	**45.6**	**56.6**	**59.0**	**32.0**	**31.9**

Sources: Worked out based on PCA 2001 and 2011

** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Ruarl District on 2007 and 3. Yadgir District from Kalaburagi District on2009*

6. Employment

District		Work Participation Rate: Proportion of Main workers to Total Population					
		Total		Male		Female	
		2001	2011	2001	2011	2001	2011
1		41	42	43	44	45	46
1	BAGALKOTE	34.0	35.8	48.5	47.9	19.2	23.5
2	BALLARI	39.5	39.5	51.2	51.9	27.5	27.0
3	BELAGAVI	36.5	36.3	52	51.1	20.4	21.1
4	BENGALURU RURAL	38.6	39.4	54.2	55.5	22.3	22.3
5	BENGALURU URBAN	36.4	40.1	54.8	57.6	16.1	21.0
6	BIDAR	28.3	32.4	40.9	44.2	15.0	20.1
7	CHAMARAJANAGARA	34.9	37.4	51.4	53.1	17.9	21.5
8	CHIKKABALLAPURA*	-	42.7	-	53.6	-	31.4
9	CHIKKAMAGALURU	37.6	42.2	54.3	57.6	20.6	26.9
10	CHITRADURGA	37.9	40.2	51.5	52.8	23.8	27.3
11	DAKSHINA KANNADA	44.3	43.8	53.9	56.3	35.0	31.5
12	DAVANAGERE	35.3	36.2	50.9	51.1	18.9	20.9
13	DHARWAD	36.6	37.4	52.3	53.4	20.1	20.9
14	GADAG	40.0	39.8	52.7	52.5	26.9	26.8
15	HASSAN	40.8	42.4	56.5	58.0	25.2	26.8
16	HAVERI	36.9	37.7	52.6	53.6	20.3	21.0
17	KALABURAGI	32.3	32.9	44.7	44.0	19.4	21.4
18	KODAGU	45.1	46.7	57.9	59.1	32.3	34.4
19	KOLAR	40.0	38.0	52.9	50.8	26.7	25.1
20	KOPPAL	35.3	36.6	47.5	47.0	22.8	25.9
21	MANDYA	38.7	39.6	56.0	56.8	21.2	22.3
22	MYSURU	35.1	36.1	53.0	53.4	16.5	18.5
23	RAICHUR	32.6	37.6	46.0	47.8	19.0	27.4
24	RAMANAGARA *	-	42.4	-	57.0	-	27.4
25	SHIVAMOGGA	35.7	37.2	53.7	54.8	17.3	19.6
26	TUMAKURU	40.6	40.3	55.0	54.7	25.8	25.6
27	UDUPI	37.5	39.0	50.4	55.1	26.1	24.3
28	UTTARA KANNADA	33.6	34.7	51.1	52.4	15.7	16.5
29	VIJAYAPURA	30.5	34.9	44.7	45.8	15.7	23.6
30	YADGIR *	-	37.2	-	46.8	-	27.5
KARNATAKA		**36.6**	**38.3**	**51.7**	**52.8**	**21.1**	**23.4**

Sources: Worked out based on PCA 2001 and 2011

** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Ruarl District on 2007 and 3. Yadgir District from Kalaburagi District on2009*

6. Employment

District		Work Participation Rate: Proportion of Marginal Workers to Total Population					
		Total		Male		Female	
		2001	2011	2001	2011	2001	2011
1		47	48	49	50	51	52
1	BAGALKOTE	9.6	7.5	5.2	5.9	14	9.1
2	BALLARI	5.9	6.0	3.4	5.0	8.4	7.1
3	BELAGAVI	8.1	7.8	3.9	5.5	12.4	1 0.0
4	BENGALURU RURAL	8.8	7.1	5.4	6.5	12.4	7.6
5	BENGALURU URBAN	2.9	4.0	3.2	4.4	2.6	3.6
6	BIDAR	8.8	8.9	6.6	8.6	11.2	9.2
7	CHAMARAJANAGARA	11.5	9.8	10	10.2	13.1	9.5
8	CHIKKABALLAPURA *	-	8.3	-	6.8	-	9.9
9	CHIKKAMAGALURU	7.7	7.5	5.1	5.6	10.3	9.4
10	CHITRADURGA	9.6	11.4	5.5	8.2	13.9	14.6
11	DAKSHINA KANNADA	5.5	4.0	4.3	3.7	6.7	4.3
12	DAVANAGERE	8.5	8.7	5.8	8.2	11.3	9.3
13	DHARWAD	6.1	5.1	3.8	4.6	8.5	5.6
14	GADAG	7.1	6.8	3.5	5.3	10.8	8.3
15	HASSAN	9.4	8.5	4.3	5.4	14.5	11.6
16	HAVERI	9.4	8.0	5.6	6.3	13.4	9.8
17	KALABURAGI	10.8	9.5	6.3	8.2	15.5	10.8
18	KODAGU	3.4	3.6	3.0	3.5	3.9	3.8
19	KOLAR	8.7	8.7	5.2	7.7	12.3	9.7
20	KOPPAL	11.1	10.6	6.1	8.4	16.1	12.7
21	MANDYA	9.0	8.7	5.2	6.7	12.7	10.6
22	MYSURU	7.0	7.7	5.2	7.6	8.8	7.9
23	RAICHUR	11.3	9.2	6.9	7.1	15.7	11.2
24	RAMANAGARA *	-	6.7	-	5.8	-	7.6
25	SHIVAMOGGA	7.8	7.3	4.9	6.1	10.7	8.5
26	TUMAKURU	10.3	10.3	5.3	7.4	15.5	13.3
27	UDUPI	6.4	4.6	4.7	4.5	7.8	4.6
28	UTTARA KANNADA	9.3	7.7	6.6	6.9	12.1	8.5
29	VIJAYAPURA	9.2	7.7	5.8	6.5	12.8	9.0
30	YADGIR *	-	9.4	-	6.9	-	12.0
KARNATAKA		**7.9**	**7.3**	**5.0**	**6.2**	**10.9**	**8.5**

Sources: Worked out based on PCA 2001 and 2011

** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Ruarl District on 2007 and 3. Yadgir District from Kalaburagi District on2009*

6. Employment

District		Sector share of employment: main and marginal workers 2011											
		Percentage to total workers: all areas (rural + urban)											
		Cultivators			Agricultural labourers			Workers in household industries			Other workers		
		Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1		53	54	55	56	57	58	59	60	61	62	63	64
1	BAGALKOTE	23.98	29.22	15.24	37.07	25.09	57.07	5.48	5.45	5.52	33.47	40.24	22.17
2	BALLARI	23.11	25.7	18.7	36.36	25.03	55.63	2.04	1.9	2.3	38.49	47.38	23.37
3	BELAGAVI	33.81	37.1	27.66	30.85	20.84	49.58	2.87	2.79	3.00	32.48	39.27	19.76
4	BENGALURU RURAL	27.78	29.4	24.24	18.29	12.68	30.53	4.23	3.84	5.09	49.7	54.07	40.14
5	BENGALURU URBAN	2.25	2.16	2.51	2.31	2.01	3.13	2.56	2.36	3.13	92.88	93.47	91.24
6	BIDAR	20.11	22.24	16.09	39.86	30.61	57.31	2.58	2.44	2.84	37.45	44.71	23.76
7	CHAMARAJANAGARA	23.48	27.94	14.29	44.49	37.84	58.19	2.91	2.19	4.39	29.12	32.03	23.13
8	CHIKKABALLAPURA	33.17	35.52	29.64	32.35	24.86	43.61	3.17	2.82	3.7	31.31	36.8	23.05
9	CHIKKAMAGALURU	27.47	30.9	21.55	22.38	16.55	32.41	1.57	1.56	1.57	48.59	50.98	44.47
10	CHITRADURGA	33.42	38.76	25.42	34.36	24.36	49.32	3.06	2.75	3.53	29.16	34.13	21.72
11	DAKSHINA KANNADA	3.39	4.08	2.26	2.93	3.44	2.09	18.86	2.6	45.66	74.81	89.88	49.99
12	DAVANAGERE	26.38	31.67	15.66	33.81	25.19	51.22	3.59	2.73	5.33	36.23	40.4	27.79
13	DHARWAD	20.93	21.98	18.56	26.46	17.58	46.48	2.1	2	2.31	50.51	58.43	32.65
14	GADAG	25.71	30.51	17.66	40.41	28.32	60.65	3.12	3.12	3.13	30.76	38.04	18.56
15	HASSAN	48.37	51.32	43.54	18.36	11.24	29.99	1.78	1.73	1.87	31.49	35.71	24.59
16	HAVERI	27.81	33.5	16.15	42.63	32.63	63.14	2.77	2.27	3.8	26.78	31.6	16.91
17	KALABURAGI	20.26	24.67	12.88	38.2	27.06	56.81	2.38	2.25	2.6	39.16	46.02	27.7
18	KODAGU	7.59	8.02	6.91	5.43	4.44	7.04	0.56	0.57	0.52	86.42	86.97	85.53
19	KOLAR	25.5	26.59	23.62	28.03	21.21	39.76	3.37	2.47	4.91	43.1	49.72	31.71
20	KOPPAL	24.96	31.03	16.12	41.7	28.39	61.04	2.87	2.78	3.00	30.48	37.79	19.84
21	MANDYA	44.64	49.73	34.75	24.81	17.6	38.8	2.05	1.64	2.83	28.51	31.03	23.62
22	MYSURU	26.58	28.46	22.16	23.66	18.05	36.85	2.14	1.83	2.88	47.61	51.66	38.11
23	RAICHUR	27.15	33.5	18.13	42.45	29.57	60.76	2.11	2.05	2.21	28.28	34.88	18.9
24	RAMANAGARA	39.16	40.6	36.52	19.28	13.76	29.43	3.33	2.75	4.41	38.22	42.89	29.63
25	SHIVAMOGGA	26.2	29.51	18.99	31.57	23.71	48.66	1.93	1.74	2.35	40.3	45.04	30.00
26	TUMAKURU	37.35	42.42	29.13	26.01	16.96	40.65	4.02	2.71	6.16	32.62	37.91	24.06
27	UDUPI	12.3	11.47	13.87	12.35	9.25	18.19	2.06	1.64	2.85	73.28	77.63	65.08
28	UTTARA KANNADA	18.34	18.79	17.25	19.12	14.24	30.92	1.56	1.66	1.33	60.99	65.32	50.5
29	VIJAYAPURA	28.26	33.68	19.23	37.9	26.47	56.96	2.74	2.57	3.02	31.1	37.28	20.79
30	YADGIR	29.09	38.48	16.18	42.84	27.45	64.02	2.41	2.2	2.7	25.66	31.88	17.1
KARNATAKA		**23.61**	**26.02**	**19.03**	**25.67**	**17.97**	**40.33**	**3.28**	**2.40**	**4.94**	**47.44**	**53.61**	**35.71**

Sources : Worked out based on PCA 2001 and 2011

7. Gender Disparities

District		Female population as percentage of total population		Percentage of child population (0-14 years)			
				2001		2011	
		2001	2011	Boys	Girls	Boys	Girls
1		2	3	4	5	6	7
1	BAGALKOTE	49.50	49.72	36.5	35.5	31.86	30.32
2	BALLARI	49.20	49.57	37.3	36.6	30.80	30.04
3	BELAGAVI	48.98	49.30	34.2	33.1	29.28	27.87
4	BENGALURU RURAL	48.59	48.62	29.7	29.7	24.23	24.17
5	BENGALURU URBAN	47.58	47.80	26.1	27.5	22.60	23.30
6	BIDAR	48.68	48.88	38.2	38.3	30.89	30.64
7	CHAMARAJANAGARA	49.25	49.82	28.8	28.6	23.37	22.41
8	CHIKKABALLAPURA *	49.13	49.29	-	-	25.49	24.80
9	CHIKKAMAGALURU	49.61	50.21	28.6	28.2	23.24	22.22
10	CHITRADURGA	48.86	49.33	31.7	31.6	25.83	25.07
11	DAKSHINA KANNADA	50.55	50.48	28.9	27.2	24.88	24.27
12	DAVANAGERE	48.76	49.30	31.9	32.1	24.76	23.03
13	DHARWAD	48.69	49.26	31.5	31.6	26.80	26.10
14	GADAG	49.22	49.54	33.6	33.1	27.87	27.00
15	HASSAN	50.10	50.26	28.9	28.0	22.74	21.88
16	HAVERI	48.55	48.73	33.3	33.7	27.38	27.32
17	KALABURAGI	48.94	49.28	40.1	39.2	32.50	31.38
18	KODAGU	49.90	50.48	28.8	28.3	24.68	23.66
19	KOLAR	49.41	49.47	31.8	31.6	26.22	25.72
20	KOPPAL	49.56	49.64	40.0	38.9	32.51	31.48
21	MANDYA	49.65	49.88	29.0	28.1	23.18	21.71
22	MYSURU	49.09	49.63	29.2	29.6	23.88	23.36
23	RAICHUR	49.58	49.99	39.9	38.9	33.14	31.55
24	RAMANAGARA *	49.09	49.38	-	-	23.48	22.71
25	SHIVAMOGGA	49.43	49.94	29.7	29.3	25.00	24.03
26	TUMAKURU	49.17	49.59	29.6	29.0	23.84	22.75
27	UDUPI	53.05	52.26	28.4	24.4	21.77	19.17
28	UTTARA KANNADA	49.26	49.47	29.9	29.3	24.62	23.69
29	VIJAYAPURA	48.73	48.97	37.1	36.5	32.29	31.24
30	YADGIR *	49.55	49.73	-	-	35.96	34.39
KARNATAKA		**49.10**	**49.31**	**32.0**	**31.7**	**26.59**	**25.86**

Source:Census2011, Karnataka at a glance 2014-15, DES, Karnataka.

** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District on 2007 and 3. Yadgir District from Kalaburagi District on 2009*

7. Gender Disparities

District		Sex ratio in age group 0-6 years		Sex ratio-female per 1000 males				
		2001	2011	1971	1981	1991	2001	2011
1		8	9	10	11	12	13	14
1	BAGALKOTE	940	935	987	997	982	980	989
2	BALLARI	947	960	966	975	966	969	983
3	BELAGAVI	921	934	947	957	954	960	973
4	BENGALURU RURAL	939	950	954	955	945	945	946
5	BENGALURU URBAN	943	944	886	900	903	908	916
6	BIDAR	941	942	963	968	952	949	956
7	CHAMARAJANAGARA	964	953	955	956	953	971	993
8	CHIKKABALLAPURA*	952	953	-	-	-	966	972
9	CHIKKAMAGALURU	959	969	937	953	977	984	1008
10	CHITRADURGA	946	947	946	952	951	955	974
11	DAKSHINA KANNADA	952	947	1006	1015	1020	1022	1020
12	DAVANAGERE	946	948	947	944	942	952	972
13	DHARWAD	943	944	928	938	935	949	971
14	GADAG	952	947	983	981	969	969	982
15	HASSAN	958	973	974	987	999	1004	1010
16	HAVERI	957	946	938	937	936	944	950
17	KALABURAGI	931	943	981	981	962	958	971
18	KODAGU	977	978	910	933	979	996	1019
19	KOLAR	965	962	961	971	965	972	979
20	KOPPAL	953	958	979	989	981	983	986
21	MANDYA	934	939	960	960	963	986	995
22	MYSURU	962	961	936	948	953	964	985
23	RAICHUR	964	950	982	988	978	983	1000
24	RAMANAGARA	945	962	-	-	-	964	976
25	SHIVAMOGGA	956	960	919	944	964	978	998
26	TUMAKURU	949	959	957	961	959	967	984
27	UDUPI	958	958	1140	1130	1134	1130	1094
28	UTTARA KANNADA	946	955	957	958	966	971	979
29	VIJAYAPURA	928	931	963	970	948	950	960
30	YADGIR	952	951	-	-	-	982	989
KARNATAKA		**946**	**948**	**957**	**963**	**960**	**965**	**973**

Source:Census2011

** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District on 2007 and 3. Yadgir District from Kalaburagi District on 2009*

7. Gender Disparities

District		Female literacy rate					
		2001			2011		
		Total	Rural	Urban	Total	Rural	Urban
1		15	16	17	18	19	20
1	BAGALKOTE	43.56	36.33	60.87	58.40	52.58	70.65
2	BALLARI	45.28	36.82	60.69	58.09	51.02	69.62
3	BELAGAVI	52.32	45.8	72.53	64.58	59.2	79.95
4	BENGALURU RURAL	59.67	56.35	71.17	70.63	66.8	80.95
5	BENGALURU URBAN	77.48	60.78	79.70	84.01	70.92	85.27
6	BIDAR	48.81	43.64	66.47	61.55	56.82	75.88
7	CHAMARAJANAGARA	42.48	38.59	63.86	54.92	51.06	73.54
8	CHIKKABALLAPURA*	48.33	43.39	69.28	61.55	57.1	77.06
9	CHIKKAMAGALURU	64.01	60.7	77.78	73.16	70.15	84.51
10	CHITRADURGA	53.78	49.12	74.74	65.88	61.91	81.55
11	DAKSHINA KANNADA	77.21	72.69	84.47	84.13	79.83	88.83
12	DAVANAGERE	58.04	52.02	71.89	68.91	63.69	79.77
13	DHARWAD	61.92	47.7	73.28	73.46	62.72	81.31
14	GADAG	52.52	46.28	63.88	65.44	60.62	73.92
15	HASSAN	59.00	54.72	79.35	68.60	64.29	84.81
16	HAVERI	57.37	54.52	68.17	70.46	67.89	79.29
17	KALABURAGI	42.06	32.7	62.31	55.09	46.86	71.91
18	KODAGU	72.26	70.1	86.11	78.14	76.37	88.58
19	KOLAR	55.46	46.51	76.95	66.84	59.82	82.18
20	KOPPAL	39.61	35.81	58.34	57.55	54.85	70.59
21	MANDYA	51.53	47.65	72.26	62.54	59.21	78.75
22	MYSURU	55.81	42.31	78.12	67.06	55.78	82.67
23	RAICHUR	35.93	28.86	56.54	48.73	42.37	67.1
24	RAMANAGARA *	51.22	46.7	68.89	61.5	56.36	77.51
25	SHIVAMOGGA	66.88	60.66	78.5	74.84	69.6	84.24
26	TUMAKURU	56.94	52.29	76.35	67.38	62.71	83.67
27	UDUPI	75.19	72.97	85.31	81.58	78.65	89.21
28	UTTARA KANNADA	68.47	63.52	80.59	78.39	74.87	86.91
29	VIJAYAPURA	43.47	37.32	64.89	56.72	51.1	74.79
30	YADGIR *	28.32	23.2	52.8	41.38	36.05	63.92
KARNATAKA		**56.87**	**48.01**	**74.12**	**68.08**	**59.71**	**81.36**

Source:Census2011,

** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District on 2007 and 3. Yadgir District from Kalaburagi District on 2009*

7. Gender Disparities

District		Gap in male and female literacy						Ratio of female to male literacy	
		2001			2011				
		Total	Rural	Urban	Total	Rural	Urban	2001	2011
1		21	22	23	24	25	26	27	28
1	BAGALKOTE	27.32	29.68	21.53	20.83	23.19	15.90	0.61	0.74
2	BALLARI	23.92	26.67	18.72	18.55	21.40	13.96	0.65	0.76
3	BELAGAVI	23.38	25.73	15.90	17.62	19.92	11.15	0.69	0.79
4	BENGALURU RURAL	19.32	21.22	12.64	14.19	16.26	8.62	0.76	0.83
5	BENGALURU URBAN	10.44	18.04	9.43	7.00	13.62	6.39	0.88	0.92
6	BIDAR	23.65	25.58	16.67	17.54	19.46	11.54	0.67	0.78
7	CHAMARAJANAGARA	16.55	17.05	13.83	13.01	13.74	9.75	0.72	0.81
8	CHIKKABALLAPURA*	21.47	23.29	13.43	16.20	18.31	8.95	0.69	0.79
9	CHIKKAMAGALURU	16.28	17.72	9.99	12.25	13.67	6.89	0.80	0.86
10	CHITRADURGA	20.88	22.72	12.47	15.49	17.28	8.67	0.72	0.81
11	DAKSHINA KANNADA	12.49	14.38	9.31	9.00	11.14	6.67	0.86	0.90
12	DAVANAGERE	18.33	21.02	12.01	13.49	15.94	8.42	0.76	0.84
13	DHARWAD	18.90	25.43	13.72	12.91	18.26	9.18	0.77	0.85
14	GADAG	26.80	30.12	20.72	19.22	22.21	14.09	0.66	0.77
15	HASSAN	19.37	21.22	9.99	15.04	17.12	7.13	0.75	0.82
16	HAVERI	20.24	22.09	13.27	13.54	15.16	8.10	0.74	0.84
17	KALABURAGI	24.12	26.61	18.02	19.29	22.22	13.21	0.64	0.74
18	KODAGU	11.44	12.04	7.08	9.05	9.57	5.83	0.86	0.90
19	KOLAR	20.53	24.46	11.15	14.97	18.29	7.87	0.73	0.82
20	KOPPAL	28.81	30.29	21.33	20.99	22.30	14.89	0.58	0.73
21	MANDYA	18.97	20.17	12.05	15.73	17.13	9.03	0.73	0.80
22	MYSURU	15.07	18.7	9.21	11.40	14.86	6.83	0.79	0.85
23	RAICHUR	25.59	27.23	20.22	21.74	23.64	16.00	0.58	0.69
24	RAMANAGARA *	18.66	20.61	10.75	15.26	17.60	7.96	0.73	0.80
25	SHIVAMOGGA	15.13	17.79	10.03	11.23	13.54	7.11	0.82	0.87
26	TUMAKURU	19.84	21.96	10.56	15.43	17.77	7.26	0.74	0.81
27	UDUPI	13.04	13.88	8.52	9.83	11.20	6.01	0.85	0.89
28	UTTARA KANNADA	16.06	18.04	11.20	11.24	12.76	7.58	0.81	0.87
29	VIJAYAPURA	26.47	28.63	18.97	20.49	22.93	13.01	0.62	0.73
30	YADGIR *	23.03	23.29	21.27	20.87	21.97	16.11	0.55	0.66
KARNATAKA		**19.23**	**22.44**	**12.54**	**14.39**	**17.90**	**8.68**	**0.75**	**0.83**

