South Asia

Nationally Determined Contributions in Asia: Are Governments recognizing the rights, roles and contributions of Indigenous Peoples?

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Country reports from Bangladesh, India, and Nepal

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Cover photo: A girl from Chakma community collects water from a dug well and stream, the only sources of drinking water to many indigenous communities. Climate change is impacting water collection: during the dry season, the streams dry up, which brings in severe hardship to indigenous women to collect water for the families. Juropanichora village in Khagrachari Sadar Upazila (sub-district), Khagrachari Hill District. **Photo Credit:** Sujash Chakma

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Abbreviations

AIPP	Asia Indigenous Peoples Pact
BCCSAP	Bangladesh Climate Change Strategy and Action Plan
BIPNetCCB	Bangladesh Indigenous Peoples' Network on Climate Change and Biodiversity
CBD	Convention on Biological Diversity
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CHT	Chittagong Hill Tracts
CIPD	Centre for Integrated Program and Development
COP	Conference of the Parties
DAE	Direct Access Entity
FPIC	Free, Prior and Informed Consent
FRA	Forest Rights Act
FTPP	Framework for Tribal Peoples Plan
GCF	Green Climate Fund
GDP	Gross Domestic Product
GHG	Greenhouse Gas
ICCPR	International Covenant on Civil and Political Rights
ICERD	International Convention on the Elimination of All Forms of Racial Discrimination
ICESCR	International Covenant on Economic, Social and Cultural Rights
ILO	International Labour Organization
IP	Indigenous Peoples
IWGIA	International Work Group for Indigenous Affairs
LCIPP	Local Community and Indigenous Peoples Platform
MoFE	Ministry of Forest and Environment
NAPA	National Adaptation Program of Action
NAPCC	National Action Plan for Climate Change
NAP	National Adaptation Plan
NDC	Nationally Determined Contribution
NEFIN	Nepal Federation of Indigenous Nationalities
NRCC	National REDD+ Coordination Committee

NRSC	National REDD+ Steering Committee
PAMs	Policies and mMeasures
PESA	Provisions of the Panchayat Extension to Scheduled Areas, 1996
REDD+	Reducing Emissions from Deforestation and Forest Degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks
SAPCC	State Action Plan for Climate Change
UNDP	United Nations Development Programme
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNFCCC	United Nations Framework Convention on Climate Change
VCF	Village Common Forest

Spice stall in a Traditional market in Belgahana village, Bilaspur, Chattisgargh 2004.
Photo Credit: FPP

India

CR Bijoy
For Asia Indigenous Peoples Pact (AIPP), Thailand

Purpose of this report

This report presents the results of an analysis examining whether and to what extent India's nationally determined contribution (NDC), REDD+ strategies, national adaptation plan, national and state action plans for climate change, climate policies and other policy responses consider, respect, incorporate and comply with the rights of Indigenous Peoples. Our analysis is in the context of the current legal status of Indigenous Peoples and their rights to governance, self-determination, autonomy, land and resources, and other key collective rights. We examine the impact of climate change on indigenous men, women, youth, and people with disabilities, and the extent to which these impacts are addressed in the policies, plans and programs responding to climate change. The extent of the engagement and involvement of Indigenous Peoples in formulating and executing these responses locally, regionally, nationally and internationally is also examined. Importantly, we describe in which way and to what extent the climate change responses, both mitigation and adaptation, benefit or negatively impact Indigenous Peoples. Their contribution and potential to contribute should inform the way forward.

Our analysis was aided by the prior knowledge on climate change issues and processes at the international and national level through an exhaustive study conducted some years ago,[1] updated through input from experts who have continuously engaged in climate change issues.[2] Further, the study is informed by and grounded in the Indigenous Peoples' mass organizations in different parts of the country; the national level processes on critical issues of resource conflicts and rights, autonomy and self-governance; and studies carried out primarily on India's Indigenous Peoples' issues for a variety of Indian and international institutions.[3]

1 Dutta, Soumya , Soumitra Ghosh, Shankar Gopalakrishnan, C.R. Bijoy and Hadida Yasmin. Climate Change and India: Analysis of Political Economy and Impact , Rosa Luxemburg Stiftung—South Asia, New Delhi, Daanish Books, 2013, https://www.rosalux.de/fileadmin/rls_uploads/pdfs/Ausland/Asien/Climate_Change_and_India.pdf

2 Primarily Soumya Dutta (Co-convenr, South Asian People's Action on Climate Crisis (SAPACC); Former member, Advisory Board, UN Climate Technology Centre and Network; Founding member, India-Climate-Justice) and Suparna Lahiri (Climate Campaigner; All India Forum of Forest Movements and the Global Forest Coalition; Formerly associated with Community Conservation Resilience Initiative).