Source:Census2011

** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District on 2007 and 3. Yadgir District from Kalaburagi District on 2009*

7. Gender Disparities

District		Indicators of reproductive and child health (RCH) - 2012-13					
		Mean age at marriage		Percentage marrying below legal age		Percentage of birth order 2 and above	Percentage receving full ANC
		Boys	Girls	Boys (<21 yrs)	Girls (<18 yrs)		
1		29	30	31	32	33	34
1	BAGALKOTE	25.1	19.1	10.1	25.2	62.9	41.7
2	BALLARI	24.4	19.4	10.2	20.9	57.1	20.0
3	BELAGAVI	25.6	19.6	7.4	26.7	63.0	46.3
4	BENGALURU RURAL	27.0	21.0	3.6	6.7	58.0	63.6
5	BENGALURU URBAN	26.7	20.8	4.1	11.8	47.0	74.5
6	BIDAR	25.3	19.7	9.3	17.2	62.9	45.5
7	CHAMARAJANAGARA	26.7	20.7	5.0	17.0	58.3	74.1
8	CHIKKABALLAPURA*	25.8	19.8	6.8	10.7	52.7	41.2
9	CHIKKAMAGALURU	27.1	22.4	6.1	4.7	50.3	47.8
10	CHITRADURGA	26.4	20.9	8.4	10.2	53.4	37.5
11	DAKSHINA KANNADA	29.0	23.5	2.2	1.1	45.6	66.7
12	DAVANAGERE	27.2	21.2	5.4	7.0	54.8	31.5
13	DHARWAD	26.3	20.2	3.0	13.1	55.5	18.6
14	GADAG	26.1	19.3	6.7	18.4	56.6	22.2
15	HASSAN	27.2	22.1	3.6	3.3	46.6	61.6
16	HAVERI	26.7	20.4	3.4	10.5	57.4	31.7
17	KALABURAGI	24.7	18.9	12.9	28.8	64.1	56.8
18	KODAGU	28.4	22.2	4.0	1.1	49.1	59.8
19	KOLAR	26.3	20.1	6.3	13.1	51.5	57.4
20	KOPPAL	25.7	19.8	9.9	14.2	60.7	19.0
21	MANDYA	27.9	20.6	1.3	11.0	45.2	69.5
22	MYSURU	27.6	20.7	5.3	10.3	48.7	56.8
23	RAICHUR	23.9	19.5	15.0	22.6	64.8	39.6
24	RAMANAGARA	26.6	20.9	2.8	10.2	55.5	44.0
25	SHIVAMOGGA	28.1	22.2	4.0	4.0	49.1	60.2
26	TUMAKURU	27.3	20.8	3.1	11.0	44.9	73.1
27	UDUPI	30.2	24.3	0.9	0.9	45.3	53.6
28	UTTARA KANNADA	29.0	22.5	2.1	5.3	46.9	53.1
29	VIJAYAPURA	24.6	19.5	11.5	24.1	65.2	26.2
30	YADGIR	24.0	18.5	19.1	36.4	63.2	43.4
KARNATAKA		**26.4**	**20.6**	**7.2**	**14.1**	**56.6**	**46.0**

Source: DLHS-4, 2012-13

** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District on 2007 and 3. Yadgir District from Kalaburagi District on 2009*

7. Gender Disparities

District		Work participation rates (total of main and marginal)					
		Males		Female		Percentage increase/ decrease over 2001	
		2001	2011	2001	2011	Male	Female
1		35	36	37	38	39	40
1	BAGALKOTE	53.7	53.84	33.3	32.62	0.3	-2.0
2	BALLARI	54.6	56.85	35.9	34.03	4.1	-5.2
3	BELAGAVI	55.9	56.64	32.7	31.11	1.3	-4.9
4	BENGALURU RURAL	59.6	61.96	34.7	29.97	4.0	-13.6
5	BENGALURU URBAN	58.0	62.03	18.7	24.61	6.9	31.6
6	BIDAR	47.5	52.72	26.2	29.25	11.0	11.6
7	CHAMARAJANAGARA	61.4	63.32	31.1	30.94	3.1	-0.5
8	CHIKKABALLAPURA*	-	60.41	-	41.27	-	-
9	CHIKKAMAGALURU	59.4	63.16	30.9	36.39	6.3	17.8
10	CHITRADURGA	57.0	61.05	37.7	41.93	7.1	11.2
11	DAKSHINA KANNADA	58.2	60.01	41.7	35.72	3.1	-14.3
12	DAVANAGERE	56.7	59.37	30.1	30.19	4.7	0.3
13	DHARWAD	56.0	58.02	28.6	26.5	3.6	-7.3
14	GADAG	56.2	57.79	37.7	35.13	2.8	-6.8
15	HASSAN	60.8	63.42	39.7	38.43	4.3	-3.2
16	HAVERI	58.2	59.91	33.7	30.74	2.9	-8.8
17	KALABURAGI	51.1	52.24	34.9	32.19	2.2	-7.8
18	KODAGU	60.9	62.67	36.2	38.17	2.9	5.4
19	KOLAR	58.1	58.48	39.0	34.71	0.7	-11.0
20	KOPPAL	53.7	55.43	38.9	38.67	3.2	-0.6
21	MANDYA	61.2	63.55	33.9	32.89	3.8	-3.0
22	MYSURU	58.2	60.98	25.3	26.35	4.8	4.2
23	RAICHUR	52.9	54.99	34.7	38.69	4.0	11.5
24	RAMANAGARA *	-	62.84	-	35.00	-	-
25	SHIVAMOGGA	58.7	60.92	28.0	28.12	3.8	0.4
26	TUMAKURU	60.2	62.01	41.3	38.93	3.0	-5.7
27	UDUPI	55.1	59.67	33.9	28.91	8.3	-14.7
28	UTTARA KANNADA	57.6	59.29	27.8	25.03	2.9	-10.0
29	VIJAYAPURA	50.5	52.21	28.5	32.6	3.4	14.4
30	YADGIR *	-	53.72	-	39.48	-	-
KARNATAKA		**56.6**	**59.00**	**32.0**	**31.87**	**4.2**	**-0.4**

Source:Census2011

** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District on 2007 and 3. Yadgir District from Kalaburagi District on 2009*

7. Gender Disparities

District		Women work participation			
		Proportion of female workers to male workers(%)		Percentage of women cultivators to all cultivators	Percentage of women agricultural labourers to all agricultural labourers
		2001	2011	2011	2011
1		41	42	43	44
1	BAGALKOTE	60.7	59.9	23.81	57.68
2	BALLARI	63.8	58.8	29.97	56.66
3	BELAGAVI	56.2	53.4	28.48	55.97
4	BENGALURU RURAL	55.6	45.8	27.39	52.42
5	BENGALURU URBAN	29.2	36.3	29.68	36.12
6	BIDAR	52.3	53.1	27.73	49.83
7	CHAMARAJANAGARA	49.2	48.5	19.89	42.73
8	CHIKKABALLAPURA*	-	66.4	35.66	53.81
9	CHIKKAMAGALURU	51.2	58.1	28.83	53.21
10	CHITRADURGA	63.2	66.9	30.49	57.52
11	DAKSHINA KANNADA	73.2	60.7	25.16	26.95
12	DAVANAGERE	50.5	49.5	19.65	50.13
13	DHARWAD	48.4	44.3	27.23	53.96
14	GADAG	65.0	59.7	25.68	56.11
15	HASSAN	65.6	61.2	34.19	62.03
16	HAVERI	54.6	48.8	19.03	48.55
17	KALABURAGI	66.0	59.9	23.81	55.69
18	KODAGU	59.1	62.1	34.85	49.61
19	KOLAR	65.3	58.1	34.04	52.13
20	KOPPAL	71.3	68.8	26.32	59.65
21	MANDYA	54.6	51.5	26.46	53.17
22	MYSURU	41.9	42.6	24.89	46.50
23	RAICHUR	64.6	70.3	27.57	59.10
24	RAMANAGARA *	-	54.3	32.83	53.75
25	SHIVAMOGGA	46.6	46.1	22.86	48.59
26	TUMAKURU	66.4	61.0	29.77	59.67
27	UDUPI	69.5	53.0	39.06	51.05
28	UTTARA KANNADA	46.8	41.3	27.50	47.31
29	VIJAYAPURA	53.6	59.9	25.49	56.32
30	YADGIR *	-	72.7	23.41	62.90
KARNATAKA		**54.5**	**52.6**	**27.76**	**54.12**

Source:Census2011

**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District on 2007 and 3. Yadgir District from Kalaburagi District on 2009*

7. Gender Disparities

District		Women work participation	
		Percentage of women in houshold industries to all workers in houshold industries	Percentage of women other worker to all other workers
		2011	2011
1		45	46
1	BAGALKOTE	37.75	24.82
2	BALLARI	41.61	22.49
3	BELAGAVI	36.49	21.19
4	BENGALURU RURAL	37.76	25.36
5	BENGALURU URBAN	32.50	26.17
6	BIDAR	38.23	22.00
7	CHAMARAJANAGARA	49.27	25.95
8	CHIKKABALLAPURA*	46.56	29.38
9	CHIKKAMAGALURU	36.89	33.63
10	CHITRADURGA	46.25	29.86
11	DAKSHINA KANNADA	91.42	25.24
12	DAVANAGERE	49.07	25.38
13	DHARWAD	33.83	19.85
14	GADAG	37.40	22.55
15	HASSAN	39.85	29.66
16	HAVERI	44.94	20.70
17	KALABURAGI	40.86	26.49
18	KODAGU	36.15	37.91
19	KOLAR	53.54	27.04
20	KOPPAL	42.58	26.52
21	MANDYA	46.95	28.16
22	MYSURU	40.17	23.90
23	RAICHUR	43.13	27.59
24	RAMANAGARA *	46.61	27.29
25	SHIVAMOGGA	38.30	23.47
26	TUMAKURU	58.44	28.15
27	UDUPI	47.92	30.77
28	UTTARA KANNADA	24.85	24.22
29	VIJAYAPURA	41.35	25.05
30	YADGIR *	47.21	28.06
KARNATAKA		51.93	25.93

Source: Census2011

** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District on 2007 and 3. Yadgir District from Kalaburagi District on 2009*

7. Gender Disparities

District		Female Popu latation in lakhs	Crime against women								
			Rape per lakh female populatation			Dowry deaths per lakh female population			Molestation per lakh female population		
		2011	2014	2015	2016	2014	2015	2016	2014	2015	2016
1		47	48	49	50	51	52	53	54	55	56
1	BAGALKOTE	9.39	2.34	3.30	2.88	0.43	0.21	0.32	10.22	16.29	10.76
2	BENGALURU CITY	42.68	2.44	7.22	7.52	1.34	1.27	1.34	15.93	16.82	19.21
3	BENGALURU DISTRICT	8.12	7.39	8.00	7.27	2.71	1.97	0.74	16.63	19.70	15.27
4	BELAGAVI DISTRICT	18.85	3.13	2.71	3.45	0.21	0.11	0.11	12.36	9.18	9.55
5	BALLARI	12.15	3.95	4.69	5.10	0.99	1.07	0.74	9.96	8.72	10.37
6	BIDAR	8.32	3.97	2.64	2.04	1.20	1.20	0.96	9.86	10.58	9.38
7	VIJAYAPURA	10.66	4.22	4.69	4.69	0.66	0.94	0.28	11.91	13.13	9.57
8	CHIKKABALLAPURA	6.18	5.83	7.93	11.81	1.62	1.94	0.97	17.15	11.97	10.19
9	CHAMARAJNAGARA	50.85	0.22	0.35	0.39	0.10	0.18	0.06	1.81	2.16	2.42
10	CHIKKAMAGALURU	57.13	0.53	0.67	0.88	0.09	0.07	0.09	3.01	2.52	3.66
11	CHITRADURGA	8.18	2.93	2.93	3.91	2.08	0.37	1.47	29.46	30.56	29.22
12	DAKSHINA KANNADA	5.51	7.26	10.16	6.17	0.18	0.18	0.00	12.70	18.33	11.80
13	DAVANAGERE	9.59	4.17	6.05	4.38	0.94	0.42	0.31	22.00	18.98	18.98
14	DHARWAD	4.4	5.23	3.64	2.95	0.68	0.45	0.23	7.27	7.73	6.59
15	GADAG	5.27	2.85	3.61	4.36	0.38	0.00	0.00	5.88	9.30	8.92
16	KALABURGI	12.64	4.19	4.51	4.51	1.11	0.79	0.55	11.47	11.00	10.28
17	HASSAN	8.92	7.06	7.85	5.49	1.23	1.57	1.12	28.14	21.75	28.36
18	HAVERI	7.78	5.14	5.01	5.14	1.29	0.26	0.39	12.08	6.04	8.61
19	HUBBALLI DHARWAD CITY	4.69	4.48	4.26	4.05	1.49	0.64	0.00	6.61	6.82	10.45
20	K.G.F.	2.25	8.89	1.78	5.33	0.44	1.78	1.33	9.33	5.78	8.89
21	KODAGU	2.79	8.96	21.51	8.24	0.36	0.36	0.36	21.51	17.20	20.79
22	KOLAR	5.34	5.99	4.49	5.24	1.50	0.56	0.75	12.55	7.49	8.80
23	KOPPAL	6.89	4.06	5.22	5.08	0.58	0.44	0.29	4.93	7.55	11.76
24	MANDYA	9.00	4.00	3.89	5.33	1.22	1.00	1.00	30.89	48.00	44.56
25	MANGALURU CITY	3.14	7.96	5.73	8.92	0.32	0.00	0.00	22.93	25.48	38.85
26	MYSURU CITY	6.18	6.63	7.12	8.09	0.49	1.29	0.97	14.08	11.97	20.23
27	MYSURU DISTRICT	8.71	4.71	4.94	5.17	2.30	0.57	0.57	23.08	18.37	21.47
28	RAICHUR	9.64	5.71	6.54	4.77	0.52	0.83	0.93	20.54	23.13	22.61
29	K.RAILWA YS*	-	-	-	-	-	-	-	-	-	-
30	RAMANAGARA	5.34	8.05	8.61	5.62	2.25	2.06	1.69	26.59	28.46	32.58
31	SHIVAMOGGA	8.75	6.63	10.74	11.77	0.91	1.14	1.26	46.17	42.06	43.20
32	TUMAKURU	13.28	2.71	2.79	3.61	1.13	1.20	1.66	18.22	6.33	5.72
33	UDUPI	6.15	4.55	6.50	4.88	0.49	0.00	0.16	18.05	17.89	18.21
34	UTTARA KANNADA	7.1	3.52	3.52	4.08	0.00	0.00	0.42	21.69	22.68	13.94
35	YADGIR	5.83	7.03	3.77	4.12	0.34	0.34	1.37	25.39	23.67	20.07
36	BELAGAVI CITY	4.7	4.68	4.68	4.47	1.70	0.64	0.64	18.09	15.53	11.28
TOTAL-ALL DISTRICTS		**396.4**	**3.34**	**4.19**	**4.18**	**0.79**	**0.64**	**0.59**	**13.28**	**12.90**	**13.27**

Source: Computed based on data of State Crimes Record Bureau,Karnataka and Census populatation 2011.

** K.railways refers to Karnataka Railways the data covers the railway junctions and it will be updated from the railway department.*

7. Gender Disparities

District		Female Popu latation in lakhs	Crime against women								
			Sucides per lakh population						Female sucides as % of male		
		2011	2014		2015		2016				
			Male	Female	Male	Female	Male	Female	2014	2015	2016
1		57	58	59	60	61	62	63	64	65	66
1	Bagalkote	9.39	213	74	140	80	124	35	34.74	57.14	28.23
2	Bengaluru City	42.68	1258	646	1248	627	1207	588	51.35	50.24	48.72
3	Bengaluru District	8.12	256	136	284	105	385	232	53.13	36.97	60.26
4	Belagavi District	18.85	547	190	439	128	467	162	34.74	29.16	34.69
5	Ballari	12.15	198	108	155	113	148	75	54.55	72.90	50.68
6	Bidar	8.32	114	40	129	66	178	33	35.09	51.16	18.54
7	Vijayapura	10.66	218	81	190	79	172	80	37.16	41.58	46.51
8	Chikkaballapura	6.18	99	71	119	55	116	65	71.72	46.22	56.03
9	Chamarajnagara	50.85	62	34	13	55	46	24	54.84	423.08	52.17
10	Chikkamagaluru	57.13	394	102	246	124	237	105	25.89	50.41	44.30
11	Chitradurga	8.18	162	78	159	130	168	153	48.15	81.76	91.07
12	Dakshina Kannada	5.51	200	68	173	56	195	48	34.00	32.37	24.62
13	Davanagere	9.59	213	127	109	222	267	113	59.62	203.67	42.32
14	Dharwad	4.4	185	70	140	65	183	45	37.48	46.43	24.59
15	Gadag	5.27	107	43	124	35	112	55	40.19	28.23	49.11
16	Kalaburagi	12.64	153	67	131	59	177	63	43.79	45.04	35.59
17	Hassan	8.92	419	154	172	154	295	79	36.75	89.53	26.78
18	Haveri	7.78	196	74	235	97	223	76	37.76	41.28	34.08
19	Hubballi Dharwad City	4.69	97	50	129	50	118	50	51.55	38.76	42.37
20	K.G.F.	2.25	36	24	51	28	59	25	66.67	54.90	42.37
21	Kodagu	2.79	221	55	175	59	188	49	24.89	33.71	26.06
22	Kolar	5.34	81	51	74	50	73	26	62.96	67.57	35.62
23	Koppal	6.89	284	88	117	23	73	31	30.99	19.66	42.47
24	Mandya	9	99	45	175	78	174	64	45.45	44.57	36.78
25	Mangaluru City	3.14	186	48	179	41	174	44	25.81	22.91	25.29
26	Mysuru City	6.18	97	46	94	63	124	52	47.42	67.02	41.94
27	Mysuru District	8.71	199	128	185	71	229	71	64.32	38.38	31.00
28	Raichur	9.64	128	66	123	44	84	34	51.56	35.77	40.48
29	K.Railways*	0	0	0	488	67	185	17	0.00	13.73	9.19
30	Ramanagara	5.34	191	55	165	60	164	66	28.80	36.36	40.24
31	Shivamogga	8.75	318	118	336	146	341	122	37.11	43.45	35.78
32	Tumakuru	13.28	280	123	324	123	330	139	43.93	37.96	42.12
33	Udupi	6.15	259	101	284	66	255	114	39.00	23.24	44.71
34	Uttara Kannada	7.1	179	68	168	62	164	51	37.99	36.90	31.10
35	Yadagiri	5.83	35	30	72	18	108	20	85.71	25.00	18.52
36	Belagavi City	4.7	0	0	109	33	94	44	0.00	30.28	46.81
TOTAL-ALL DISTRICTS		**396.4**	**7684**	**3259**	**7454**	**3332**	**7637**	**3050**	**42.41**	**44.70**	**39.94**

*Source: Computed based on data of State Crimes Record Bureau, Karnataka and Census populat at on 2011. * K.railways refers to Karnataka Railways the data covers the railway junctions and it will be updated from the railway department.*

7. Gender Disparities

District		Empowerment of women						
		Gram panchayat- General Election 2015						
		No.of Grama Panchayats	No.of Seats	Seats won by Women		Total No.of Presidents	Women Presidents	
				No.	%		No.	%
1		67	68	69	70	71	72	73
1	BAGALKOTE	197	3265	1691	51.79	198	100	50.51
2	BALLARI	196	3691	1906	51.64	199	101	50.75
3	BELAGAVI	481	8467	4285	50.61	497	252	50.70
4	BENGALURU RURAL	96	1758	904	51.42	105	53	50.48
5	BENGALURU URBAN	93	2373	1204	50.74	96	49	51.04
6	BIDAR	179	3199	1625	50.80	186	94	50.54
7	CHAMARAJANAGARA	129	2157	1105	51.23	130	60	46.15
8	CHIKKABALLAPURA	152	2482	1266	51.01	157	80	50.96
9	CHIKKAMAGALURU	217	2234	1096	49.06	227	115	50.66
10	CHITRADURGA	186	3367	1727	51.29	189	96	50.79
11	DAKSHINA KANNADA	227	3399	1757	51.69	230	116	50.43
12	DAVANAGERE	224	3218	1649	51.24	234	119	50.85
13	DHARWAD	136	1960	995	50.77	143	73	51.05
14	GADAG	116	1706	878	51.47	120	62	51.67
15	HASSAN	254	3589	1797	50.07	266	135	50.75
16	HAVERI	206	2967	1531	51.60	222	113	50.90
17	KALABURAGI	243	4214	2180	51.73	264	134	50.76
18	KODAGU	102	1219	631	51.76	104	52	50.00
19	KOLAR	156	2790	1429	51.22	156	79	50.64
20	KOPPAL	148	2677	1367	51.06	152	76	50.00
21	MANDYA	230	3826	1960	51.23	234	118	50.43
22	MYSURU	266	4744	2436	51.35	266	135	50.75
23	RAICHUR	174	3458	1726	49.91	180	91	50.56
24	RAMANAGARA	120	1956	1004	51.33	127	64	50.39
25	SHIVAMOGGA	263	2862	1501	52.45	271	137	50.55
26	TUMAKURU	330	5368	2761	51.43	331	167	50.45
27	UDUPI	155	2398	1237	51.58	158	80	50.63
28	UTTARA KANNADA	230	2732	1418	51.90	230	117	50.87
29	VIJAYAPURA	210	3926	2007	51.12	213	108	50.70
30	YADGIR	121	2342	1179	50.34	123	62	50.41
KARNATAKA		**5837**	**94344**	**48252 ***	**51.14**	**6008**	**3038**	**50.57**

Source:Karnataka State Election Commission.
** Seats won by women Category: SC- 11049, ST- 7,634. Backward Class A- 8,358. Backward Class B- 1,296 and in General- 19, 915. Total- 48,252.*

7. Gender Disparities

District		Empowerment of women-2016					
		Taluk panchayat-General Election					
		Total No.of members	No.of women members	% of seats reserved for women	Total No.of Presidents	Women Presidents	
						No.	%
1		74	75	76	77	78	79
1	BAGALKOTE	130	67	51.54	6	1	16.67
2	BALLARI	150	76	50.67	7	5	71.43
3	BELAGAVI	345	175	50.72	10	6	60.00
4	BENGALURU RURAL	77	39	50.65	4	1	52.00
5	BENGALURU URBAN	97	50	51.55	4	3	75.00
6	BIDAR	131	66	50.38	5	3	60.00
7	CHAMARAJANAGARA	89	46	51.69	4	0	0.00
8	CHIKKABALLAPURA	108	56	51.85	6	2	33.33
9	CHIKKAMAGALURU	107	56	52.34	7	2	28.57
10	CHITRADURGA	136	70	51.47	6	3	50.00
11	DAKSHINA KANNADA	136	69	50.74	5	2	40.00
12	DAVANAGERE	133	68	51.13	6	4	66.67
13	DHARWAD	82	42	51.22	5	4	80.00
14	GADAG	75	39	52.00	5	2	40.00
15	HASSAN	153	80	52.29	8	6	75.00
16	HAVERI	128	65	50.78	7	2	28.57
17	KALABURAGI	179	90	50.28	7	5	71.43
18	KODAGU	50	26	52.00	3	3	100.00
19	KOLAR	111	57	51.35	5	2	40.00
20	KOPPAL	109	56	51.38	4	1	25.00
21	MANDYA	155	79	50.97	7	4	57.14
22	MYSURU	187	94	50.27	7	4	57.14
23	RAICHUR	142	72	50.70	5	4	80.00
24	RAMANAGARA	81	41	50.62	4	0	0.00
25	SHIVAMOGGA	116	61	52.59	7	3	42.86
26	TUMAKURU	215	109	50.70	10	4	40.00
27	UDUPI	98	50	51.02	3	3	100.00
28	UTTARA KANNADA	130	70	53.85	11	7	63.64
29	VIJAYAPURA	159	81	50.94	5	2	40.00
30	YADGIR	94	48	51.06	3	1	33.33
KARNATAKA		**3903**	**1998**	**51.19**	**176**	**89**	**50.57**

Source:Karnataka State Election Commission.

7. Gender Disparities

District		Empowerment of women-2016					
		Zilla panchayat-General Election					
		Total No.of members	No.of women members	% of seats reserved for women	Total No.of Presidents	Women Presidents	
						No.	%
1		80	81	82	83	84	85
1	BAGALKOTE	36	18	50.00	1	1	100
2	BALLARI	40	20	50.00	1	1	100
3	BELAGAVI	90	45	50.00	1	1	100
4	BENGALURU RURAL	21	11	52.38	1	0	0
5	BENGALURU URBAN	50	25	50.00	1	0	0
6	BIDAR	34	17	50.00	1	1	100
7	CHAMARAJANAGARA	23	12	52.17	1	0	0
8	CHIKKABALLAPURA	28	14	50.00	1	0	0
9	CHIKKAMAGALURU	33	17	51.52	1	1	100
10	CHITRADURGA	37	19	51.35	1	1	100
11	DAKSHINA KANNADA	36	18	50.00	1	0	0
12	DAVANAGERE	36	18	50.00	1	1	100
13	DHARWAD	22	11	50.00	1	1	100
14	GADAG	19	10	52.63	1	0	0
15	HASSAN	40	20	50.00	1	1	100
16	HAVERI	34	17	50.00	1	0	0
17	KALABURAGI	47	24	51.06	1	1	100
18	KODAGU	29	15	51.72	1	0	0
19	KOLAR	30	15	50.00	1	0	0
20	KOPPAL	29	15	51.72	1	0	0
21	MANDYA	41	21	51.22	1	1	100
22	MYSURU	49	25	51.02	1	1	100
23	RAICHUR	38	19	50.00	1	1	100
24	RAMANAGARA	22	11	50.00	1	0	0
25	SHIVAMOGGA	31	16	51.61	1	1	100
26	TUMAKURU	57	29	50.88	1	0	0
27	UDUPI	26	12	50.00	1	0	0
28	UTTARA KANNADA	39	20	51.28	1	1	100
29	VIJAYAPURA	42	21	50.00	1	0	0
30	YADGIR	24	12	50.00	1	0	0
KARNATAKA		**1083**	**548**	**50.60**	**30**	**15**	**50**

Source:Karnataka State Election Commission.

8. Housing and Amenities

District		Percentage distribution of census houses according to type -All areas									
		2001				2011					
		Permanent	Semi-permanent	Temporary	Unclas-sified	Permpanent	Semi-permanent	Temporary			Unclassifiable
								Total	Serviceable	Non-Serviceable	
1		2	3	4	5	6	7	8	9	10	11
1	BAGALKOTE	25.15	66.89	7.92	0.04	42.8	44.9	11.4	7.5	3.9	0.9
2	BALLARI	42.03	33.48	24.47	0.03	66.1	21.4	11.5	5.7	5.8	1
3	BELAGAVI	54.60	38.34	7.05	0.01	58.1	35.6	5.7	2.8	2.9	0.6
4	BENGALURU RURAL	56.59	29.37	14.03	0.01	75.3	19.5	4.8	4	0.9	0.4
5	BENGALURU URBAN	89.72	8.52	1.75	0.01	93.3	5.7	0.7	0.2	0.5	0.3
6	BIDAR	75.17	22.49	2.29	0.05	74.2	22.7	1.8	0.9	0.8	1.4
7	CHAMARAJANAGARA	46.88	41.58	11.50	0.03	57.3	35.1	7.1	4.5	2.6	0.5
8	CHIKKABALLAPURA *	-	-	-	-	78.9	13.5	7	5.9	1.2	0.6
9	CHIKKAMAGALURU	44.81	49.15	6.02	0.02	53.8	43.6	2.3	0.9	1.4	0.3
10	CHITRADURGA	51.83	35.60	12.53	0.04	61.3	29.1	8.7	3.1	5.7	0.8
11	DAKSHINA KANNADA	48.06	47.29	4.63	0.02	69.4	29.5	1	0.6	0.3	0.2
12	DAVANAGERE	60.13	34.19	5.66	0.02	61.5	34.8	3	1.3	1.7	0.6
13	DHARWAD	47.37	35.40	17.21	0.02	55	32.5	12.1	10.1	2	0.4
14	GADAG	32.94	38.93	28.08	0.04	44.2	33.5	21.4	16.8	4.7	0.9
15	HASSAN	32.84	64.52	2.63	0.02	48.6	50	1.3	0.7	0.6	0.1
16	HAVERI	39.13	52.33	8.52	0.03	44.2	47.1	8.2	6.3	1.8	0.5
17	KALABURAGI	59.49	35.34	5.13	0.04	77.7	18	3	1.9	1.1	1.4
18	KODAGU	49.16	46.81	4.03	0.00	55.2	42.9	1.8	0.8	1	0.1
19	KOLAR	69.19	19.98	10.82	0.01	76.5	19.3	3.8	3.1	0.6	0.5
20	KOPPAL	25.95	40.18	33.81	0.07	49.8	31.4	17.3	12.4	4.9	1.5
21	MANDYA	56.93	34.18	8.88	0.01	65.8	30	4.1	2.7	1.3	0.2
22	MYSURU	53.73	41.12	5.14	0.01	65.9	31.7	2.2	1.4	0.8	0.2
23	RAICHUR	24.01	44.28	31.68	0.03	46.1	32.4	20.2	8.9	11.3	1.3
24	RAMANAGARA *	-	-	-	-	66.3	24.8	8.7	6.1	2.6	0.3
25	SHIVAMOGGA	45.27	47.27	7.46	0.00	56.8	40.9	2.1	0.8	1.2	0.2
26	TUMAKURU	61.23	24.91	13.79	0.07	70.2	22.3	6.9	4.3	2.5	0.7
27	UDUPI	53.18	39.96	6.85	0.01	78.6	20.2	1	0.5	0.4	0.2
28	UTTARA KANNADA	48.65	42.78	8.55	0.02	63.3	33.7	2.8	1.5	1.3	0.2
29	VIJAYAPURA	26.96	63.77	9.21	0.06	42.6	43.9	12.4	8.2	4.2	1.1
30	YADGIR *	-	-	-	-	48	39.8	10.7	5.9	4.8	1.4
KARNATAKA		**54.94**	**35.52**	**9.51**	**0.02**	**66.8**	**27.1**	**5.6**	**3.4**	**2.2**	**0.6**

Source: Primary Census Abstract (H-Series) - 2001 and 2011

** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of census houses according to type-Rural									
		2001				2011					
		Permanent	Semi-permanent	Temporary	Unclassified	Permpanent	Semi-permanent	Temporary			Unclassifiable
								Total	Serviceable	Non-Serviceable	
1		12	13	14	15	16	17	18	19	20	21
1	BAGALKOTE	16.91	73.96	9.08	0.05	33.4	52.2	13.6	8.5	5.1	0.8
2	BALLARI	32.81	39.30	27.86	0.03	59.3	25.6	13.9	7.1	6.9	1.1
3	BELAGAVI	51.38	40.16	8.46	0.01	53.2	39.3	6.9	3.2	3.7	0.6
4	BENGALURU RURAL	51.18	33.00	15.81	0.01	71	22.8	5.8	4.8	1	0.4
5	BENGALURU URBAN	71.32	24.86	3.81	0.01	84.6	13.8	1.4	0.6	0.8	0.2
6	BIDAR	74.46	22.94	2.55	0.05	72.3	24.2	1.9	1	0.9	1.6
7	CHAMARAJANAGARA	43.40	44.27	12.29	0.04	55.1	36.7	7.7	4.8	2.9	0.5
8	CHIKKABALLAPURA *	-	-	-	-	76.4	14.8	8.2	6.8	1.4	0.6
9	CHIKKAMAGALURU	38.43	54.45	7.09	0.03	48.4	48.6	2.7	1	1.7	0.3
10	CHITRADURGA	47.65	39.20	13.11	0.04	57.4	32.1	9.6	3.5	6.1	0.9
11	DAKSHINA KANNADA	32.87	60.25	6.87	0.01	57.2	41.2	1.4	1	0.4	0.2
12	DAVANAGERE	55.24	37.64	7.10	0.02	55.6	39.9	3.8	1.6	2.2	0.7
13	DHARWAD	23.93	45.87	30.19	0.02	30.1	47.1	22.4	18.8	3.6	0.5
14	GADAG	28.53	40.79	30.67	0.02	38.4	37.2	23.5	18.3	5.2	0.9
15	HASSAN	23.90	73.18	2.89	0.02	40.6	57.9	1.5	0.8	0.6	0.1
16	HAVERI	35.35	55.36	9.26	0.03	38.7	51.5	9.3	7.2	2.1	0.4
17	KALABURAGI	50.30	43.35	6.31	0.03	71	23.3	3.9	2.5	1.4	1.8
18	KODAGU	44.88	50.59	4.52	0.00	52.7	45.1	2	0.9	1.1	0.1
19	KOLAR	63.54	23.01	13.44	0.01	71.2	23.1	5.2	4.3	0.8	0.5
20	KOPPAL	21.12	43.26	35.55	0.07	45.6	33.7	19.1	13.9	5.2	1.6
21	MANDYA	53.27	38.12	8.60	0.01	62.6	33.3	4	2.7	1.3	0.2
22	MYSURU	36.65	56.53	6.81	0.01	52.4	44.4	3.1	2	1.1	0.2
23	RAICHUR	13.66	50.10	36.21	0.03	37.6	36.3	24.6	10.9	13.7	1.4
24	RAMANAGARA *	-	-	-	-	62.1	27.7	10	7	3	0.2
25	SHIVAMOGGA	31.28	57.81	10.90	0.00	46.7	50.2	2.9	1.1	1.8	0.2
26	TUMAKURU	56.50	27.38	16.05	0.07	66.9	24	8.3	5.3	3	0.8
27	UDUPI	48.06	43.97	7.96	0.01	75.5	23.3	1	0.6	0.4	0.2
28	UTTARA KANNADA	39.94	48.77	11.26	0.02	57	39.2	3.6	2	1.7	0.2
29	VIJAYAPURA	15.59	73.53	10.84	0.04	33.1	50.9	14.8	9.7	5.1	1.2
30	YADGIR *	-	-	-	-	42.5	44.3	11.9	6.4	5.5	1.4
KARNATAKA		**42.71**	**44.94**	**12.32**	**0.02**	**55.1**	**36.4**	**7.8**	**4.8**	**3**	**0.7**

Source: Primary Census Abstract (H-Series) - 2001 and 2011

** New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of census houses according to type-Urban									
		2001				2011					
		Permanent	Semi-permanent	Temporary	Unclassified	Permpanent	Semi-permanent	Temporary			Unclas-sifiable
								Total	Serviceable	Non-Serviceable	
1		22	23	24	25	26	27	28	29	30	31
1	BAGALKOTE	45.42	49.49	5.07	0.03	62	30	7	5.4	1.6	1.1
2	BALLARI	58.74	22.93	18.31	0.03	76.5	14.8	7.8	3.7	4.1	0.9
3	BELAGAVI	64.67	32.67	2.63	0.03	71.7	25.5	2.3	1.5	0.8	0.5
4	BENGALURU RURAL	76.97	15.70	7.32	0.00	86.3	11	2.3	1.8	0.6	0.4
5	BENGALURU URBAN	92.13	6.38	1.48	0.01	94.1	4.9	0.6	0.2	0.4	0.3
6	BIDAR	77.89	20.75	1.31	0.05	79.9	17.9	1.2	0.9	0.4	0.9
7	CHAMARAJANAGARA	66.88	26.11	7.00	0.01	68.7	27.1	4	2.8	1.2	0.2
8	CHIKKABALLAPURA *	-	-	-	-	87.8	8.9	3.1	2.7	0.4	0.3
9	CHIKKAMAGALURU	70.94	27.43	1.63	0.00	74.4	24.7	0.7	0.3	0.4	0.2
10	CHITRADURGA	70.47	19.55	9.92	0.06	76.8	17.4	5.3	1.4	4	0.4
11	DAKSHINA KANNADA	71.63	27.19	1.16	0.03	82.5	16.8	0.5	0.2	0.3	0.2
12	DAVANAGERE	71.23	26.38	2.38	0.01	73.6	24.4	1.5	0.8	0.7	0.6
13	DHARWAD	65.95	27.11	6.92	0.02	73.3	21.8	4.5	3.7	0.8	0.4
14	GADAG	41.30	35.43	23.19	0.08	54.6	26.9	17.8	14	3.8	0.7
15	HASSAN	74.61	24.01	1.38	0.00	79	20.2	0.7	0.3	0.3	0.2
16	HAVERI	54.17	40.26	5.58	0.00	63.8	31.4	4.2	3.5	0.8	0.6
17	KALABURAGI	85.89	12.32	1.72	0.07	91.2	7.2	1	0.6	0.4	0.6
18	KODAGU	76.43	22.69	0.88	0.00	69.8	29.4	0.8	0.3	0.4	0.1
19	KOLAR	86.54	10.68	2.76	0.02	87.8	11	0.8	0.6	0.3	0.4
20	KOPPAL	49.48	25.16	25.30	0.07	69.2	21.1	9	5.2	3.8	0.7
21	MANDYA	76.27	13.38	10.34	0.00	81.5	14	4.4	2.9	1.5	0.1
22	MYSURU	82.23	15.40	2.36	0.01	84.7	14	1	0.7	0.3	0.3
23	RAICHUR	54.32	27.24	18.39	0.05	69.8	21.3	7.9	3.4	4.5	0.9
24	RAMANAGARA *	-	-	-	-	80.3	15	4.3	3.3	1	0.4
25	SHIVAMOGGA	70.85	27.99	1.16	0.00	74.6	24.6	0.6	0.4	0.3	0.2
26	TUMAKURU	80.84	14.66	4.42	0.07	81.9	16	1.9	0.9	1	0.3
27	UDUPI	75.33	22.61	2.03	0.03	86.2	12.8	0.8	0.3	0.6	0.2
28	UTTARA KANNADA	69.98	28.08	1.91	0.03	78.6	20.3	0.9	0.3	0.6	0.3
29	VIJAYAPURA	67.96	28.56	3.34	0.15	72.6	21.8	4.8	3.4	1.5	0.7
30	YADGIR *	-	-	-	-	71.1	21.4	5.9	3.7	2.2	1.6
KARNATAKA		**77.92**	**17.82**	**4.23**	**0.02**	**84.1**	**13.3**	**2.2**	**1.3**	**0.9**	**0.4**

Source: Primary Census Abstract (H-Series) - 2001 and 2011
New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009

8. Housing and Amenities

District		Percentage distribution of household by no.of rooms (all areas)					
		2001					
		No.of households occupied					
		No.of exclusive rooms	1 room	2 room	3 room	4 room and above	Total no.of household
1		32	33	34	35	36	37
1	BAGALKOTE	2.70	36.91	36.70	13.16	10.53	293347
2	BALLARI	10.12	43.91	27.86	10.49	7.61	368360
3	BELAGAVI	3.48	36.00	33.53	14.84	12.15	761914
4	BENGALURU RURAL	18.01	41.44	23.87	9.62	7.06	383592
5	BENGALURU URBAN	7.09	37.28	28.84	15.98	10.80	1418289
6	BIDAR	1.16	41.61	32.19	12.23	12.81	247350
7	CHAMARAJANAGARA	21.56	45.58	21.71	6.93	4.22	202913
8	CHIKKABALLAPURA *	-	-	-	-	-	-
9	CHIKKAMAGALURU	5.61	23.06	27.80	19.75	23.78	239728
10	CHITRADURGA	10.44	44.87	27.39	10.52	6.78	294724
11	DAKSHINA KANNADA	1.85	12.18	22.10	22.87	41.00	349695
12	DAVANAGERE	9.31	33.12	28.39	16.80	12.38	333888
13	DHARWAD	7.79	33.90	28.48	14.72	15.11	289789
14	GADAG	20.36	43.31	23.06	7.72	5.55	180351
15	HASSAN	9.56	33.70	27.28	15.50	13.96	360089
16	HAVERI	13.99	30.58	29.49	14.63	11.31	255761
17	KALABURAGI	1.68	42.85	32.16	11.54	11.77	542937
18	KODAGU	0.82	11.60	24.57	19.48	43.53	124098
19	KOLAR	19.51	40.61	22.15	9.50	8.23	499535
20	KOPPAL	12.36	50.64	24.09	7.62	5.30	210649
21	MANDYA	21.72	40.37	21.81	9.20	6.89	368794
22	MYSURU	16.29	40.55	24.58	10.63	7.94	535927
23	RAICHUR	5.07	51.10	27.36	9.66	6.81	298100
24	RAMANAGARA *	-	-	-	-	-	-
25	SHIVAMOGGA	3.16	15.16	29.09	23.95	28.64	330832
26	TUMAKURU	13.25	33.63	29.79	13.40	9.93	545493
27	UDUPI	1.80	14.19	27.03	23.97	33.02	206222
28	UTTARA KANNADA	1.51	18.85	32.59	22.12	24.93	266481
29	VIJAYAPURA	1.53	41.86	34.37	12.15	10.08	323275
30	YADGIR *	-	-	-	-	-	-
KARNATAKA		**8.90**	**35.84**	**28.15**	**14.00**	**13.11**	**10232133**