3 This refers to the author's full time engagement with indiogenous peoples organisations for over three decades. Being a continuous process, there are too many people to be named.

Summary of Findings

- Though the Indigenous Peoples of India—known as Scheduled Tribes, or tribal peoples—have special legal recognition to diverse and distinct territorial and governance rights, and protection of land and resource rights, these laws are subject to weak implementation and violations resulting in widespread disaffection.

- Being the least served by government services, tribal peoples, primarily those who are dependent on natural resources, are one of the most impacted and vulnerable sections of society in this highly climate-risk-prone country which is experiencing regular climate-change-related impacts.

- India's NDC, REDD+ strategy, and national and state climate change adaptation plans and action plans alike view tribal peoples as poor, living in interior areas endowed with rich natural resources, but do not at any stage refer to tribal peoples, despite their special status in the Constitution, with special duty for protection by the governments.

- Tribal peoples, by virtue of their being mostly forest-dwelling communities with governance rights over most of the forests, should have been ensured a pre-eminent role in national climate policies and plans.

- Yet, tribal peoples, their governance structures, and the ministry and departments that deal with tribal affairs have been ignored, relegating the tribal peoples as mere recipients of benefits, and recipients of awareness and employment from climate change responses.

- Current and proposed climate interventions have intensified conflicts and violence in response to violations of land- and forest-related rights, violations that threaten people's livelihoods and survival, the vast majority of whom are marginalized and many of whom are vulnerable, being resource-dependent.

- Ironically, tribal peoples' historical contribution to carbon sequestration through their forest and land stewardship, along with their having contributed the least to the problem (they have the smallest carbon footprint), is neither made visibile, acknowledged nor accounted for; significantly, neither is their prime role in carbon sequestration in the future.

Recommendations

- The forest-dwelling tribal peoples, armed now as the statutory authority to protect, conserve, manage and control the forests, should be a leading partner of the government in national and state climate actions.

- The autonomous statutory authorities—namely, the Gram Sabhas (village assemblies) in the forest and forest fringe villages, the Fifth Schedule areas and the north-east; the traditional institutions in the tribal-dominated north-east region; and the autonomous councils in the Sixth Schedule areas and those created under state laws in the north-east—should be the primary decision-making bodies for climate adaptation and mitigation policies, plans and programs at the local level.

01
General status of Indigenous Peoples in India

Bounded by the Himalayas in the north and the ocean and sea in the east, south and west, India is the world's seventh largest country with a geographical area of 328.73 million hectares constituting 2.4 per cent of the global land area. It has the second largest population in the world and is home to the world's largest indigenous population.

1.1 Legal status

The Scheduled Tribes (STs) of India are generally referred to internationally as Indigenous Peoples (IPs). *Adivasi*, meaning the original inhabitants, is the term popularly used in peninsular India, while 'tribes' and more recently 'Indigenous Peoples' are popular in the north-east. Not all *Adivasis* are STs; neither are all STs *Adivasis*. In this report, the terms IPs, STs, Adivasis and tribal peoples are used interchangeably.

Scheduled Areas

104 districts have Fifth Schedule areas; 36 are fully and 68 are partially notified.

19 districts in the north-east have Sixth Schedule areas; 15 are fully and 4 are partially notified.

STs is a legal and administrative category and are "such tribes or tribal communities or parts of, or groups within such tribes or tribal communities as are deemed under Article 342 to be Scheduled Tribes for the purposes of this Constitution" [Article 366(25)].[4] The President of India issues notifications listing the STs in a particular state/union territory along with specific geographical areas within the state/union territory. These notifications can be modified subsequently to include or exclude peoples, but this requires an Act of Parliament. The area definition can also be modified.

4 So far there have been nine notification, see https://tribal.nic.in/clm.aspx

India is a signatory to ILO Convention 107 (Indigenous and Tribal Populations Convention, 1957) and the UN Declaration on the Rights of Indigenous Peoples (2007), but not to ILO Convention 169 (Indigenous and Tribal Peoples Convention, 1989). Officially, the government holds that all Indians are indigenous to the country, arguing that the colonizers did not constitute the dominant population when India became a sovereign nation. The government categorically rejects the globally acknowledged equating of the STs with IPs[5] even while abiding by the operational directives of bilateral and multilateral agencies with regard to IPs while operationalizing projects with their financial aid.