Source: Primary Census Abstract (H-Series) - 2001 and 2011
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of household by no.of rooms (all areas)							
		2011							
		No.of households occupied							
		No.of exclusive rooms	1 room	2 room	3 room	4 room	5 room	6 rooms and above	Total no.of household
1		38	39	40	41	42	43	44	45
1	BAGALKOTE	15.0	36.8	29.4	10.6	5.1	1.5	1.5	355377
2	BALLARI	16.2	37.4	29.0	11.4	4.1	1.1	0.9	481704
3	BELAGAVI	10.8	31.7	31.7	14.8	6.9	2.1	2.0	963825
4	BENGALURU RURAL	15.3	38.8	29.6	11.1	3.6	0.9	0.7	2377056
5	BENGALURU URBAN	7.0	33.2	31.7	18.4	6.4	1.9	1.4	224745
6	BIDAR	1.8	37.2	33.9	13.5	8.2	2.7	2.7	313521
7	CHAMARAJANAGARA	26.4	41.9	22.0	6.7	2.1	0.5	0.4	244198
8	CHIKKABALLAPURA *	23.7	38.1	23.9	9.0	3.5	1.0	0.9	282311
9	CHIKKAMAGALURU	11.4	24.0	26.9	17.5	10.7	4.5	5.1	272173
10	CHITRADURGA	24.0	35.6	24.8	10.2	3.5	1.0	0.8	354143
11	DAKSHINA KANNADA	1.9	11.1	22.8	26.2	20.7	9.4	7.9	425291
12	DAVANAGERE	19.6	30.7	27.0	14.1	5.6	1.7	1.3	404840
13	DHARWAD	18.5	31.2	26.0	14.5	6.4	2.0	1.6	372054
14	GADAG	31.7	38.1	19.4	6.9	2.4	0.7	0.8	215602
15	HASSAN	19.1	34.4	25.8	12.1	5.4	1.8	1.4	429292
16	HAVERI	22.3	31.3	26.3	12.4	5.1	1.5	1.1	325456
17	KALABURAGI	4.3	33.4	34.0	14.2	7.9	2.9	3.3	465245
18	KODAGU	3.1	16.2	23.5	19.6	15.9	9.7	12.0	138303
19	KOLAR	23.0	36.2	24.8	9.7	4.0	1.3	1.1	330990
20	KOPPAL	22.8	39.5	24.7	8.0	3.2	0.9	0.9	259396
21	MANDYA	18.9	41.5	25.9	9.0	3.1	0.9	0.6	426578
22	MYSURU	18.5	37.5	26.1	11.6	4.1	1.3	1.0	688422
23	RAICHUR	13.0	39.6	29.8	10.6	4.5	1.2	1.3	359337
24	RAMANAGARA	20.7	40.6	26.1	9.0	2.6	0.7	0.4	259794
25	SHIVAMOGGA	8.6	19.1	28.4	22.3	12.7	4.8	4.1	402139
26	TUMAKURU	19.4	35.0	27.5	11.6	4.3	1.3	0.9	636394
27	UDUPI	3.3	12.1	28.2	26.8	17.2	7.2	5.3	246313
28	UTTARA KANNADA	4.2	17.2	32.6	23.4	13.8	4.9	3.9	319912
29	VIJAYAPURA	7.5	35.7	33.1	13.1	6.5	2.0	2.0	405076
30	YADGIR	10.0	39.1	30.9	10.9	5.4	1.7	2.0	200424
KARNATAKA		**13.4**	**32.8**	**28.5**	**14.4**	**6.6**	**2.3**	**2.0**	**13179911**

Source: Primary Census Abstract (H-Series) - 2011.
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of household by no.of rooms (Rural)					
		2001					
		No.of households occupied					
		No.of exclusive rooms	1 room	2 room	3 room	4 room and above	Total no.of household
1		46	47	48	49	50	51
1	BAGALKOTE	3.27	39.96	37.45	11.91	7.40	208499
2	BALLARI	13.76	49.18	25.56	7.57	3.93	237028
3	BELAGAVI	4.04	39.34	34.36	13.30	8.96	578259
4	BENGALURU RURAL	20.15	41.30	23.29	8.99	6.27	302905
5	BENGALURU URBAN	14.72	42.48	25.83	10.74	6.23	163932
6	BIDAR	1.34	46.77	32.27	10.61	9.01	195936
7	CHAMARAJANAGARA	23.02	45.63	21.10	6.45	3.79	173032
8	CHIKKABALLAPURA *	-	-	-	-	-	-
9	CHIKKAMAGALURU	6.45	24.40	27.58	18.92	22.65	192629
10	CHITRADURGA	11.80	47.40	26.72	9.05	5.02	240594
11	DAKSHINA KANNADA	1.81	11.70	22.14	21.89	42.46	211879
12	DAVANAGERE	11.31	37.10	26.58	14.45	10.55	231641
13	DHARWAD	14.05	48.62	23.57	8.46	5.30	129465
14	GADAG	25.64	49.13	19.03	4.11	2.09	118054
15	HASSAN	10.58	35.69	27.45	14.31	11.96	296318
16	HAVERI	15.94	32.57	28.98	13.23	9.28	204645
17	KALABURAGI	1.95	47.62	32.13	10.05	8.25	402306
18	KODAGU	0.80	11.66	25.36	19.04	43.14	107331
19	KOLAR	22.92	44.01	20.27	7.41	5.39	376491
20	KOPPAL	14.10	53.57	22.53	6.00	3.81	174796
21	MANDYA	23.54	40.60	20.88	8.60	6.38	310296
22	MYSURU	22.08	42.48	21.63	8.30	5.51	334632
23	RAICHUR	5.97	57.19	24.96	7.61	4.26	222168
24	RAMANAGARA *	-	-	-	-	-	-
25	SHIVAMOGGA	3.95	16.50	29.63	23.39	26.52	213611
26	TUMAKURU	14.94	34.18	29.78	12.54	8.55	439243
27	UDUPI	1.96	15.16	27.90	23.61	31.37	167361
28	UTTARA KANNADA	1.65	21.05	34.83	21.15	21.33	188984
29	VIJAYAPURA	1.72	46.55	34.21	10.54	6.98	253138
30	YADGIR *	-	-	-	-	-	-
KARNATAKA		**11.06**	**38.72**	**27.38**	**12.01**	**10.83**	**6675173**

Source: Primary Census Abstract (H-Series) - 2001 and 2011
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of household by no.of rooms (Rural)							
		2011							
		No.of households occupied							
		No.of exclusive rooms	1 room	2 room	3 room	4 room	5 room	6 rooms and above	Total no.of household
1		52	53	54	55	56	57	58	59
1	BAGALKOTE	17.3	38.1	29.4	9.2	4.0	1.0	1.0	238746
2	BALLARI	21.5	39.8	26.6	8.3	2.6	0.6	0.5	291383
3	BELAGAVI	12.7	33.9	32.5	12.8	5.3	1.4	1.4	708069
4	BENGALURU RURAL	16.8	38.9	28.6	10.5	3.6	1.0	0.7	207628
5	BENGALURU URBAN	12.4	40.7	30.1	10.9	3.7	1.1	1.0	162398
6	BIDAR	2.0	41.0	34.4	12.1	6.9	1.8	1.8	237380
7	CHAMARAJANAGARA	27.9	41.9	21.0	6.3	2.0	0.5	0.3	203748
8	CHIKKABALLAPURA *	26.2	38.7	22.7	7.9	2.9	0.8	0.8	220309
9	CHIKKAMAGALURU	12.8	24.4	26.4	16.3	10.2	4.6	5.4	215334
10	CHITRADURGA	25.8	36.2	24.1	9.2	3.1	0.9	0.7	282019
11	DAKSHINA KANNADA	2.2	11.5	22.0	24.3	21.0	10.3	8.8	220806
12	DAVANAGERE	24.4	32.5	24.1	11.8	4.8	1.4	1.1	272929
13	DHARWAD	33.3	37.9	19.0	6.5	2.3	0.6	0.4	157960
14	GADAG	39.1	39.2	16.0	4.0	1.2	0.3	0.4	137799
15	HASSAN	21.5	35.2	24.1	11.0	5.1	1.7	1.4	339911
16	HAVERI	25.4	32.5	25.1	10.8	4.3	1.1	0.8	254181
17	KALABURAGI	5.5	37.6	34.7	12.3	6.0	1.8	2.1	311531
18	KODAGU	3.3	16.9	23.4	18.7	15.5	9.7	12.4	118509
19	KOLAR	29.7	38.2	21.3	6.8	2.5	0.8	0.7	226245
20	KOPPAL	26.5	40.6	23.0	6.3	2.4	0.6	0.7	213217
21	MANDYA	20.5	42.0	24.9	8.3	2.9	0.8	0.6	354049
22	MYSURU	26.1	40.2	21.7	7.7	2.8	0.9	0.7	401655
23	RAICHUR	16.1	44.2	27.6	7.4	3.1	0.7	0.9	264274
24	RAMANAGARA *	23.4	40.5	24.8	8.2	2.3	0.6	0.3	200171
25	SHIVAMOGGA	9.8	18.6	27.3	21.9	13.2	4.8	4.3	257060
26	TUMAKURU	21.3	35.9	26.9	10.3	3.7	1.1	0.8	495885
27	UDUPI	3.1	13.3	30.3	26.3	15.8	6.4	4.7	174548
28	UTTARA KANNADA	4.9	19.5	34.3	22.0	12.0	4.1	3.2	226803
29	VIJAYAPURA	9.0	38.6	33.7	11.3	5.0	1.3	1.2	307984
30	YADGIR *	11.6	41.9	30.1	9.4	4.4	1.2	1.4	161665
KARNATAKA		**17.7**	**34.9**	**26.9**	**11.5**	**5.5**	**1.9**	**1.7**	**7864196**

Source: Primary Census Abstract (H-Series) - 2011.
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of household by no.of rooms (Urban)					
		2001					
		No.of households occupied					
		No.of exclusive rooms	1 room	2 room	3 room	4 room and above	Total no.of household
1		60	61	62	63	64	65
1	BAGALKOTE	1.32	29.41	34.85	16.23	18.19	84848
2	BALLARI	3.54	34.41	32.03	15.77	14.25	131332
3	BELAGAVI	1.70	25.49	30.93	19.70	22.18	183655
4	BENGALURU RURAL	9.96	41.99	26.05	11.98	10.01	80687
5	BENGALURU URBAN	6.10	36.60	29.24	16.67	11.40	1254357
6	BIDAR	0.49	21.94	31.90	18.37	27.30	51414
7	CHAMARAJANAGARA	13.12	45.30	25.21	9.70	6.67	29881
8	CHIKKABALLAPURA *	-	-	-	-	-	-
9	CHIKKAMAGALURU	2.17	17.57	28.69	23.14	28.42	47099
10	CHITRADURGA	4.38	33.65	30.35	17.06	14.57	54130
11	DAKSHINA KANNADA	1.92	12.92	22.02	24.37	38.77	137816
12	DAVANAGERE	4.77	24.10	32.49	22.13	16.51	102247
13	DHARWAD	2.72	22.02	32.45	19.79	23.03	160324
14	GADAG	10.36	32.26	30.70	14.58	12.10	62297
15	HASSAN	4.86	24.41	26.48	21.00	23.25	63771
16	HAVERI	6.19	22.62	31.52	20.23	19.45	51116
17	KALABURAGI	0.89	29.19	32.24	15.82	21.87	140631
18	KODAGU	0.94	11.25	19.50	22.32	46.00	16767
19	KOLAR	9.09	30.20	27.89	15.88	16.94	123044
20	KOPPAL	3.87	36.34	31.68	15.50	12.61	35853
21	MANDYA	12.05	39.19	26.77	12.38	9.62	58498
22	MYSURU	6.69	37.34	29.49	14.51	11.97	201295
23	RAICHUR	2.44	33.28	34.38	15.63	14.27	75932
24	RAMANAGARA *	-	-	-	-	-	-
25	SHIVAMOGGA	1.71	12.72	28.11	24.97	32.50	117221
26	TUMAKURU	6.25	31.36	29.84	16.93	15.62	106250
27	UDUPI	1.08	10.04	23.24	25.51	40.12	38861
28	UTTARA KANNADA	1.17	13.47	27.15	24.49	33.73	77497
29	VIJAYAPURA	0.84	24.96	34.95	17.96	21.28	70137
30	YADGIR *	-	-	-	-	-	-
KARNATAKA		**4.85**	**30.44**	**29.59**	**17.73**	**17.39**	**3556960**

Source: Primary Census Abstract (H-Series) - 2001 and 2011
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of household by no.of rooms (Urban)							
		2011							
		No.of households occupied							
		No.of exclusive rooms	1 room	2 room	3 room	4 room	5 room	6 rooms and above	Total no.of household
1		66	67	68	69	70	71	72	73
1	BAGALKOTE	10.2	34.2	29.5	13.6	7.3	2.6	2.6	116631
2	BALLARI	8.0	33.6	32.7	16.2	6.4	1.7	1.4	190321
3	BELAGAVI	5.5	25.5	29.7	20.2	11.3	4.0	3.7	255756
4	BENGALURU RURAL	11.2	38.6	32.2	12.8	3.6	0.9	0.7	2169428
5	BENGALURU URBAN	6.5	32.5	31.9	19.1	6.6	2.0	1.5	62347
6	BIDAR	0.9	25.5	32.4	17.8	12.2	5.5	5.7	76141
7	CHAMARAJANAGARA	18.5	42.1	26.9	8.4	2.7	0.7	0.6	40450
8	CHIKKABALLAPURA *	15.1	36.1	27.9	12.7	5.5	1.6	1.1	62002
9	CHIKKAMAGALURU	6.1	22.3	28.7	22.1	12.8	4.4	3.7	56839
10	CHITRADURGA	16.8	33.1	27.7	14.2	5.3	1.7	1.3	72124
11	DAKSHINA KANNADA	1.7	10.7	23.7	28.3	20.3	8.4	6.8	204485
12	DAVANAGERE	9.6	27.0	33.0	19.0	7.3	2.4	1.7	131911
13	DHARWAD	7.6	26.2	31.1	20.4	9.5	3.0	2.4	214094
14	GADAG	18.8	36.0	25.6	12.0	4.7	1.4	1.5	77803
15	HASSAN	10.0	31.4	32.4	16.1	6.4	2.2	1.4	89381
16	HAVERI	11.1	26.7	30.8	17.9	8.2	2.8	2.5	71275
17	KALABURAGI	1.8	24.9	32.5	18.2	11.7	5.1	5.9	153714
18	KODAGU	1.9	12.4	24.0	24.5	18.1	9.7	9.4	19794
19	KOLAR	8.7	31.9	32.4	15.9	7.0	2.3	1.8	104745
20	KOPPAL	5.7	34.6	32.3	16.0	7.0	2.2	2.2	46179
21	MANDYA	10.9	39.1	31.1	12.6	4.3	1.2	0.7	72529
22	MYSURU	7.9	33.7	32.1	17.0	6.0	1.9	1.4	286767
23	RAICHUR	4.2	27.0	35.9	19.4	8.5	2.5	2.5	95063
24	RAMANAGARA *	11.8	41.0	30.3	11.7	3.6	1.0	0.7	59623
25	SHIVAMOGGA	6.5	19.9	30.3	22.9	11.9	4.8	3.7	145079
26	TUMAKURU	12.6	31.8	29.7	16.1	6.4	2.1	1.3	140509
27	UDUPI	3.8	9.0	23.0	27.8	20.7	8.9	6.8	71765
28	UTTARA KANNADA	2.4	11.5	28.6	26.7	18.2	7.0	5.7	93109
29	VIJAYAPURA	2.6	26.8	31.3	19.1	11.2	4.5	4.5	97092
30	YADGIR *	3.2	27.2	34.2	17.5	9.4	3.8	4.7	38759
KARNATAKA		**7.1**	**29.6**	**31.0**	**18.8**	**8.3**	**2.9**	**2.4**	**5315715**

Source: Primary Census Abstract (H-Series) - 2011.
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of household size (all areas)									
		2001			2011						
		1-2 members	3-5 members	more than 6	1	2	3	4	5	6-8	9+
1		74	75	76	77	78	79	80	81	82	83
1	BAGALKOTE	11.80	44.64	43.56	4.1	7.8	11.3	19.8	20.6	26.8	9.6
2	BALLARI	10.40	47.19	42.41	3.1	7.7	12.2	22.3	21.1	26.4	7.2
3	BELAGAVI	11.32	51.23	37.45	3.9	8.5	12.7	23.8	20.7	23.5	6.9
4	BENGALURU RURAL	12.07	58.16	29.77	4.3	10.4	16.7	30.0	17.4	17.6	3.7
5	BENGALURU URBAN	13.99	64.31	21.69	4.5	13.2	21.3	29.9	15.6	13.1	2.3
6	BIDAR	7.90	38.60	53.50	2.7	6.9	9.0	17.1	21.9	34.3	8.0
7	CHAMARAJANAGARA	12.57	59.52	27.91	5.1	11.2	17.1	29.1	18.1	16.7	2.7
8	CHIKKABALLAPURA *	-	-	-	4.4	10.1	15.3	28.3	18.7	19.5	3.6
9	CHIKKAMAGALURU	11.36	62.86	25.78	4.4	10.4	17.7	31.1	18.2	15.5	2.7
10	CHITRADURGA	10.14	54.44	35.42	3.2	8.2	13.7	25.8	20.8	23.1	5.1
11	DAKSHINA KANNADA	10.88	52.49	36.63	3.3	8.7	15.5	25.8	18.8	20.7	7.2
12	DAVANAGERE	8.92	54.01	37.08	2.7	7.7	13.5	27.0	21.1	22.2	5.8
13	DHARWAD	10.77	52.48	36.75	3.3	8.6	14.2	24.8	21.0	21.5	6.6
14	GADAG	11.66	48.46	39.88	4.0	8.5	13.0	22.3	21.3	23.7	7.2
15	HASSAN	10.05	61.79	28.16	4.5	10.2	17.3	32.5	17.9	15.7	2.1
16	HAVERI	8.90	50.51	40.59	3.1	7.8	13.1	24.8	22.0	23.2	5.9
17	KALABURAGI	9.60	39.02	51.38	2.9	6.8	9.4	16.7	20.6	34.0	9.4
18	KODAGU	16.43	64.73	18.84	6.2	14.2	18.4	29.4	17.2	12.6	2.0
19	KOLAR	11.93	54.26	33.81	3.8	9.1	14.0	26.8	19.8	22.0	4.5
20	KOPPAL	11.05	43.39	45.56	3.3	7.4	10.9	19.1	20.6	28.9	9.7
21	MANDYA	11.28	61.31	27.40	4.3	9.7	17.0	30.9	18.1	16.9	3.0
22	MYSURU	11.03	60.73	28.24	4.0	9.8	17.2	31.3	17.8	16.5	3.3
23	RAICHUR	11.12	43.59	45.29	3.2	7.5	11.0	18.7	19.9	30.4	9.3
24	RAMANAGARA *	-	-	-	5.4	10.6	17.0	29.7	17.4	17.1	2.7
25	SHIVAMOGGA	10.54	60.79	28.67	3.7	9.3	16.2	31.1	19.7	16.7	3.3
26	TUMAKURU	12.57	59.02	28.40	5.1	10.6	17.2	28.8	18.0	17.4	2.9
27	UDUPI	11.15	48.30	40.55	4.5	9.4	14.2	23.7	17.4	21.8	9.0
28	UTTARA KANNADA	12.89	53.23	33.88	5.0	9.5	15.2	26.3	20.3	19.2	4.4
29	VIJAYAPURA	10.30	42.87	46.83	3.2	7.1	9.9	18.8	21.4	30.1	9.5
30	YADGIR *	-	-	-	3.0	6.1	8.7	14.5	18.2	35.7	13.8
KARNATAKA		**11.42**	**54.26**	**34.32**	**4.0**	**9.6**	**15.4**	**26.2**	**18.9**	**20.7**	**5.2**

Source: Primary Census Abstract (H-Series) - 2001 and 2011
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of household size (Rural)									
		2001			2011						
		1-2 members	3-5 members	more than 6	1	2	3	4	5	6-8	9+
1		84	85	86	87	88	89	90	91	92	93
1	BAGALKOTE	11.71	43.65	44.65	4.4	7.6	10.7	18.7	20.5	27.7	10.5
2	BALLARI	10.17	44.58	45.25	3.2	7.2	10.9	20.1	21.6	28.6	8.4
3	BELAGAVI	11.18	49.83	38.98	4.0	8.3	11.8	22.5	20.8	25.1	7.5
4	BENGALURU RURAL	12.18	58.07	29.75	4.5	10.1	15.6	29.1	17.8	18.7	4.1
5	BENGALURU URBAN	14.40	60.01	25.59	5.2	13.0	19.1	30.3	15.8	13.9	2.6
6	BIDAR	7.94	38.07	54.00	3.0	7.0	8.6	16.3	21.9	35.1	8.1
7	CHAMARAJANAGARA	12.72	59.68	27.60	5.2	11.3	17.0	29.0	18.1	16.7	2.7
8	CHIKKABALLAPURA *	-	-	-	4.7	10.2	14.8	27.6	18.8	20.0	3.9
9	CHIKKAMAGALURU	11.08	62.58	26.34	4.4	10.4	17.2	30.6	18.6	16.1	2.7
10	CHITRADURGA	10.13	53.58	36.29	3.4	8.1	13.0	25.0	20.9	24.1	5.5
11	DAKSHINA KANNADA	9.17	50.14	40.69	2.8	7.3	13.3	24.9	20.9	23.3	7.5
12	DAVANAGERE	8.56	53.06	38.38	2.8	7.4	12.6	26.5	21.5	22.8	6.3
13	DHARWAD	10.48	50.35	39.17	3.7	8.1	12.8	23.2	21.6	22.7	7.8
14	GADAG	11.49	47.81	40.69	4.2	8.2	12.4	21.5	21.4	24.7	7.6
15	HASSAN	9.84	61.34	28.82	4.6	10.3	16.6	31.8	18.3	16.4	2.1
16	HAVERI	8.64	50.86	40.50	3.2	7.7	12.8	24.8	22.5	23.1	5.9
17	KALABURAGI	9.49	37.78	52.74	3.4	6.7	8.6	15.2	20.4	35.5	10.3
18	KODAGU	16.34	64.66	19.00	6.2	14.4	18.0	29.0	17.5	13.0	2.0
19	KOLAR	12.22	53.51	34.27	4.2	9.1	13.1	25.9	19.6	22.8	5.3
20	KOPPAL	11.00	42.70	46.30	3.3	7.2	10.5	18.5	20.6	29.6	10.2
21	MANDYA	11.20	61.14	27.66	4.4	9.7	16.7	30.6	18.2	17.3	3.1
22	MYSURU	10.52	59.73	29.75	4.4	9.4	15.8	31.2	18.4	17.4	3.4
23	RAICHUR	11.09	42.53	46.38	3.2	7.4	10.5	17.8	19.9	31.4	9.9
24	RAMANAGARA *	-	-	-	5.9	11.0	16.9	29.6	17.3	16.7	2.7
25	SHIVAMOGGA	9.89	59.71	30.41	3.6	8.7	15.0	30.9	20.7	17.5	3.5
26	TUMAKURU	12.61	58.16	29.23	5.5	10.7	16.4	27.9	18.3	18.2	3.0
27	UDUPI	10.71	46.70	42.58	4.3	8.6	12.7	22.4	18.1	23.9	10.0
28	UTTARA KANNADA	12.22	52.25	35.52	4.9	9.1	14.4	26.0	21.0	20.1	4.4
29	VIJAYAPURA	10.26	41.50	48.23	3.4	6.9	9.3	17.7	21.2	31.0	10.4
30	YADGIR *	-	-	-	3.1	5.9	8.3	13.8	18.0	36.5	14.4
KARNATAKA		**10.93**	**51.98**	**37.10**	**4.1**	**8.8**	**13.5**	**24.7**	**19.7**	**23.1**	**6.1**

Source: Primary Census Abstract (H-Series) - 2001 and 2011
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of household size (Urban)									
		2001			2011						
		1-2 members	3-5 members	more than 6	1	2	3	4	5	6-8	9+
1		94	95	96	97	98	99	100	101	102	103
1	BAGALKOTE	12.03	47.09	40.88	3.5	8.3	12.4	22.1	20.9	25.0	7.8
2	BALLARI	10.80	51.91	37.29	3.0	8.5	14.2	25.5	20.4	23.0	5.4
3	BELAGAVI	11.75	55.63	32.62	3.6	9.2	15.1	27.3	20.4	19.4	5.0
4	BENGALURU RURAL	11.64	58.51	29.85	3.7	11.0	19.4	32.5	16.5	14.5	2.6
5	BENGALURU URBAN	13.94	64.88	21.18	4.4	13.2	21.6	29.9	15.6	13.0	2.3
6	BIDAR	7.77	40.64	51.59	1.7	6.5	10.4	19.9	21.9	32.0	7.7
7	CHAMARAJANAGARA	11.74	58.60	29.66	4.4	10.6	17.6	29.6	18.1	16.8	2.9
8	CHIKKABALLAPURA *	-	-	-	3.4	9.8	17.3	30.6	18.5	17.8	2.5
9	CHIKKAMAGALURU	12.50	64.01	23.48	4.5	10.3	19.6	32.7	17.0	13.2	2.7
10	CHITRADURGA	10.15	58.29	31.55	2.8	8.6	16.1	29.3	20.4	19.1	3.7
11	DAKSHINA KANNADA	13.50	56.11	30.39	3.9	10.2	17.9	26.9	16.4	17.8	6.8
12	DAVANAGERE	9.72	56.14	34.14	2.4	8.3	15.2	27.9	20.4	20.8	4.8
13	DHARWAD	11.00	54.21	34.79	3.0	9.0	15.3	25.9	20.5	20.5	5.8
14	GADAG	11.98	49.69	38.33	3.7	9.1	13.9	23.8	21.1	21.9	6.4
15	HASSAN	10.99	63.91	25.11	4.1	9.7	20.1	34.9	16.4	12.8	2.0
16	HAVERI	9.93	49.13	40.93	2.9	8.2	14.2	25.1	20.4	23.5	5.6
17	KALABURAGI	9.93	42.57	47.50	2.0	7.1	11.1	19.8	21.2	31.2	7.6
18	KODAGU	16.97	65.19	17.83	6.5	12.6	20.6	32.1	15.5	10.8	1.9
19	KOLAR	11.05	56.57	32.38	3.0	9.1	15.9	28.7	20.2	20.2	3.0
20	KOPPAL	11.28	46.77	41.95	3.3	8.3	12.8	21.9	20.4	26.0	7.3
21	MANDYA	11.72	62.24	26.04	3.8	9.6	18.3	32.5	17.8	15.4	2.6
22	MYSURU	11.88	62.38	25.74	3.6	10.3	19.3	31.5	17.0	15.3	3.0
23	RAICHUR	11.22	46.66	42.11	3.1	8.0	12.5	21.3	20.1	27.7	7.3
24	RAMANAGARA *	-	-	-	3.7	9.4	17.4	30.3	17.8	18.5	3.0
25	SHIVAMOGGA	11.72	62.78	25.51	3.9	10.3	18.4	31.4	18.1	15.2	2.8
26	TUMAKURU	12.42	62.59	24.99	3.6	10.2	20.1	32.0	17.1	14.7	2.4
27	UDUPI	13.03	55.16	31.81	4.9	11.5	17.8	26.8	15.7	16.9	6.5
28	UTTARA KANNADA	14.51	55.62	29.87	5.3	10.4	17.1	27.0	18.7	17.0	4.5
29	VIJAYAPURA	10.42	47.80	41.78	2.4	7.7	11.8	22.3	21.9	27.1	6.8
30	YADGIR *	-	-	-	2.8	6.9	10.4	17.6	19.0	32.1	11.2
KARNATAKA		**12.35**	**58.55**	**29.10**	**3.8**	**10.9**	**18.3**	**28.3**	**17.7**	**17.2**	**3.9**

Source: Primary Census Abstract (H-Series) - 2001 and 2011
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of household by tenure status all areas					
		Total					
		2001			2011		
		Owned	Rented	Others	Owned	Rented	Others
1		104	105	106	107	108	109
1	BAGALKOTE	82.96	13.58	3.46	80.8	15.3	3.9
2	BALLARI	80.56	16.56	2.88	76.1	21.4	2.5
3	BELAGAVI	85.02	12.55	2.43	84.2	13.1	2.6
4	BENGALURU RURAL	84.40	13.92	1.68	73.0	24.7	2.4
5	BENGALURU URBAN	45.69	50.73	3.58	38.4	58.7	2.9
6	BIDAR	90.19	8.58	1.23	88.8	9.8	1.4
7	CHAMARAJANAGARA	90.94	7.32	1.74	90.0	7.5	2.6
8	CHIKKABALLAPURA *	-	-	-	84.5	13.8	1.7
9	CHIKKAMAGALURU	78.10	14.35	7.55	79.6	15.2	5.3
10	CHITRADURGA	87.61	11.20	1.19	84.4	13.2	2.4
11	DAKSHINA KANNADA	85.58	11.55	2.88	84.5	13.1	2.5
12	DAVANAGERE	80.45	17.04	2.51	79.2	18.1	2.7
13	DHARWAD	75.29	21.56	3.15	74.0	23.4	2.6
14	GADAG	83.16	13.87	2.97	81.5	15.2	3.3
15	HASSAN	85.51	11.95	2.55	84.6	13.3	2.1
16	HAVERI	87.55	10.22	2.23	86.1	11.4	2.5
17	KALABURAGI	84.47	13.62	1.91	81.3	17.1	1.7
18	KODAGU	65.60	14.22	20.18	67.5	16.3	16.2
19	KOLAR	83.18	15.37	1.45	78.9	18.3	2.7
20	KOPPAL	84.60	12.47	2.93	81.9	15.8	2.2
21	MANDYA	87.49	10.53	1.99	86.9	11.1	2.0
22	MYSURU	79.71	17.39	2.90	76.9	20.3	2.8
23	RAICHUR	84.12	12.10	3.77	83.5	13.4	3.0
24	RAMANAGARA *	-	-	-	83.2	14.5	2.4
25	SHIVAMOGGA	78.11	19.28	2.61	78.4	19.4	2.2
26	TUMAKURU	85.49	12.88	1.63	83.7	14.6	1.7
27	UDUPI	90.42	7.37	2.21	89.6	8.5	1.9
28	UTTARA KANNADA	84.38	12.55	3.07	85.6	11.0	3.3
29	VIJAYAPURA	85.79	11.37	2.83	83.5	13.6	2.9
30	YADGIR *	-	-	-	87.4	10.5	2.1
KARNATAKA		**78.46**	**18.66**	**2.88**	**74.3**	**23.0**	**2.7**

Source: Primary Census Abstract (H-Series) - 2001 and 2011
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of household by tenure status (rural)					
		2001			2011		
		Owned	Rented	Others	Owned	Rented	Others
1		110	111	112	113	114	115
1	BAGALKOTE	89.13	7.94	2.94	86.5	9.6	3.9
2	BALLARI	90.54	7.16	2.30	88.0	9.6	2.4
3	BELAGAVI	91.24	6.41	2.35	90.4	6.9	2.7
4	BENGALURU RURAL	91.68	6.82	1.50	82.9	14.6	2.4
5	BENGALURU URBAN	69.01	26.77	4.22	54.6	41.5	3.9
6	BIDAR	95.68	3.22	1.10	95.0	3.7	1.3
7	CHAMARAJANAGARA	94.58	3.75	1.66	94.3	3.4	2.3
8	CHIKKABALLAPURA *	-	-	-	92.9	5.7	1.5
9	CHIKKAMAGALURU	84.28	7.13	8.59	86.6	7.5	5.9
10	CHITRADURGA	93.68	5.14	1.17	91.7	6.0	2.3
11	DAKSHINA KANNADA	93.24	3.78	2.97	93.7	3.9	2.3
12	DAVANAGERE	91.89	5.90	2.21	91.2	6.3	2.4
13	DHARWAD	92.17	4.91	2.92	91.3	6.1	2.6
14	GADAG	90.73	7.08	2.19	88.7	8.6	2.7
15	HASSAN	92.61	5.04	2.35	93.2	4.7	2.0
16	HAVERI	92.55	5.38	2.07	91.7	5.9	2.5
17	KALABURAGI	93.47	4.80	1.73	92.2	6.2	1.6
18	KODAGU	68.27	9.49	22.24	70.4	11.6	18.0
19	KOLAR	94.03	4.77	1.21	92.5	5.4	2.1
20	KOPPAL	89.03	8.39	2.58	86.6	11.1	2.3
21	MANDYA	93.05	5.12	1.83	93.3	5.1	1.6
22	MYSURU	94.26	4.34	1.39	94.0	4.4	1.6
23	RAICHUR	92.14	4.65	3.21	91.1	6.1	2.8
24	RAMANAGARA *	-	-	-	91.4	6.3	2.3
25	SHIVAMOGGA	91.36	6.59	2.04	91.3	6.6	2.1
26	TUMAKURU	92.54	6.04	1.42	92.2	6.3	1.5
27	UDUPI	92.84	4.90	2.26	93.0	5.3	1.7
28	UTTARA KANNADA	90.45	6.24	3.32	91.1	5.5	3.4
29	VIJAYAPURA	91.34	6.22	2.44	89.4	7.9	2.6
30	YADGIR *	-	-	-	92.2	5.6	2.1
KARNATAKA		**91.16**	**6.23**	**2.61**	**89.9**	**7.5**	**2.6**

Source: Primary Census Abstract (H-Series) - 2001 and 2011
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of household by tenure status (Urban)					
		2001			2011		
		Owned	Rented	Others	Owned	Rented	Others
1		116	117	118	119	120	121
1	BAGALKOTE	67.82	27.43	4.75	69.1	27.0	3.9
2	BALLARI	62.56	33.52	3.91	58.0	39.3	2.6
3	BELAGAVI	65.43	31.88	2.69	67.0	30.6	2.5
4	BENGALURU RURAL	57.08	40.56	2.36	47.0	50.9	2.2
5	BENGALURU URBAN	42.64	53.86	3.50	36.8	60.3	2.8
6	BIDAR	69.26	29.01	1.74	69.3	29.0	1.6
7	CHAMARAJANAGARA	69.86	27.95	2.19	68.2	28.0	3.8
8	CHIKKABALLAPURA *	-	-	-	54.7	42.6	2.6
9	CHIKKAMAGALURU	52.82	43.89	3.29	53.1	44.2	2.7
10	CHITRADURGA	60.61	38.10	1.28	55.9	41.5	2.6
11	DAKSHINA KANNADA	73.78	23.49	2.73	74.5	22.9	2.6
12	DAVANAGERE	54.51	42.27	3.21	54.3	42.6	3.1
13	DHARWAD	61.66	35.00	3.34	61.3	36.2	2.5
14	GADAG	68.81	26.75	4.44	68.8	26.9	4.3
15	HASSAN	52.51	44.02	3.47	51.7	45.9	2.4
16	HAVERI	67.55	29.57	2.88	66.1	31.3	2.6
17	KALABURAGI	58.72	38.86	2.42	59.2	39.1	1.7
18	KODAGU	48.52	44.52	6.96	50.3	44.4	5.3
19	KOLAR	49.98	47.82	2.20	49.8	46.1	4.1
20	KOPPAL	63.00	32.40	4.60	60.3	37.7	1.9
21	MANDYA	58.01	39.18	2.81	56.0	40.2	3.8
22	MYSURU	55.50	39.08	5.41	52.9	42.6	4.5
23	RAICHUR	60.68	33.91	5.41	62.7	33.7	3.6
24	RAMANAGARA *	-	-	-	55.6	41.9	2.6
25	SHIVAMOGGA	53.96	42.40	3.64	55.5	42.0	2.4
26	TUMAKURU	56.33	41.18	2.49	53.7	44.0	2.3
27	UDUPI	80.02	17.98	2.00	81.2	16.5	2.3
28	UTTARA KANNADA	69.59	27.94	2.47	72.3	24.6	3.1
29	VIJAYAPURA	65.77	29.98	4.25	64.7	31.6	3.7
30	YADGIR *	-	-	-	67.3	30.6	2.1
KARNATAKA		**54.62**	**41.98**	**3.39**	**51.1**	**46.0**	**2.9**

Source: Primary Census Abstract (H-Series) - 2001 and 2011
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage of households by location of drinking water									
		2011									
		No.of households	Within the premises			Near the premises			Away from premises		
			Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1		122	123	124	125	126	127	128	129	130	131
1	BAGALKOTE	355,377	28.8	20.7	45.6	46.9	51.8	36.8	24.3	27.5	17.6
2	BALLARI	481,704	34.2	18.6	58.0	42.0	50.3	29.3	23.8	31.1	12.7
3	BELAGAVI	963,825	35.3	24.2	66.1	40.7	46.6	24.3	24.0	29.2	9.6
4	BENGALURU RURAL	224,745	26.4	21.4	39.5	54.5	59.6	41.4	19.1	19.1	19.1
5	BENGALURU URBAN	2,377,056	76.8	41.3	80.2	16.8	46.7	13.9	6.4	12.0	5.9
6	BIDAR	313,521	29.4	20.1	58.3	38.4	42.5	25.8	32.2	37.4	15.9
7	CHAMARAJANAGARA	244,198	31.6	26.5	57.0	50.3	53.5	34.1	18.1	19.9	9.0
8	CHIKKABALLAPURA *	282,311	23.2	16.6	46.9	51.9	56.5	35.4	24.9	26.9	17.7
9	CHIKKAMAGALURU	272,173	39.7	33.3	64.1	47.1	51.9	28.9	13.2	14.8	7.0
10	CHITRADURGA	354,143	24.5	17.6	51.6	53.7	58.1	36.7	21.7	24.3	11.8
11	DAKSHINA KANNADA	425,291	79.3	72.2	86.9	13.5	17.9	8.8	7.2	9.9	4.3
12	DAVANAGERE	404,840	30.0	16.8	57.2	51.5	59.4	35.4	18.5	23.8	7.4
13	DHARWAD	372,054	57.3	29.4	77.8	28.5	44.9	16.4	14.2	25.7	5.7
14	GADAG	215,602	29.6	21.4	44.2	44.9	47.4	40.5	25.5	31.2	15.3
15	HASSAN	429,292	34.5	25.3	69.2	50.6	56.9	26.8	14.9	17.8	4.0
16	HAVERI	325,456	28.2	20.9	54.0	50.6	56.3	30.2	21.2	22.8	15.7
17	KALABURAGI	465,245	31.4	16.7	61.2	37.6	42.8	27.0	31.0	40.4	11.8
18	KODAGU	138,303	55.0	50.8	79.7	32.2	35.0	15.3	12.9	14.2	5.0
19	KOLAR	330,990	26.0	17.6	44.1	43.3	49.6	29.6	30.8	32.9	26.2
20	KOPPAL	259,396	22.7	19.3	38.6	49.1	50.0	45.2	28.2	30.8	16.2
21	MANDYA	426,578	37.7	30.1	74.7	48.9	54.6	21.0	13.5	15.3	4.3
22	MYSURU	688,422	59.5	40.6	86.0	30.8	44.3	11.9	9.7	15.1	2.1
23	RAICHUR	359,337	24.1	15.6	47.7	39.5	40.4	36.8	36.4	44.0	15.5
24	RAMANAGARA	259,794	29.5	17.3	70.3	56.6	66.3	24.0	13.9	16.4	5.6
25	SHIVAMOGGA	402,139	45.0	34.2	64.1	41.9	48.6	30.1	13.0	17.2	5.8
26	TUMAKURU	636,394	25.7	16.1	59.7	55.0	63.0	27.0	19.2	20.9	13.3
27	UDUPI	246,313	75.3	71.6	84.2	13.7	15.4	9.6	11.0	13.1	6.1
28	UTTARA KANNADA	319,912	58.3	52.0	73.6	26.7	30.6	17.0	15.1	17.4	9.4
29	VIJAYAPURA	405,076	25.8	14.8	60.6	39.8	45.3	22.4	34.4	39.9	17.0
30	YADGIR	200,424	19.8	13.3	46.9	39.6	41.3	32.4	40.6	45.3	20.7
KARNATAKA		**13,179,911**	**44.5**	**26.6**	**70.9**	**37.3**	**48.6**	**20.6**	**18.2**	**24.8**	**8.5**