There are 705 tribal peoples in 28 states and eight union territories (2011) with a population of 104 million constituting 8.6 per cent of the total population.[6] Of the 640 administrative districts in the country, STs constitute a majority in 110 districts, 20–50 per cent in 87 districts and 10–20 per cent in another 74 districts.

Concentration of Scheduled Tribes population across blocks and villages

Of the 5,985 blocks (*tehsils/talukas*) in the country, STs are:
the majority in 1,063 blocks
20–50% in 700 blocks
10–20% in 626 blocks.

Of the 597,483 villages in the country, STs are:
the majority in 110,118 villages
20–50% in 45,902 villages
10–20% in 29,800 villages.

5 'We regard the entire population of India at the time of our independence, and their successors, to be indigenous', quote by Permanent Mission of India to the United Nations, India's Approach to the 75th session of the UNGA, New York, 2020, https://www.pminewyork.gov.in/pdf/menu/submenu__554119307.pdf

6 Registrar General & Census Commissioner, Ministry of Home Affairs. Scheduled Tribes of India as revealed in Census 2011, https://tribal.nic.in/downloads/statistics/3-STinindiaascensus2011.pdf

Of the 640 administrative districts, 123 are 'scheduled areas'. These areas are notified under the Fifth and Sixth schedules of Article 244 of the Constitution, with special provisions for land and autonomy. The scheduled areas under the Sixth Schedule are also referred to as 'tribal areas'. About 13 per cent of the total geographical area of the country is within scheduled areas.[7] The State of Nagaland, Fifth Schedule areas in the ten central Indian states,[8] the ten Sixth Schedule areas of Assam, Meghalaya, Mizoram and Tripura,[9] and the 14 autonomous councils in Assam and Manipur and the union territory of Ladakh,[10] together with the areas recognized as rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006 (known as the Forest Rights Act, or FRA),[11] constitute the total area, with varying degrees of autonomy, at least in law where most of the STs of the country reside along with non-STs.

7 For breakup of population in the Scheduled area, see Wahi, Namita and Ankit Bhatia. The Legal Regime and Political Economy of Land Rights in the Scheduled Areas of India, CPR, New Delhi, 2018,

https://cprindia.org/research/reports/legal-regime-and-political-economy-land-rights-scheduled-tribes-scheduled-areas

8 Fifth Scheduled areas are notified by the government in 10 of the 28 States - Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Telengana, see https://www.mea.gov.in/Images/pdf1/S5.pdf

9 The Sixth Schedule areas are incorporated through constitutional amendments, see https://madc.mizoram.gov.in/uploads/files/the-sixth-schedule.pdf. Ten Autonomous District Councils have been constituted, three in Assam, three in Meghalaya, one in Tripura and three in Mizoram. State wise Autonomous District Councils with the year of formation:

1. Assam: Dima Hasao District Autonomous Council [North Cachar (1951, 1970) for Dimasa, Kuki, Hmar, Zemei and Hrangkhawls]; Karbi Anglong Autonomous Council [Karbi Anglong (1951, 1976) for Karbis, Dimasa, Rengma, Kuki, Garos, Tiwas, Khasis, Hmars, Mizos and Chakmas] and Bodoland Territorial Council [Bodoland (2003) for Bodos, Koch Rajbongshis and smaller tribes]
2. Meghalaya: Khasi Hills Autonomous District Council [Khasi Hills (1972) for Khasi and smaller tribal groups], Garo Hills Autonomous District Council [Garo Hills (1972, 1979) for Garos and smaller tribal groups] and Jaintia Hills Autonomous District Council [Jaintia Hills (1972) for Pnar, Jaintia and Khasi]
3. Mizoram: Chakma Autonomous District Council [Chakma (1987) for Chakma], Mara Autonomous District Council [Mara (1987) for Mara] and Lai Autonomous District Council [Lai (1987) for Lai]
4. Tripura: Tripura Tribal Areas Autonomous District Council [Tripura Tribal Area (1982) for Bhil, Bhutia, Chainel, Chakma, Garo, Holan, Kuki, Lepcha, Lushai, Mog, Munda, Moatia, Orang, Riang, Santal, Tripura and U