Source: Primary Census Abstract (H-Series) - 2011.
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage of households by source of drinking water											
		2011											
		Tap water from treated source			Tap water from Un-treated source			Covered well			Un-Covered well		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1		132	133	134	135	136	137	138	139	140	141	142	143
1	BAGALKOTE	34.9	22.6	60.1	28.5	36.4	12.3	0.6	0.7	0.4	3.6	4.9	0.9
2	BALLARI	47.5	24.1	83.2	33.2	47.5	11.2	0.3	0.4	0.2	1.0	1.5	0.2
3	BELAGAVI	36.6	23.9	72.0	17.4	21.1	6.9	1.5	1.1	2.6	12.9	15.3	6.1
4	BENGALURU RURAL	19.5	19.3	20.0	47.3	42.6	59.4	0.3	0.3	0.2	0.3	0.4	0.1
5	BENGALURU URBAN	66.6	29.7	70.1	12.5	38.4	10.1	0.5	0.4	0.5	0.3	0.4	0.3
6	BIDAR	25.5	20.5	41.1	25.2	28.6	14.6	3.1	1.3	8.6	13.7	12.1	18.6
7	CHAMARAJANAGARA	32.5	24.1	74.6	31.2	34.6	14.3	1.3	1.5	0.4	2.9	3.4	0.4
8	CHIKKABALLAPURA *	28.4	23.2	46.9	43.1	46.3	31.7	0.5	0.5	0.4	0.9	1.1	0.2
9	CHIKKAMAGALURU	31.3	22.8	63.2	37.1	40.0	25.8	0.9	1.0	0.5	8.1	9.9	1.2
10	CHITRADURGA	30.9	20.9	69.7	34.7	39.5	15.7	1.1	1.3	0.3	0.4	0.5	0.1
11	DAKSHINA KANNADA	31.9	12.6	52.7	11.8	13.1	10.4	2.5	1.9	3.1	40.7	53.7	26.6
12	DAVANAGERE	38.9	20.8	76.3	30.8	41.5	8.7	0.7	0.9	0.3	0.8	1.1	0.1
13	DHARWAD	59.6	26.4	84.1	21.1	41.7	5.9	0.3	0.3	0.3	0.6	1.2	0.3
14	GADAG	42.9	30.1	65.6	29.8	32.9	24.3	0.4	0.5	0.2	2.2	2.8	1.0
15	HASSAN	30.0	19.3	70.4	33.5	37.5	18.2	0.6	0.8	0.1	2.2	2.8	0.3
16	HAVERI	31.4	22.7	62.5	43.7	50.1	21.1	0.7	0.8	0.5	0.3	0.2	0.4
17	KALABURAGI	35.7	22.5	62.6	21.1	24.0	15.2	0.7	0.8	0.4	10.0	14.4	1.1
18	KODAGU	32.6	26.2	70.8	15.6	16.8	8.5	5.5	5.5	5.5	27.8	31.1	8.2
19	KOLAR	29.1	24.7	38.7	34.0	36.1	29.4	0.7	0.5	1.0	0.9	1.1	0.6
20	KOPPAL	35.3	27.7	70.2	36.8	41.0	17.1	0.6	0.6	0.2	2.0	2.4	0.1
21	MANDYA	41.3	33.0	81.8	36.3	42.3	6.9	0.6	0.7	0.4	1.3	1.5	0.6
22	MYSURU	61.7	41.9	89.4	20.7	31.9	5.0	0.2	0.3	0.1	1.1	1.9	0.1
23	RAICHUR	38.4	24.4	77.6	22.7	26.2	12.9	0.8	0.9	0.5	4.5	5.9	0.5
24	RAMANAGARA	36.5	27.0	68.3	44.5	50.6	23.9	0.3	0.3	0.4	0.4	0.4	0.3
25	SHIVAMOGGA	43.3	21.3	82.4	22.0	30.4	7.1	1.0	0.7	1.5	19.9	28.3	4.9
26	TUMAKURU	25.0	13.7	64.9	41.8	47.6	21.3	0.8	0.9	0.5	0.9	0.9	0.9
27	UDUPI	11.7	6.7	23.7	6.9	7.6	5.3	6.0	5.0	8.6	67.5	72.4	55.6
28	UTTARA KANNADA	17.3	9.5	36.3	10.1	11.9	5.7	2.6	2.2	3.4	57.9	62.3	47.1
29	VIJAYAPURA	31.6	18.6	72.9	16.6	19.5	7.2	0.8	0.9	0.6	12.4	15.5	2.5
30	YADGIR	24.6	18.2	51.7	22.4	23.3	18.9	0.8	0.9	0.4	11.1	12.9	3.9
KARNATAKA		**41.2**	**22.9**	**68.4**	**24.8**	**33.5**	**12.0**	**1.0**	**1.0**	**1.0**	**8.0**	**10.9**	**3.7**

Source: Primary Census Abstract (H-Series) - 2011.
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage of households by source of drinking water								
		2011								
		Hand Pump			Tubewell/Borewell			Spring		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1		144	145	146	147	148	149	150	151	152
1	BAGALKOTE	7.4	8.0	6.2	20.7	22.8	16.2	0.2	0.2	0.4
2	BALLARI	3.5	5.2	0.9	11.1	16.5	2.9	0.5	0.8	0.0
3	BELAGAVI	7.9	9.9	2.1	19.4	23.6	7.6	0.4	0.4	0.4
4	BENGALURU RURAL	1.0	1.3	0.3	28.0	35.1	9.8	0.0	0.0	0.0
5	BENGALURU URBAN	0.5	0.9	0.4	16.4	27.9	15.3	0.1	0.1	0.1
6	BIDAR	12.8	15.9	3.1	17.0	19.5	9.3	0.5	0.4	0.9
7	CHAMARAJANAGARA	12.5	14.6	1.4	18.2	20.3	7.6	0.1	0.2	0.1
8	CHIKKABALLAPURA *	1.1	1.3	0.2	23.9	26.8	13.9	0.2	0.2	0.1
9	CHIKKAMAGALURU	3.9	4.6	1.2	13.2	14.8	7.1	1.6	2.0	0.1
10	CHITRADURGA	6.6	7.8	1.9	25.1	29.0	9.7	0.1	0.1	0.1
11	DAKSHINA KANNADA	0.7	0.8	0.6	8.2	10.5	5.7	0.5	0.9	0.1
12	DAVANAGERE	4.2	5.9	0.6	22.8	28.5	11.0	0.1	0.1	0.1
13	DHARWAD	1.8	2.9	1.0	9.1	13.1	6.2	0.0	0.0	0.0
14	GADAG	5.2	6.9	2.3	8.4	10.9	3.9	0.2	0.2	0.2
15	HASSAN	8.6	10.7	1.0	24.0	27.8	9.5	0.1	0.2	0.0
16	HAVERI	2.7	2.7	2.6	19.0	22.0	8.5	0.0	0.0	0.1
17	KALABURAGI	15.1	20.1	4.9	14.7	15.2	13.7	0.3	0.4	0.3
18	KODAGU	2.5	2.7	1.5	9.8	10.6	4.6	1.6	1.8	0.3
19	KOLAR	0.8	1.0	0.4	28.0	35.6	11.3	0.0	0.0	0.0
20	KOPPAL	6.7	7.5	3.1	15.4	17.0	8.0	0.1	0.1	0.1
21	MANDYA	6.1	7.1	1.1	13.6	14.8	8.0	0.1	0.1	0.0
22	MYSURU	6.6	10.8	0.8	8.3	11.7	3.5	0.1	0.1	0.1
23	RAICHUR	9.5	12.0	2.6	11.8	14.8	3.4	1.9	2.5	0.1
24	RAMANAGARA	1.6	2.0	0.3	16.0	19.0	5.8	0.1	0.0	0.2
25	SHIVAMOGGA	1.7	2.4	0.5	9.1	12.7	2.6	0.9	1.2	0.3
26	TUMAKURU	6.3	7.8	1.2	23.9	28.4	8.0	0.1	0.1	0.0
27	UDUPI	1.2	1.0	1.7	4.1	4.0	4.1	0.2	0.3	0.0
28	UTTARA KANNADA	3.0	3.4	1.9	4.4	4.7	3.5	1.4	2.0	0.0
29	VIJAYAPURA	22.7	28.5	4.5	12.5	14.0	7.7	0.2	0.3	0.2
30	YADGIR	25.0	28.3	11.1	12.2	12.1	12.4	0.4	0.5	0.3
KARNATAKA		**5.5**	**8.4**	**1.3**	**16.0**	**19.6**	**10.6**	**0.3**	**0.5**	**0.1**

Source: Primary Census Abstract (H-Series) - 2011.
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage of households by source of drinking water								
		2011								
		River/Canal			Tank/Pond/Lake			Others		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1		153	154	155	156	157	158	159	160	161
1	BAGALKOTE	2.8	3.2	1.8	0.2	0.2	0.1	1.1	0.9	1.6
2	BALLARI	1.2	1.9	0.2	0.9	1.5	0.1	0.8	0.5	1.1
3	BELAGAVI	2.5	3.0	1.0	0.4	0.5	0.1	1.0	1.0	1.2
4	BENGALURU RURAL	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.9	10.1
5	BENGALURU URBAN	0.1	0.0	0.1	0.3	0.1	0.4	2.7	2.1	2.8
6	BIDAR	0.2	0.2	0.1	0.4	0.3	0.5	1.7	1.2	3.1
7	CHAMARAJANAGARA	0.4	0.5	0.2	0.1	0.1	0.0	0.9	0.9	1.0
8	CHIKKABALLAPURA *	0.0	0.0	0.1	0.1	0.2	0.1	1.8	0.5	6.4
9	CHIKKAMAGALURU	1.8	2.3	0.1	1.3	1.7	0.1	0.7	0.7	0.7
10	CHITRADURGA	0.2	0.1	0.5	0.4	0.1	1.2	0.7	0.7	0.7
11	DAKSHINA KANNADA	0.5	0.8	0.1	2.0	3.7	0.1	1.2	2.0	0.4
12	DAVANAGERE	1.1	0.5	2.3	0.1	0.1	0.1	0.6	0.6	0.5
13	DHARWAD	0.7	0.1	1.2	6.0	13.9	0.2	0.7	0.5	0.9
14	GADAG	0.9	0.8	1.0	9.1	14.0	0.4	1.0	0.9	1.1
15	HASSAN	0.3	0.3	0.3	0.2	0.3	0.0	0.4	0.5	0.2
16	HAVERI	0.8	0.7	1.1	0.2	0.1	0.7	1.1	0.7	2.7
17	KALABURAGI	1.4	1.9	0.6	0.1	0.1	0.1	0.8	0.7	1.2
18	KODAGU	2.1	2.4	0.3	1.8	2.0	0.2	0.7	0.8	0.1
19	KOLAR	0.0	0.0	0.0	1.3	0.1	3.9	5.2	0.8	14.6
20	KOPPAL	0.8	0.9	0.4	1.7	2.1	0.0	0.7	0.6	0.7
21	MANDYA	0.2	0.1	0.4	0.0	0.0	0.0	0.5	0.4	0.8
22	MYSURU	0.5	0.6	0.4	0.1	0.1	0.1	0.6	0.7	0.5
23	RAICHUR	3.1	4.1	0.4	6.1	8.0	1.0	1.1	1.2	0.9
24	RAMANAGARA	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.7
25	SHIVAMOGGA	0.5	0.7	0.2	0.9	1.4	0.2	0.7	0.9	0.3
26	TUMAKURU	0.1	0.1	0.0	0.1	0.1	0.1	1.1	0.5	3.0
27	UDUPI	0.4	0.6	0.1	0.8	1.1	0.0	1.2	1.3	1.0
28	UTTARA KANNADA	0.9	0.9	0.9	1.5	2.0	0.2	1.0	1.1	0.8
29	VIJAYAPURA	1.6	1.5	1.7	0.3	0.2	0.5	1.2	0.9	2.2
30	YADGIR	1.7	2.0	0.3	0.7	0.8	0.2	1.0	1.1	0.8
KARNATAKA		**0.8**	**1.1**	**0.4**	**1.0**	**1.4**	**0.3**	**1.4**	**0.8**	**2.2**

Source: Primary Census Abstract (H-Series) - 2011.
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

8. Housing and Amenities

District		Percentage distribution of households by latrines								
		2011								
		No.of households			Availability within the premises			Non-availability within the premises		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1		162	163	164	165	166	167	168	169	170
1	BAGALKOTE	355377	238746	116631	18.8	7.2	42.5	81.2	92.8	57.5
2	BALLARI	481704	291383	190321	32.4	12.1	63.5	67.6	87.9	36.5
3	BELAGAVI	963825	708069	255756	32.8	18.5	72.4	67.2	81.5	27.6
4	BENGALURU RURAL	224745	162398	62347	79.9	75.5	91.3	20.1	24.5	8.7
5	BENGALURU URBAN	2377056	207628	2169428	94.8	74.8	96.8	5.2	25.2	3.2
6	BIDAR	313521	237380	76141	23.2	8.8	68.1	76.8	91.2	31.9
7	CHAMARAJANAGARA	244198	203748	40450	23.5	15.4	64.3	76.5	84.6	35.7
8	CHIKKABALLAPURA *	282311	220309	62002	36.5	23.0	84.3	63.5	77.0	15.7
9	CHIKKAMAGALURU	272173	215334	56839	61.5	54.1	89.4	38.5	45.9	10.6
10	CHITRADURGA	354143	282019	72124	30.3	19.1	73.9	69.7	80.9	26.1
11	DAKSHINA KANNADA	425291	220806	204485	92.7	88.1	97.6	7.3	11.9	2.4
12	DAVANAGERE	404840	272929	131911	46.4	29.8	80.9	53.6	70.2	19.1
13	DHARWAD	372054	157960	214094	57.0	23.1	82.0	43.0	76.9	18.0
14	GADAG	215602	137799	77803	21.2	9.2	42.3	78.8	90.8	57.7
15	HASSAN	429292	339911	89381	39.9	26.7	89.9	60.1	73.3	10.1
16	HAVERI	325456	254181	71275	37.3	28.2	69.7	62.7	71.8	30.3
17	KALABURAGI	465245	311531	153714	25.5	4.5	68.2	74.5	95.5	31.8
18	KODAGU	138303	118509	19794	81.4	78.8	97.0	18.6	21.2	3.0
19	KOLAR	330990	226245	104745	42.8	25.5	80.2	57.2	74.5	19.8
20	KOPPAL	259396	213217	46179	18.5	12.0	48.4	81.5	88.0	51.6
21	MANDYA	426578	354049	72529	37.5	27.5	85.9	62.5	72.5	14.1
22	MYSURU	688422	401655	286767	55.0	27.0	94.2	45.0	73.0	5.8
23	RAICHUR	359337	264274	95063	20.7	10.0	50.4	79.3	90.0	49.6
24	RAMANAGARA	259794	200171	59623	41.9	28.0	88.5	58.1	72.0	11.5
25	SHIVAMOGGA	402139	257060	145079	71.2	61.8	87.7	28.8	38.2	12.3
26	TUMAKURU	636394	495885	140509	32.5	18.3	82.5	67.5	81.7	17.5
27	UDUPI	246313	174548	71765	87.2	83.6	96.0	12.8	16.4	4.0
28	UTTARA KANNADA	319912	226803	93109	59.3	50.6	80.6	40.7	49.4	19.4
29	VIJAYAPURA	405076	307984	97092	18.1	5.0	59.5	81.9	95.0	40.5
30	YADGIR	200424	161665	38759	11.2	4.3	40.2	88.8	95.7	59.8
KARNATAKA		**13179911**	**7864196**	**5315715**	**51.2**	**28.4**	**84.9**	**48.8**	**71.6**	**15.1**

Source: Primary Census Abstract (H-Series) - 2011.
**New Districts were created, 1. Chikkaballapura district from Kolar District. 2. Ramanagara District from Bengaluru Rural District 2007 and 3. Yadgir District from Kalaburagi District on 2009*

9. Profile of scheduled castes and scheduled tribes

District		Scheduled caste population					
		2001			2011		
		Male	Female	Total	Male	Female	Total
1		2	3	4	5	6	7
1	BAGALKOTE	124009	126595	250604	158135	161014	319149
2	BALLARI	188536	185682	374218	258582	258827	517409
3	BELAGAVI	233431	228589	462020	289096	288322	577418
4	BENGALURU RURAL	94683	91919	186602	107424	106276	213700
5	BENGALURU URBAN	435162	415885	851047	607725	590660	1198385
6	BIDAR	153649	145163	298812	204280	195505	399785
7	CHAMARAJANAGARA	121434	116190	237624	130894	128551	259445
8	CHIKKABALLAPURA	139092	135641	274733	157628	154937	312565
9	CHIKKAMAGALURU	116796	116338	233134	125016	128635	253651
10	CHITRADURGA	172092	164395	336487	196819	192298	389117
11	DAKSHINA KANNADA	65818	65342	131160	73324	74854	148178
12	DAVANAGERE	170365	162862	333227	198299	194296	392595
13	DHARWAD	67007	64962	131969	89137	88718	177855
14	GADAG	69796	67618	137414	87745	86451	174196
15	HASSAN	155409	156317	311726	169961	175070	345031
16	HAVERI	90108	85252	175360	112212	107764	219976
17	KALABURAGI	264892	252145	607937	330091	318691	648782
18	KODAGU	33384	34038	67422	35759	37825	73584
19	KOLAR	199367	197592	396959	232546	233321	465867
20	KOPPAL	92736	92473	185209	129341	129267	258608
21	MANDYA	123695	123518	247213	131675	133619	265294
22	MYSURU	237476	230164	467640	269331	267312	536643
23	RAICHUR	159340	157936	317276	200359	200574	400933
24	RAMANAGARA	97148	93929	191077	102612	101207	203819
25	SHIVAMOGGA	136299	133220	269519	153546	154612	308158
26	TUMAKURU	241177	232867	474044	254535	252366	506901
27	UDUPI	33345	34344	67689	36988	38441	75429
28	UTTARA KANNADA	51309	50587	101896	57841	58590	116431
29	VIJAYAPURA	171108	163146	334254	226440	216333	442773
30	YADGIR	101082	99476	109658	137204	136111	273315
KARNATAKA		**4339745**	**4224185**	**8563930**	**5264545**	**5210447**	**10474992**

Source: Census of 2001 and 2011 (Primary census Abstract)

9. Profile of scheduled castes and scheduled tribes

District		Decadal growth rate of SC population (%)			percentage of SC population to total population of the district	
		2001 - 2011			2001	2011
		Male	Female	Total		
1		8	9	10	11	12
1	BAGALKOTE	27.52	27.19	27.35	15.17	16.89
2	BALLARI	37.15	39.39	38.26	18.46	21.10
3	BELAGAVI	23.85	26.13	24.98	10.96	12.08
4	BENGALURU RURAL	13.46	15.62	14.52	21.93	21.57
5	BENGALURU URBAN	39.65	42.02	40.81	13.02	12.46
6	BIDAR	32.95	34.68	33.79	19.89	23.47
7	CHAMARAJANAGARA	7.79	10.64	9.18	24.61	25.42
8	CHIKKABALLAPURA	13.33	14.23	13.77	23.91	24.90
9	CHIKKAMAGALURU	7.04	10.57	8.80	20.43	22.29
10	CHITRADURGA	14.37	16.97	15.64	22.17	23.45
11	DAKSHINA KANNADA	11.40	14.56	12.97	6.91	7.09
12	DAVANAGERE	16.40	19.30	17.82	18.61	20.18
13	DHARWAD	33.03	36.57	34.77	8.23	9.63
14	GADAG	25.72	27.85	26.77	14.14	16.36
15	HASSAN	9.36	12.00	10.68	18.11	19.42
16	HAVERI	24.53	26.41	25.44	12.19	13.77
17	KALABURAGI	24.61	26.39	6.72	27.95	25.28
18	KODAGU	7.11	11.13	9.14	12.29	13.27
19	KOLAR	16.64	18.08	17.36	28.62	30.32
20	KOPPAL	39.47	39.79	39.63	15.48	18.61
21	MANDYA	6.45	8.18	7.31	14.02	14.69
22	MYSURU	13.41	16.14	14.76	17.71	17.88
23	RAICHUR	25.74	27.00	26.37	19.00	20.79
24	RAMANAGARA	5.62	7.75	6.67	18.54	18.83
25	SHIVAMOGGA	12.65	16.06	14.34	16.41	17.58
26	TUMAKURU	5.54	8.37	6.93	18.34	18.92
27	UDUPI	10.93	11.93	11.43	6.09	6.41
28	UTTARA KANNADA	12.73	15.82	14.26	7.53	8.10
29	VIJAYAPURA	32.34	32.60	32.47	18.50	20.34
30	YADGIR	35.74	36.83	149.24	11.47	23.28
KARNATAKA		**21.31**	**23.35**	**22.32**	**16.20**	**17.15**

Source: Census of 2001 and 2011 (Primary census Abstract)

9. Profile of scheduled castes and scheduled tribes

District		Scheduled Tribe population					
		2001			2011		
		Male	Female	Total	Male	Female	Total
1		13	14	15	16	17	18
1	BAGALKOTE	40171	40010	80181	48470	48733	97203
2	BALLARI	183662	180976	364638	225451	225955	451406
3	BELAGAVI	122979	120472	243451	148673	148525	297198
4	BENGALURU RURAL	22343	21327	43670	27147	25756	52903
5	BENGALURU URBAN	44971	41047	86018	99164	91075	190239
6	BIDAR	93455	88764	182219	119787	116035	235822
7	CHAMARAJANAGARA	53205	52906	106111	59369	60850	120219
8	CHIKKABALLAPURA	69878	67710	137578	79156	77331	156487
9	CHIKKAMAGALURU	20570	20449	41019	21990	22980	44970
10	CHITRADURGA	136194	130041	266235	152939	149615	302554
11	DAKSHINA KANNADA	31579	31357	62936	40961	41307	82268
12	DAVANAGERE	106932	102769	209701	117808	115304	233112
13	DHARWAD	36234	34208	70442	44173	43375	87548
14	GADAG	27739	26671	54410	30975	30679	61654
15	HASSAN	13297	13154	26451	15986	16343	32329
16	HAVERI	65498	61665	127163	72109	69271	141380
17	KALABURAGI	24093	23042	47135	32830	32429	65259
18	KODAGU	23109	23006	46115	28510	29544	58054
19	KOLAR	34400	33723	68133	39997	38878	78875
20	KOPPAL	70063	68525	138588	82761	81510	164271
21	MANDYA	8693	8500	17193	11310	11092	22402
22	MYSURU	136831	134520	271351	166697	167850	334547
23	RAICHUR	152080	150962	303042	182101	184970	367071
24	RAMANAGARA	9194	8691	17885	11619	11327	22946
25	SHIVAMOGGA	28435	27562	55997	32707	32705	65412
26	TUMAKURU	98795	95024	193819	105265	104294	209559
27	UDUPI	20572	21041	41613	26228	26669	52897
28	UTTARA KANNADA	11978	11803	23781	17095	17144	34239
29	VIJAYAPURA	15455	14596	30051	19912	19402	39314
30	YADGIR	53833	53227	107060	73564	73285	146849
KARNATAKA		**1756238**	**1707748**	**3463986**	**2134754**	**2114233**	**4248987**

Source: Census of 2001 and 2011 (Primary census Abstract)

9. Profile of scheduled castes and scheduled tribes

District		Decadal growth rate of ST population (%)			Percentage of ST population to total population of the district	
		2001 - 2011			2001	2011
		Male	Female	Total		
1		19	20	21	22	23
1	BAGALKOTE	20.66	21.80	21.23	4.85	5.14
2	BALLARI	22.75	24.85	23.80	17.99	18.41
3	BELAGAVI	20.89	23.29	22.08	5.78	6.22
4	BENGALURU RURAL	21.50	20.77	21.14	5.13	5.34
5	BENGALURU URBAN	120.51	121.88	121.16	1.32	1.98
6	BIDAR	28.18	30.72	29.42	12.13	13.85
7	CHAMARAJANAGARA	11.59	15.02	13.30	10.99	11.78
8	CHIKKABALLAPURA	13.28	14.21	13.74	11.97	12.47
9	CHIKKAMAGALURU	6.90	12.38	9.63	3.60	3.95
10	CHITRADURGA	12.29	15.05	13.64	17.54	18.23
11	DAKSHINA KANNADA	29.71	31.73	30.72	3.32	3.94
12	DAVANAGERE	10.17	12.20	11.16	11.71	11.98
13	DHARWAD	21.91	26.80	24.28	4.39	4.74
14	GADAG	11.67	15.03	13.31	5.60	5.79
15	HASSAN	20.22	24.24	22.22	1.54	1.82
16	HAVERI	10.09	12.33	11.18	8.84	8.85
17	KALABURAGI	36.26	40.74	38.45	2.17	2.54
18	KODAGU	23.37	28.42	25.89	8.41	10.47
19	KOLAR	16.27	15.29	15.77	4.91	5.13
20	KOPPAL	18.12	18.95	18.53	11.59	11.82
21	MANDYA	30.10	30.49	30.30	0.97	1.24
22	MYSURU	21.83	24.78	23.29	10.27	11.15
23	RAICHUR	19.74	22.53	21.13	18.15	19.03
24	RAMANAGARA	26.38	30.33	28.30	1.74	2.12
25	SHIVAMOGGA	15.02	18.66	16.81	3.41	3.73
26	TUMAKURU	6.55	9.76	8.12	7.50	7.82
27	UDUPI	27.49	26.75	27.12	3.74	4.49
28	UTTARA KANNADA	42.72	45.25	43.98	1.76	2.38
29	VIJAYAPURA	28.84	32.93	30.82	1.66	1.81
30	YADGIR	36.65	37.68	37.17	11.20	12.51
KARNATAKA		**21.55**	**23.80**	**22.66**	**6.55**	**6.95**

Source: Census of 2001 and 2011 (Primary census Abstract)

9. Profile of scheduled castes and scheduled tribes

District		percentage of SC population to the state SC population and ranking of distrcts			
		Total		Rank	
		2001	2011	2001	2011
1		24	25	26	27
1	BAGALKOTE	2.9	3.0	16	14
2	BALLARI	4.4	4.9	7	5
3	BELAGAVI	5.4	5.5	5	3
4	BENGALURU RURAL	2.2	2.0	21	23
5	BENGALURU URBAN	9.9	11.4	1	1
6	BIDAR	3.5	3.8	13	10
7	CHAMARAJANAGARA	2.8	2.5	18	19
8	CHIKKABALLAPURA	3.2	3.0	14	15
9	CHIKKAMAGALURU	2.7	2.4	19	21
10	CHITRADURGA	3.9	3.7	8	12
11	DAKSHINA KANNADA	1.5	1.4	26	27
12	DAVANAGERE	3.9	3.7	10	11
13	DHARWAD	1.5	1.7	25	25
14	GADAG	1.6	1.7	24	26
15	HASSAN	3.6	3.3	12	13
16	HAVERI	2.0	2.1	23	22
17	KALABURAGI	7.1	6.2	2	2
18	KODAGU	0.8	0.7	30	30
19	KOLAR	4.6	4.4	6	7
20	KOPPAL	2.2	2.5	22	20
21	MANDYA	2.9	2.5	17	18
22	MYSURU	5.5	5.1	4	4
23	RAICHUR	3.7	3.8	11	9
24	RAMANAGARA	2.2	1.9	20	24
25	SHIVAMOGGA	3.1	2.9	15	16
26	TUMAKURU	5.5	4.8	3	6
27	UDUPI	0.8	0.7	29	29
28	UTTARA KANNADA	1.2	1.1	28	28
29	VIJAYAPURA	3.9	4.2	9	8
30	YADGIR	1.3	2.6	27	17
KARNATAKA		**100.0**	**100.00**		

Source: Census of 2001 and 2011 (Primary census Abstract)

9. Profile of scheduled castes and scheduled tribes

District		percentage of ST population to the state ST population and ranking of distrcts				Sex ratio of SCs		Sex ratio of STs	
		2001	2011	2001	2011	2001	2011	2001	2011
1		28	29	30	31	32	33	34	35
1	BAGALKOTE	2.31	2.29	15	15	1021	1018	996	1005
2	BALLARI	10.53	10.62	1	1	985	1001	985	1002
3	BELAGAVI	7.03	6.99	5	5	979	997	980	999
4	BENGALURU RURAL	1.26	1.25	23	23	971	989	955	949
5	BENGALURU URBAN	2.48	4.48	14	9	956	972	913	918
6	BIDAR	5.26	5.55	8	6	945	957	950	969
7	CHAMARAJANAGARA	3.06	2.83	13	14	957	982	994	1025
8	CHIKKABALLAPURA	3.97	3.68	10	11	975	983	969	977
9	CHIKKAMAGALURU	1.18	1.06	25	25	996	1029	994	1045
10	CHITRADURGA	7.69	7.12	4	4	955	977	955	978
11	DAKSHINA KANNADA	1.82	1.94	18	17	993	1021	993	1008
12	DAVANAGERE	6.05	5.49	6	7	956	980	961	979
13	DHARWAD	2.03	2.06	16	16	969	995	944	982
14	GADAG	1.57	1.45	20	21	969	985	961	990
15	HASSAN	0.76	0.76	27	28	1006	1030	989	1022
16	HAVERI	3.67	3.33	11	13	946	960	941	961
17	KALABURAGI	1.36	1.54	21	20	952	965	956	988
18	KODAGU	1.33	1.37	22	22	1020	1058	996	1036
19	KOLAR	1.97	1.86	17	18	991	1003	980	972
20	KOPPAL	4.00	3.87	9	10	997	999	978	985
21	MANDYA	0.50	0.53	30	30	999	1015	978	981
22	MYSURU	7.83	7.87	3	3	969	993	983	1007
23	RAICHUR	8.75	8.64	2	2	991	1001	993	1016
24	RAMANAGARA	0.52	0.54	29	29	967	986	945	975
25	SHIVAMOGGA	1.62	1.54	19	19	977	1007	969	1000
26	TUMAKURU	5.60	4.93	7	8	966	991	962	991
27	UDUPI	1.20	1.24	24	24	1030	1039	1023	1017
28	UTTARA KANNADA	0.69	0.81	28	27	986	1013	985	1003
29	VIJAYAPURA	0.87	0.93	26	26	953	955	944	974
30	YADGIR	3.09	3.46	12	12	984	992	989	996
KARNATAKA		**100.00**	**100.00**			**973**	**990**	**972**	**990**

Source: Census of 2001 and 2011 (Primary census Abstract)

** New Districts were created, 1. Chikkaballapur district from Kolar District. 2. Ramanagara District from Bengaluru Rural District on 2007 and 3. Yadgir District from Kalaburagi District on 2009*

9. Profile of scheduled castes and scheduled tribes

District		Literacy rate (%) of SCs 2011								
		Total			Rural			Urban		
		Male	Female	Persons	Male	Female	Persons	Male	Female	Persons
1		36	37	38	39	40	41	42	43	44
1	BAGALKOTE	58.64	39.72	49.09	56.32	36.78	46.47	65.47	48.31	56.79
2	BALLARI	57.89	40.13	49.01	54.72	35.79	45.28	65.63	50.52	58.01
3	BELAGAVI	67.03	49.24	58.15	64.72	45.88	55.36	75.20	60.71	67.86
4	BENGALURU RURAL	68.02	53.69	60.90	67.10	52.26	59.71	73.24	61.80	67.57
5	BENGALURU URBAN	74.39	64.36	69.45	67.25	53.75	60.62	75.82	66.48	71.21
6	BIDAR	61.89	45.90	54.07	60.02	43.32	51.86	70.80	58.14	64.60
7	CHAMARAJANAGARA	60.83	50.58	55.75	58.82	48.15	53.54	72.61	64.75	68.70
8	CHIKKABALLAPURA	60.36	45.53	53.01	58.88	43.63	51.32	70.60	58.54	64.61
9	CHIKKAMAGALURU	67.32	54.04	60.58	65.86	51.95	58.81	76.42	66.88	71.55
10	CHITRADURGA	65.60	50.51	58.15	63.89	48.00	56.06	76.05	65.36	70.68
11	DAKSHINA KANNADA	74.43	63.26	68.79	71.47	59.34	65.37	81.24	71.99	76.52
12	DAVANAGERE	63.17	47.79	55.56	60.94	44.58	52.85	72.40	60.98	66.73
13	DHARWAD	70.71	56.67	63.71	61.71	45.09	53.56	76.90	64.23	70.51
14	GADAG	62.49	44.07	53.35	60.26	40.56	50.53	68.67	53.51	61.06
15	HASSAN	66.47	52.58	59.42	64.71	50.20	57.35	77.61	67.64	72.54
16	HAVERI	63.98	48.61	56.45	62.52	46.24	54.57	72.75	62.37	67.60
17	KALABURAGI	55.18	37.36	46.43	51.46	32.83	42.32	66.70	51.24	59.07
18	KODAGU	71.60	59.48	65.37	70.43	57.86	63.96	79.98	71.33	75.57
19	KOLAR	69.36	55.76	62.55	64.29	48.30	56.31	81.51	73.21	77.32
20	KOPPAL	58.44	40.89	49.67	57.24	39.29	48.30	66.14	50.72	58.28
21	MANDYA	66.99	53.23	60.06	65.51	50.93	58.17	74.55	65.00	69.72
22	MYSURU	65.27	54.18	59.74	60.14	48.23	54.22	77.82	68.57	73.19
23	RAICHUR	54.32	35.34	44.83	50.77	30.98	40.88	67.10	50.97	59.01
24	RAMANAGARA	65.22	50.02	57.67	63.34	47.51	55.49	73.23	60.52	66.86
25	SHIVAMOGGA	67.00	53.56	60.26	63.87	49.57	56.72	75.64	64.28	69.89
26	TUMAKURU	66.81	51.61	59.24	65.21	49.18	57.23	75.78	65.17	70.49
27	UDUPI	76.50	67.25	71.79	74.37	64.78	69.48	82.62	74.39	78.43
28	UTTARA KANNADA	74.11	62.27	68.15	72.16	59.19	65.67	78.29	68.63	73.37
29	VIJAYAPURA	60.38	39.53	50.19	58.36	36.48	47.69	69.85	53.47	61.77
30	YADGIR	44.74	26.43	35.62	42.52	24.20	33.39	61.73	43.51	52.67
KARNATAKA		**64.30**	**49.34**	**56.86**	**60.50**	**44.11**	**52.36**	**73.90**	**62.44**	**68.18**

Source: Census of 2001 and 2011 (Primary census Abstract)

9. Profile of scheduled castes and scheduled tribes

District		Literacy rate (%) of STs 2011								
		Total			Rural			Urban		
		Male	Female	Persons	Male	Female	Persons	Male	Female	Persons
1		45	46	47	48	49	50	51	52	53
1	BAGALKOTE	58.55	40.03	49.26	57.47	38.66	48.05	63.87	46.78	55.28
2	BALLARI	56.12	38.72	47.41	54.23	35.94	45.12	61.58	46.49	53.93
3	BELAGAVI	59.77	41.08	50.43	57.84	38.61	48.24	71.12	55.49	63.26
4	BENGALURU RURAL	70.66	56.26	63.65	69.47	54.28	62.08	76.88	66.55	71.83
5	BENGALURU URBAN	76.00	66.87	71.63	67.29	54.91	61.42	77.55	68.94	73.42
6	BIDAR	61.15	44.98	53.19	60.18	43.71	52.09	71.06	57.76	64.44
7	CHAMARAJANAGARA	55.50	43.39	49.37	51.94	40.01	45.92	70.15	56.93	63.39
8	CHIKKABALLAPURA	62.25	46.86	54.65	60.76	45.15	53.04	74.04	60.86	67.61
9	CHIKKAMAGALURU	69.35	56.71	62.89	67.92	54.91	61.27	81.21	71.68	76.35
10	CHITRADURGA	66.93	50.61	58.86	65.59	48.48	57.16	77.12	65.91	71.43
11	DAKSHINA KANNADA	78.90	68.60	73.73	78.17	67.15	72.64	81.81	74.45	78.11
12	DAVANAGERE	66.27	52.07	59.25	65.06	49.92	57.57	71.89	62.02	67.00
13	DHARWAD	66.75	51.89	59.39	63.51	46.27	55.08	71.21	59.19	65.15
14	GADAG	69.75	51.37	60.60	68.68	49.73	59.29	74.80	58.71	66.62
15	HASSAN	69.40	54.69	61.96	68.03	52.33	60.08	77.93	69.68	73.79
16	HAVERI	70.13	54.63	62.54	69.39	53.35	61.55	76.52	64.97	70.72
17	KALABURAGI	56.30	39.13	47.76	52.19	34.61	43.47	69.94	53.91	61.93
18	KODAGU	51.64	43.99	47.75	50.92	43.15	46.97	74.39	71.20	72.78
19	KOLAR	63.83	48.52	56.29	62.24	46.79	54.60	80.14	67.95	74.38
20	KOPPAL	60.88	42.04	51.53	60.41	41.14	50.86	67.15	53.56	60.26
21	MANDYA	63.55	51.84	57.75	61.65	48.58	55.22	70.23	62.79	66.47
22	MYSURU	60.25	47.99	54.10	56.46	43.67	50.05	72.93	62.23	67.53
23	RAICHUR	46.34	27.96	37.07	45.10	26.57	35.75	58.74	42.09	50.41
24	RAMANAGARA	56.13	43.84	50.07	52.49	40.81	46.72	74.45	59.29	67.01
25	SHIVAMOGGA	69.16	57.85	63.51	65.92	53.89	59.92	79.76	70.53	75.11
26	TUMAKURU	70.06	55.30	62.71	68.70	52.88	60.83	78.45	69.90	74.16
27	UDUPI	76.06	65.80	70.89	74.63	64.08	69.31	81.35	72.10	76.68
28	UTTARA KANNADA	69.00	56.36	62.67	67.29	54.41	60.85	76.66	64.93	70.75
29	VIJAYAPURA	62.04	43.45	52.87	60.10	39.73	50.11	70.33	58.32	64.25
30	YADGIR	44.85	27.09	35.99	43.09	25.03	34.09	57.56	41.59	49.51
KARNATAKA		**61.63**	**46.08**	**53.89**	**59.21**	**42.82**	**51.06**	**71.79**	**59.70**	**65.77**

Source: Census of 2001 and 2011 (Primary census Abstract)
**New Districts were created, 1. Chikkaballapur district from Kolar District. 2. Ramanagara District from Bengaluru Rural District on 2007 and 3. Yadgir District from Kalaburagi District on 2009*

9. Profile of scheduled castes and scheduled tribes

District		Work participation rate of SCs								
		2011	2011							
		Total pop.	Total			Rural			Urban		
			Persons	Male	Female	Persons	Male	Female	Persons	Male	Female
1		54	55	56	57	58	59	60	61	62	63
1	BAGALKOTE	319149	44.03	50.79	37.40	46.33	51.08	41.64	37.31	49.93	25.00
2	BALLARI	517409	46.78	53.96	39.59	50.10	54.32	45.85	38.75	53.10	24.66
3	BELAGAVI	577418	44.87	54.83	34.87	47.45	55.59	39.22	35.89	52.15	20.05
4	BENGALURU RURAL	213700	47.77	59.94	35.47	49.14	60.66	37.50	40.08	55.91	23.97
5	BENGALURU URBAN	1198385	43.80	58.99	28.16	46.16	60.19	31.62	43.32	58.75	27.47
6	BIDAR	399785	44.69	51.67	37.40	46.82	53.00	40.36	34.56	45.34	23.33
7	CHAMARAJANAGARA	259445	47.29	60.31	34.05	48.97	61.41	36.30	37.45	53.82	20.89
8	CHIKKABALLAPURA	312565	53.66	59.41	47.81	55.66	60.47	50.77	39.91	52.16	27.48
9	CHIKKAMAGALURU	253651	54.20	62.06	46.57	56.38	62.89	50.03	40.75	56.88	25.30
10	CHITRADURGA	389117	52.44	59.16	45.58	55.02	60.28	49.61	36.95	52.25	21.78
11	DAKSHINA KANNADA	148178	57.63	64.70	50.71	60.54	66.16	54.98	51.06	61.35	41.20
12	DAVANAGERE	392595	49.44	57.78	40.94	52.41	59.07	45.60	37.22	52.43	21.80
13	DHARWAD	177855	43.40	55.50	31.25	52.68	58.62	46.51	37.18	53.36	21.29
14	GADAG	174196	48.42	54.67	42.08	51.20	55.95	46.33	40.84	51.10	30.66
15	HASSAN	345031	52.98	61.31	44.89	55.34	62.41	48.47	38.02	54.31	22.24
16	HAVERI	219976	49.60	58.04	40.81	51.63	59.18	43.73	37.61	51.20	23.82
17	KALABURAGI	648782	45.44	51.33	39.34	48.20	52.31	43.92	36.96	48.31	25.31
18	KODAGU	73,584	57.22	63.54	51.24	58.99	64.39	53.89	44.47	57.50	31.91
19	KOLAR	465867	46.40	56.63	36.21	51.98	59.04	44.89	33.22	50.87	15.92
20	KOPPAL	258608	47.99	52.39	43.58	49.33	52.62	46.01	39.61	50.93	28.74
21	MANDYA	265294	49.49	61.47	37.69	51.28	62.45	40.25	40.35	56.43	24.61
22	MYSURU	536643	45.76	60.36	31.05	48.91	62.03	35.64	38.09	56.26	19.93
23	RAICHUR	400933	47.55	52.38	42.73	50.61	53.25	47.98	36.56	49.26	23.95
24	RAMANAGARA	203819	49.38	60.95	37.66	51.18	61.90	40.28	41.79	56.91	26.73
25	SHIVAMOGGA	308158	48.25	60.20	36.38	51.80	61.57	42.03	38.60	56.43	21.23
26	TUMAKURU	506901	51.82	60.66	42.92	54.04	61.70	46.32	39.44	54.84	23.95
27	UDUPI	75,429	52.58	64.30	41.29	53.02	63.94	42.51	51.30	65.35	37.78
28	UTTARA KANNADA	116431	44.20	59.15	29.44	47.66	61.03	34.33	36.93	55.13	19.36
29	VIJAYAPURA	442773	43.47	49.57	37.09	45.48	50.15	40.57	34.17	46.84	21.15
30	YADGIR	273315	48.04	51.88	44.17	49.42	52.59	46.24	37.48	46.50	28.34
KARNATAKA		**10474992**	**47.58**	**56.85**	**38.21**	**50.71**	**57.74**	**43.59**	**39.70**	**54.62**	**24.72**