10 These are constituted under State laws.

11 As on 31 December 2020, about 5.3 million ha of the minimum potential of 'around 40 million ha of community forest resources' in about 1.79 lakh villages have been titled for transfer to village level democratic institutions amounting to 13% of forest land. However, some of this area may fall within the Fifth Scheduled areas, the Sixth Schedule areas and the Autonomous Council areas of the north-east. For further details, see Bijoy, C.R. Democracy In The Forests: The Governance That Is To Be, 17/0 Law, Environment and Development Journal, http://www.lead-journal.org/content/a1702.pdf

1.2 Land and resource rights

Being territorially-bound communities, during the feudal era almost all tribal peoples in India were left to govern themselves through their customary and traditional governance systems and institutions. Colonial intrusion and subsequent resistance to the colonizing forces resulted in arrangements that allowed considerable self-governance, in varying degrees. These arrangements remain in the statute books, with modifications. However, the extent to which these laws have been useful is determined largely by the extent and impact of sustained political assertions of the tribal peoples on the state. In this, the north-east fares remarkably better than the peninsular region in all respects.

Key provisions:

- The Inner Line Permit under the Bengal Eastern Frontier Regulation of 1873[12] in Arunachal Pradesh, Mizoram, and hill areas of Manipur and Nagaland protects land and regulates entry of outsiders.
- The Santhal Pargana Tenancy Act of 1876[13] and the Chotanagpur Tenancy Act of 1908[14] protects the lands in Jharkhand.
- Nagaland and Mizoram state assemblies have exclusive power over land and its resources[15] under Article 371A[16] and Article 371G[17] respectively.
- The Fifth Schedule and Sixth Schedule areas under Article 244 of the Constitution provide for protection of land and natural resources.[18]

12 See https://www.dimapurpolice.in/Acts%20And%20Rules/Bengal%20Eastern%20Frontier%20Regulation,%201873.pdf

13 Section 20, the main protective clause in the Act, prohibits any transfer of a raiyat's (any person holding the land for the purpose of cultivation and who has acquired the right of occupancy according to the tenancy law or rules) land by sale, gift, mortgage, will, lease or any other contract or agreement, either expressed or implied unless the right to do so has been recorded in the record of rights. See https://www.indiacode.nic.in/bitstream/123456789/8120/1/santhal_parganas_tenancy_laws_full.pdf

14 Section 46 of the Act states very clearly that under the raiyati, land belonging to a tribal can only be transferred to another tribal living under the same police station area. Similarly, a raiyati land belonging to a person of the Scheduled Caste or Backward Caste can only be transferred to another person of the Scheduled Caste or Backward Caste respectively within the same district. See http://www.bareactslive.com/JH/JHR055.HTM

15 Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006 (FRA) for instance, has not been extended to these States yet, precisely because these constitutional provisions, along with political assertions, have safeguarded their control over their territories.

16 See https://indiankanoon.org/doc/371998/

17 See https://indiankanoon.org/doc/1184172/

18 The Governor can prevent, or apply with modification (laws apply unless prevented or modified), any law in the Fifth Schedule areas and make regulations for peace and good government especially regarding transfer and allotment of land.

- Autonomous councils[19] created through state laws in Manipur, Assam and Ladakh provide for protection of land.

- The Provisions of the Panchayat Extension to Scheduled Areas 1996[20] (PESA) provide the *Gram Sabhas* (village assemblies)[21] the authority to prevent land alienation, restore illegally alienated lands, own minor forest produce, and control minor water bodies and minor minerals within their territorial jurisdiction.[22]

- The tribal homelands and the forests are almost coterminous. India has notified 23.34 per cent (767,400 sq km) of its lands as forests. The government policy is to have 33 per cent of the total land as forests. The Indian Forest Act 1927[23] provides for declaring Reserved Forest (all rights are banned unless granted), Protected Forest (rights permitted unless banned) and Village Forest (Reserved Forest assigned to villages), and regulates them. The Wildlife (Protection) Act 1972[24] has created a protected area regime consisting of national parks, wildlife sanctuaries, conservation reserves, community reserves and tiger reserves across the country. With the enactment of the FRA,[25] all restrictions on forest rights, except hunting, were removed on all forest lands.[26] Gram Sabhas can access forest lands[27] in all states and all union territories where the law is applicable; determine their rights; and define their geographical jurisdiction to protect,