Source: Census 2011 (Primary census Abstract)

9. Profile of scheduled castes and scheduled tribes

District		Work participation rate of STs								
		2011	2011							
		Total pop.	Total			Rural			Urban		
			Persons	Male	Female	Persons	Male	Female	Persons	Male	Female
1		64	65	66	67	68	69	70	71	72	73
1	BAGALKOTE	97,203	48.06	54.09	42.07	49.40	54.38	44.44	41.46	52.60	30.44
2	BALLARI	451406	49.40	56.74	42.08	52.65	57.38	47.89	40.16	54.89	25.84
3	BELAGAVI	297198	48.28	56.01	40.55	50.35	56.65	44.04	36.18	52.25	20.29
4	BENGALURU RURAL	52,903	49.45	61.37	36.88	50.54	61.58	38.90	43.73	60.30	26.41
5	BENGALURU URBAN	190239	46.86	62.46	29.86	50.00	64.06	34.40	46.30	62.18	29.07
6	BIDAR	235822	46.02	53.74	38.05	47.31	54.44	39.94	32.92	46.58	19.10
7	CHAMARAJANAGARA	120219	49.99	64.52	35.82	51.97	65.18	39.01	41.99	61.82	23.05
8	CHIKKABALLAPURA	156487	53.98	60.53	47.26	55.59	61.35	49.71	40.96	54.02	27.26
9	CHIKKAMAGALURU	44,970	54.30	62.67	46.29	55.91	63.19	48.95	40.91	58.36	24.18
10	CHITRADURGA	302554	54.98	61.47	48.34	57.05	62.17	51.77	39.69	56.18	23.71
11	DAKSHINA KANNADA	82,268	55.71	65.18	46.33	57.81	66.40	49.29	47.31	60.29	34.45
12	DAVANAGERE	233112	49.83	60.22	39.22	52.16	61.44	42.67	39.04	54.56	23.24
13	DHARWAD	87,548	47.51	58.44	36.38	53.29	60.87	45.37	39.78	55.08	24.71
14	GADAG	61,654	50.63	58.22	42.97	52.56	58.86	46.14	41.75	55.20	28.75
15	HASSAN	32,329	53.40	63.76	43.27	55.37	64.55	46.41	41.03	58.81	23.41
16	HAVERI	141380	49.70	60.26	38.71	50.99	60.94	40.56	38.98	54.43	23.68
17	KALABURAGI	65,259	45.42	52.21	38.54	48.22	53.18	43.19	36.16	48.99	23.32
18	KODAGU	58,054	60.30	64.16	56.57	60.77	64.29	57.39	44.93	60.09	30.15
19	KOLAR	78,875	51.88	59.57	43.96	53.46	60.71	46.05	34.97	47.93	20.52
20	KOPPAL	164271	50.28	54.82	45.68	51.12	54.91	47.25	39.41	53.50	25.70
21	MANDYA	22,402	50.75	62.38	38.90	52.74	62.58	42.59	43.92	61.66	26.52
22	MYSURU	334547	47.92	62.39	33.55	50.13	63.02	37.29	40.60	60.30	21.21
23	RAICHUR	367071	52.60	55.93	49.32	53.66	56.32	51.04	41.91	51.99	31.85
24	RAMANAGARA	22,946	51.45	61.35	41.29	53.12	62.48	43.55	42.96	55.66	29.78
25	SHIVAMOGGA	65,412	48.09	60.98	35.19	51.25	62.06	40.38	37.85	57.47	18.56
26	TUMAKURU	209559	53.01	62.58	43.36	55.20	63.51	46.80	39.66	56.80	22.67
27	UDUPI	52,897	50.96	63.59	38.53	51.65	63.80	39.70	48.39	62.81	34.25
28	UTTARA KANNADA	34,239	46.86	59.81	33.95	49.37	61.46	37.27	35.72	52.42	19.30
29	VIJAYAPURA	39,314	44.56	52.11	36.82	46.46	52.20	40.50	36.75	51.77	22.10
30	YADGIR	146849	49.64	54.38	44.88	51.24	55.03	47.43	38.25	49.71	26.96
KARNATAKA		**4248987**	**50.26**	**58.90**	**41.53**	**52.44**	**59.41**	**45.38**	**41.14**	**56.73**	**25.45**

Source: Census 2011 (Primary census Abstract)

TECHNICAL NOTE

Technical Note 1
HUMAN DEVELOPMENT INDEX

The Human Development Index(HDI) is a summary measure of achievements in three key dimensions of human development viz., long and healthy life, access to knowledge and a decent standard of living. This note describes the data sources and steps to calculating the HDI.

Data Sources

Life expectancy at birth - The life expectancy at birth usually denoted by e^{o}_{o} , measures the average number of years a person is expected to live under prevailing mortality conditions. This measure is taken from census of India; abridged life tables 2009-13. Same table also provides life expectancy for different age group, using which inequality in levels of health is estimated.

Mean years of schooling - Mean years of schooling of the adult population i.e., aged 25 and above are estimated using the NSS employment and unemployment data for the year 2011-12. The same data is used to estimate the inequality in levels of education.

Expected years of schooling - Expected years of schooling is defined as the number of years of schooling that a child of school entrance age can expect to receive if prevailing pattern of age-specific enrolment rates were to stay same throughout the child's life (UNDP 2010). Based on the enrolment rates for the age group six to eighteen years, expected years of schooling is estimated using NSS 71st Social Consumption in India: Education survey, 2014.

Per capita Income - Per capita income at State level is estimated using Gross National Income Per capita (PPP US$) for India for the year 2011-12 from world development tables and State level per capita consumption expenditure from NSS 68th round consumer expenditure survey, 2011-12. This makes use of the assumption that income distribution across States is same as consumer expenditure distribution. Atkinson measure of inequality is estimated from same NSS 68th round unit record data and is used as a proxy for inequality estimate of income. As suggested by UNDP(2010), top 0.5 percentile group of distribution is truncated and zero expenditures are replaced with minimum value of expenditure of the bottom 0.5 percentile group.

STEPS FOR CALCULATING HUMAN DEVELOPMENT INDEX

Step1- Creating the dimension indices

Minimum and maximum values (goal posts) are set in order to transform the indicators expressed in different units into indices between 0 and 1. For international comparison,

goal posts are taken from UNDP 2014 report and presented in the text. Having defined the maximum and minimum values, the dimension indices are calculated as dimension index=(actual - minimum) / (maximum - minimum)

Step 2 - Aggregating the dimensional indices to provide the Human Development Index

The HDI is the geometric mean of the three dimensional indices

$$HDI = (I_{Health} \times I_{Education} \times I_{Income})^{1/3}$$

Example Karnataka:

Indicator	Value
Life Expectancy at Birth	68.5
Mean Years of Schooling	5.65
Expected years of schooling	11.12
Per capita income(PPP US$)	5867

$$Health\ Index = \frac{68.5 - 20}{85 - 20} = 0.7463$$

$$Mean\ Years\ of\ Schooling\ Index = \frac{5.65 - 0}{15 - 0} = 0.3767$$

$$Expected\ Years\ of\ Schooling\ Index = \frac{11.12 - 0}{18 - 0} = 0.6178$$

$$Education\ Index = \frac{0.3767 + 0.6178}{2} = 0.4972$$

$$Income\ Index = \frac{ln\ (5867) - ln\ (100)}{ln\ (75000) - ln\ (100)} = 0.6151$$

$$Human\ Development\ Index = (0.7463 \times 0.4972 \times 0.6151)^{1/3} = 0.6111$$

Technical Note 2 - Inequality adjusted Human Development Index

Step 1 - Estimating inequality in the dimension of the Human Development Index

Inequality measure used here is Atkinson(1970) measure, $A_x = 1 - \frac{\sqrt[n]{X_1 \ldots X_n}}{\bar{X}}$

Where (X1...Xn) denotes the underlying distribution in the dimension of interest. Ax is obtained for each variable i.e., life expectancy, mean years of schooling and per capita consumption

Step 2 - Adjusting the dimension indices for inequality

The inequality adjusted dimension indices are obtained from the HDI dimension indices Ix, by multiplying them by (1-A_x) i.e., $I_x^* = (1-A_x) \times I_x$

Step 3 - Combining the dimension indices to calculate the Inequality adjusted Human Development Index

$$IHDI^* = (I^*_{Health} \times I^*_{Education} \times I^*_{Income})^{1/3}$$

Example - Karnataka

I*health=(1-0.2227)×0.7463=0.5801

I*education=(1-0.3991)×0.4972=0.2988

I*income=(1-0.1201)×0.6151=0.5412

Inequality adjusted Human Development Index = (0.5801 × 0.2988 × 0.5412)1/3 = 0.4544

Technical Note 3 - Gender Inequality Index

The Gender Inequality Index (GII) reflects gender based disadvantage in three dimensions – reproductive health, empowerment and the labour market. It shows the loss in potential human development due to inequality between female and male achievements in these dimensions.

DATA SOURCES

Maternal Mortality Ratio (MMR) - Maternal Mortality Rate(MMR) is defined as the number of maternal deaths to women in the ages 15-49 per lakh women in that age group. MMR corresponds to the year 2011-13 based on SRS.

Adolescent fertility rate(AFR) - Defined as number of live births per thousand women in the age group 15-19. 2012, SRS

Share of parliamentary seats held by each sex: Share of MP and MLA seats by each sex in 2014 general election.

Attainment at secondary and higher education by each sex - These estimates are based on NSS 68th round employment and unemployment survey.

Labour force participation rate by each sex - Estimates are based on 68th round NSS employment and unemployment survey.

Step 1 - Aggregating across dimensions within each gender group by the geometric mean

$$G_F = \sqrt[3]{\left(\frac{10}{MMR}.\frac{1}{AFR}\right)^{1/2} \times (PR_F.SE_F)^{1/2} \times LFPR_F}$$

$$G_M = \sqrt[3]{1 \times (PR_M.SE_M)^{1/2} \times LFPR_M}$$

Step 2 - Aggregating across gender groups using harmonic mean to obtain equally distributed gender index

$$HARM(G_F, G_M) = \left[\frac{(G_F)^{-1} + (G_M)^{-1}}{2}\right]^{-1}$$

Step 3 - Calculating the geometric mean of the arithmetic means for each indicator

$$G_{\bar{F},\bar{M}} = \sqrt[3]{\overline{Health} \times \overline{Empowerment}\ \overline{LFPR}}$$

Where $\overline{Health} = \left[\sqrt{\frac{10}{MMR} \times \frac{1}{AFR}} + 1\right]/2,$

$\overline{Empowerment} = \left[\sqrt{PR_F \times SE_F} + \sqrt{PR_M \times SE_M}\right]/2$ and

$$\overline{LFPR} = \frac{LFPR_F + LFPR_M}{2}$$

Step 4 - Calculating Gender Inequality Index

$$GII = 1 - \frac{HARM(G_F, G_M)}{G_{\bar{F},\bar{M}}}$$

Example - Karnataka

sex	Health		Empowerment	Education	Labour Market
	Maternal Mortality Ratio	Adolescent fertility rate	Parlimentary representation(%)	Attainment at secondary and higher education(%)	Labour market participation rate(%)
Female	133	33.8	0.02	0.35	0.46
Male	Nil	Nil	0.98	0.54	0.82

$$G_F = \sqrt[3]{\left(\frac{10}{133}.\frac{1}{33.8}\right)^{1/2} \times (0.02 \times 0.35)^{1/2} \times 0.46} = 0.1178$$

$$G_M = \sqrt[3]{1 \times (0.98 \times 0.54)^{1/2} \times 0.82} = 0.8446$$

$$HARM(G_F, G_M) = \left[\frac{(0.1178)^{-1} + (0.8446)^{-1}}{2}\right]^{-1} = 0.2067$$

$$\overline{Health} = \frac{\left[\sqrt{\frac{10}{133} \times \frac{1}{33.8}} + 1\right]}{2} = 0.5236$$

$$\overline{Empowerment} = \left[\sqrt{0.02 \times 0.35} + \sqrt{0.98 \times 0.54}\right]/2 = 0.4033$$

$$\overline{LFPR} = \frac{0.46 + 0.82}{2} = 0.6429$$

$$G_{\bar{F},\bar{M}} = \sqrt[3]{0.5236 \times 0.4033 \times 0.6429} = 0.5139$$

$$GII = 1 - \frac{0.2067}{0.5139} = 0.5978$$

Technical Note 4 - Multidimensional Poverty Index

The Multidimensional Poverty Index(MPI) identifies multiple deprivations at the household level in education, health and standard of living. It uses micro data from household surveys.

Data source: For all the indicators data source is from DLHS-4

The Ministry of Health and Family Welfare, Government of India, initiated the process of conducting DLHS-4 during 2012-2013 and has designated the International Institute for Population Sciences (IIPS) as the nodal agency to carry out the survey. Fieldwork in Karnataka was conducted during December 2012 to October 2013, gathering information from 47,200 households, 44,028 ever married women and also from 2,155 health facilities.

MPI was estimated only at district level for Karnataka State. This analysis was not carried out at State level due to non availability of micro data for nine major States viz., Uttara Pradesh, Chattisgarh, Madhya Pradesh, Uttarkhand, Jharkhand, Orissa, Bihar, Assam and Rajasthan. In the absence of information with respect to these nine major States comparison of MPI across States would be inappropriate.

MPI is based on two cut off points. The first cut off corresponds to each indicator which is as follows.

Education

School attainment: No household member has completed at least five years of schooling

School attendance: A school age child is not attending school

Health

Nutrition: A household member (for whom there is nutrition information) is malnourished; i.e., Body Mass Index for adults and height for age z score for children under age 5.

Child mortality: A child has died in the household within the five years prior to the survey.

Standard of living

Electricity - Not having access to electricity

Drinking water - Not having access to safe drinking water

Sanitation - Not having access to improved sanitation or if improved, it is shared

Cooking fuel - Using dirty cooking fuel (dung, wood or charcoal)

Housing - Having home with dirt, sand or dung floor

Assets - Household is not having at least one asset related to information (Radio, Tv, Telephone), mobility (Mike, Motorbike, Car, Truck, Animal Cart, Motorboat) or livelihood (Refrigerator, Arable land, livestock)

The deprivation score of each indicator are summed with weights to obtain the household deprivation score,c. The second cut off of 33.3 percent is used here to identify whether a household is multidimensionally poor or not. All the households with weighted deprivation score greater than 33.3 percent are multidimensionally poor. If a household is poor then all the members in it are poor.

The head count ratio, "H", is the proportion of multidimensional poor in the population: $H=q/n$, where "q" is the number of people who are multidimensionally poor and n is the total population. The intensity of poverty , ${}_{x}A$, reflects the proportion of the weighted component indicators in which, on average, poor people are deprived.

$A=\frac{\sum_{1}^{q} c_i}{q}$ where c_i is the deprivation score that the ith poor individual experiences.

MPI value is the product of two measures: the Multidimensional Poverty head count ratio and the intensity of poverty. MPI $= H \times A$

Example using hypothetical data

	Household				Weight
	1	2	3	4	
Household Size	4	7	5	4	
Education					
No one has completed five years of schooling	0	1	0	1	16.67
School age child not enrolled in school	0	1	0	0	16.67
Health					
At least one member is malnourished	0	0	1	0	16.67
One or more children have died	1	1	0	1	16.67
Living Conditions					
No electricity	0	1	1	1	5.56
No access to clean drinking water	0	0	1	0	5.56
No access to adequate sanitation	0	1	1	0	5.56
House with dirt floor	0	0	0	0	5.56
Household used 'dirty' cooking fuel	1	1	1	1	5.56
Household has no asset	0	1	0	1	5.56
Results					
Household deprived score (sum of each deprivation multiplied by weight)	22.2%	72.2%	38.9%	50.5%	
Is the household poor($\geq$33.3%)	No	Yes	Yes	Yes	

Note - '1' indicates deprivation and "0" indicates no deprivation

Weighted deprivation in household 1 $= (1\times16.67)+(1\times5.56) = 22.2$percent

Head count ratio(H) $= \frac{0+7+5+4}{4+7+5+4} = 0.80$ i.e.,80% of people live in poor households

Intensity of poverty(A) $= \frac{(72.2\times7)+(38.9\times5)+(50.0\times4)}{(7+5+4)} = 56.3\%$ i.e., the average poor person is deprived in 56.3% of weighted indicators.

MPI $= H\times A = 0.8\times0.563 = 0.450$

Contribution of deprivation in

$$\textbf{\textit{Education:}} = \frac{16.67\times(7+4+7)}{4+7+5+4}/45.0 = 33.3\%$$

$$\textbf{\textit{Health:}} = \frac{16.67\times(5+7+4)}{4+7+5+4}/45.0 = 29.6\%$$

$$\textbf{\textit{Living Conditions:}} = \frac{5.56\times(7\times4+5\times4+4\times3)}{4+7+5+4}/45.0 = 37.1\%$$

End Note

Chapter 9: Poverty and Inequality

[1]$\alpha=0$ yields a distribution of individual poverty levels in which each poor person has poverty level 1; the average across the entire population is simply the headcount ratio. $\alpha=1$ uses the normalized gap gi as a poor person's poverty level, thereby differentiating among the poor; the average becomes the poverty gap measure. $\alpha=2$ squares the normalized gap and Thus, weights the gaps by the gaps; this yields the squared gap measure.

[2]For the latest rounds i.e., 66th round(2009-10) and 6th round(2011-12) NSS also designed MRP*. In MRP* 365 days reference period was used for low frequency purchase items, 7 day reference period was uased for certain specified food items and 30 days reference period for the remaining items.

[3]NSS regions for Karnataka are classified as follows.

- Region 1: Coastal and Ghats : Dakshina Kannada, Udupi and Uttara Kannada.
- Region 2: Inland Eastern : Chikkamagaluru, Hassan, Kodagu and Shivamogga.
- Region 3: Inland Southern : Bengaluru (R), Bengaluru (U), Chamarajanagar, Kolar, Mandya, Mysuru & Tumakuru
- Region 4: Inland Northern : Bagalkot, Belagavi, Ballari, Bidar, Vijayapura, Chitradurga, Davangere, Dharwad, Gadag, Kalburagi, Haveri, Koppal and Raichur.

Chapter 13: Governance and Human Development

[1]Mechanisms of social accountability include participatory budgeting, public expenditure tracking, monitoring of public service delivery, public commissions and citizen advisory boards.

[2]see for instance, Standard and Poor, Moody's, Global Integrity Index, Transparency International, BTI, Heritage Foundation, the Wall Street Journal, International Country Risk Guide (ICRG), Global Competitiveness Survey (GCS) and Economist Intelligence Unit (EIU)

[3]See for instance The Everyday Democracy Index (EDI) was launched by Demos in January 2008. It measures the democratic health of 25 of the 27 member States of the European Union. Though some of its measures can be found in other indicators as well, it attempts to go beyond the existing framework. The six dimensions it measures include electoral and procedural democracy, activism and civic participation, aspirations and deliberation, family democracy, workplace democracy, democratic public spaces.

[4]Thomas also refers to the problem of clustering.. When creating indices, often many indicators areput together without adequate consideration and thought despite the obvious problems.

[5]Ibrahim Index of African Governance assesses government on 57 criteria and

is a project of the Mo Ibrahim Foundation. The project was carried out by the Kennedy School of Government's Program on IntraState Conflict and Conflict Resolution under the direction of Robert I. Rotberg and Rachel M. Gisselquist. *http://www.moibrahimfoundation.org/the-index.asp*

[6]The six issues they focus on include accountability, transparency, efficiency,

decency, fairness and participation in six arenas civil society, political society, government, bureaucracy, economic society and judiciary

[7]Lorraine Corner, Gender-sensitive and Pro-poor Indicators of Good Governance, Paper prepared for the UNDP Governance Indicators Project, Oslo Governance Centre.

[8]1. No Pverty; 2. Zero Hunger; 3. Good Health and Well beng; 4. Quality Education; 5. Gender Equality; 6. Clean Water and Sanitation; 7. Affordable and Clean Energy; 8. Decent Work and Economic Growth; 9. Industry, Innovation and Infrastructure.; 10. Reduced Inequalities; 11. Sustaiable Cities and Communities; 12. Responsbile Consumption and Production; 13. Climate Action; 14. Life Below Water; 15. Life on Land; 16. Peace Justice and Strong Institutions; and 17. Partnership for the Goals.

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[15]For details please see *www.lokniti.org* Also details in Shastri, Suri and Yadav 2009; Palshikar , Suri and Yadav 2014; Shastri 2014a, 2014b, 2013, 2009a, 2009b

[16]The 2009 NES is not discussed as a question on the satisfaction with the State government was not discussed

[17]One must add a caveat at this stage. Over the last two decades in all surveys undertaken both at the national and State level. It is noticed that it requires tremendous negative developments to encourage a respondent to express dissatisfaction with the government.

[18]This was an open ended questions and peoples response was coded.

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