19 14 Autonomous Councils have been created, six in Assam, six in Manipur and two in the union territory of Ladakh. Assam: (1) Rabha Hasing (South Kamrup & Goalpara districts, 1995); (2) Sonowal Kachari (Dibrugarh,Tinsukhia, Dhemaji, Lakhimpur, Sibasagar & Jorha districts, 2005); (3) Mising (Dhemaji, Sonitpur, Lakhimpur, Dibrugarh, Tinsukhia, Sibsagar, Jorhat & Golaghat districts, 1995); (4) Lalung (Tiwa) (Morigaon, Nagaon & Kamrup districts, 1995); (5) Deori (Lakhimpur, Dhemaji, Dibrugarh, Tinsukhia & Sibsagar districts, 2005) and (6) Thengal Kachari (Jorhat, Sibsagar, Dibrugarh & Lakhimpur, 2005)

Manipur: (1) Senapati; (2) Sadar Hills; (3) Ukhrul ; (4) Chandel; (5) Churachandpur and (6) Tamenglong

Ladakh (1) Ladakh Autonomous Hill Development Council, Leh (1995) and (2) Ladakh Autonomous Hill Development Council, Kargil (2003)

20 See https://legislative.gov.in/sites/default/files/A1996-40.pdf

21 Assembly of all adult members of a village or habitation.

22 However, rules to operationalise the state amendment to the panchayat raj act incorporating the PESA provisions were delayed, notified in six states and are yet to be notified in Chhattisgarh, Jharkhand, Madhya Pradesh and Odisha.

23 See http://moef.gov.in/wp-content/uploads/2018/03/Indian-Forest.pdf

24 See https://www.indiacode.nic.in/handle/123456789/1726

25 See https://tribal.nic.in/fra.aspx

26 Applies to 'land of any description falling within any forest area' and includes unclassed forests (the largest category of forests customarily under community control in the north-east), undemarcated forests, existing or deemed forests, protected forests, Sanctuaries, National Parks and Tiger Reserves, and any area recorded as forest in the Government record.

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conserve, access, use and manage.[28] Gram Sabha consent is mandatory for forest diversion, demarcation of inviolate forest areas and relocation.

- No land records exist in Arunachal Pradesh, Meghalaya, Mizoram, Nagaland, hill areas of Manipur, and parts of Assam due to people's resistance. Rather than clear legal protection, de facto customary law applies.

- Most states, including in the north-east, have land laws specifically to prohibit tribal land alienation and restoration of illegally alienated lands.[29] Tamilnadu and Karnataka are the exceptions.[30]

- The Land Acquisition Act 1894, which was enacted for the state to acquire land for public purposes, displacing many millions of tribal peoples,[31] was replaced by the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013.[32] Prior consent and better compensation is specifically provided for STs.

- The Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act 1989, which makes wrongful occupation or dispossession of tribal land a crime, now includes forest rights recognized under the FRA.

Despite all these provisions, tribal land alienation has been increasing, a result of the weak implementation of the laws and the absence of strong judicial intervention. In 2011, STs constituted the social group with the highest level of poverty, with 43 per cent of STs living below the poverty line, compared to the national figure of 21.9 per cent.

28 FRA, Sec.3 (1)(i): rights to protect, regenerate or conserve or manage any community forest resource which they have been traditionally protecting and conserving for sustainable use; FRA Sec.5: (b) ensure that adjoining catchments area, water sources and other ecological sensitive areas are adequately protected; (c) ensure that the habitat of forest dwelling Scheduled Tribes and other traditional forest dwellers is preserved from any form of destructive practices affecting their cultural and natural heritage;

29 Department of Land Resources, Ministry of Rural Development. Report of the Committee On State Agrarian Relations and Unfinished Task of Land Reforms, New Delhi, 2009, https://dolr.gov.in/sites/default/files/Committee%20Report.pdf

30 Amendments were made to weaken the law as in Kerala in 1991 where alternate lands were to be given instead of the original land in certain cases. There were repeated attempts to dilute the Regulation 1/70 of Andhra Pradesh, and Chota Nagpur Tenancy Act 1908 and the Santhal Pargana Tenancy Act of 1876 of Jharkhand which were thwarted by massive protests. On the positive side, the Governor of Maharashtra issued a notification in 2016 (See https://cdnbbsr.s3waas.gov.in/s3c8758b51708 3196f05ac29810b924aca/uploads/2019/11/20191120 96.pdf) using the Governor's powers under the Fifth Schedule amending the Maharashtra Revenue Code, 1966 preventing the District Collector from approving transfer of land from tribal to non-tribal without the previous sanction of the Gram Sabha.

31 8.5 million tribal peoples were displaced by 1990 for mega developmental projects like dams, mining, industries and conservation of forests etc. Many more millions were displaced since then. Tribal peoples constitute the bulk of those displaced despite them being only 8.6% of the total population.

32 See https://www.advocatekhoj.com/library/bareacts/righttofaircompensation/index.php?Title=Right%20to%20Fair%20Compensation%20and%20Transparency%20in%20Land%20Acquisition,%20Rehabilitation%20and%20Resettlement%20Act,%202013

02

Indigenous Peoples and climate change in India

Climate-sensitive agriculture, fisheries and forestry constitute the livelihoods of the bulk of people in India, including tribal peoples, with 42.6 per cent of the land under agricultural production and 24.39 per cent as forests. Indigenous Peoples are mainly dependent on natural resources, mostly inhabiting forested and mountainous regions. The regions with high concentrations of Indigenous Peoples are also the regions likely to be most impacted by climate change.

Protected areas

- 24.27% of forests (171,921 sq km or 5.03% of total land area)
- 104 national parks (43,716 sq km or 25.43% of PAs) – no rights
- 566 wildlife sanctuaries (122,420 sq km (71.21% of PAs) – restricted rights
- 97 conservation reserves (4,483 sq km) – uninhabited government land accessed by people
- 214 community reserves (1,392 sq km) – includes private land.

Marine protected areas

- 10 national parks, 115 wildlife sanctuaries, 4 conservation reserves and one community reserve covering 8,716.98 sq km
- 1,864.84 sq km are in the island region where the most vulnerable and least contacted tribal peoples live; the rest is in peninsular India.

Tiger reserves

- 50 tiger reserves carved out of national parks and wildlife sanctuaries covering 71,027.10 sq km
- 40,340.12 sq km critical tiger habitat or core area and 30,686.98 sq km buffer area
- Inhabited by 57,386 families
- 18,493 families in 215 villages relocated
- 41,086 people in 496 villages still remain.

India is ranked 29 out of 191 countries by the 2019 INFORM Risk Index, with very high exposure to flooding (riverine, flash, and coastal) and to tropical cyclones, with their associated hazards and droughts. The country is ranked 44 out of 191 countries for vulnerability due to its high levels of socioeconomic deprivation.[33] A World Bank commissioned study found that India is already experiencing climate-change-related impacts. It also predicts changes associated with an increase in temperature of between 2 ºC and 4 ºC.

Another index, the Global Climate Risk Index 2021[34] ranked India as the seventh most affected country in 2019 (fifth in 2018) with a score of 16.67, 2,267 fatalities (0.17 fatalities per 100,000 inhabitants). Surplus rain in 2019 caused floods leading to 1,800 deaths across 14 states, displacing 1.8 million people, affecting 11.8 million people, and with an economic loss of USD 10 billion. There were eight tropical cyclones in the northern Indian Ocean; six of them were 'very severe'. Flood risk has increased significantly all over India during recent decades. There were 431 major natural disasters during the period 1980–2010. The frequency of dry days has also increased during the period 1901–2010. The annual mean temperature during the period 1901–2017 increased by 0.66 ˚C per hundred years. These changes have resulted in more flooding and drought, and less groundwater recharge.

33 See https://climateknowledgeportal.worldbank.org/country/india/vulnerability

34 The 16th edition of its annual analysis of some important climate related impact and the associated vulnerabilities of 180 countries from quantified impacts of extreme weather events in terms of fatalities and economic losses based on the data from the Munich Re NatCatSERVICE. See https://www.germanwatch.org/sites/default/files/Global%20Climate%20Risk%20Index%202021_2.pdf

Tribal peoples in India have poor access to government services such as education, health care, welfare, and development resources such as land, natural resources, credit and infrastructure, generally resulting in sub-optimal economic productivity, and poor social and physical infrastructure. As a result, their social and human development is low, and they are prone to malnutrition and endemic diseases. The consequences are often worsened by impacts from climate change, which include the following:[35]

- *Extreme heat:* Frequent spells of hot weather over larger areas affect the west coast and southern India, impacting agriculture significantly.[36]

- *Rainfall:* An overall decline in monsoon rainfall and more frequent unpredictable heavy rainfall events are seen. Increased flooding over larger parts is predicted from the northwest coast to the south-eastern coastal region, as are extreme precipitation events in south India and in the Himalayas in the north.[37]

- *Droughts:* Generally drier weather with an increase in the number of droughts is expected, especially in north-western India, Jharkhand, Odisha and Chhattisgarh, which is the main Indigenous Peoples' region in the country.

- *Groundwater:* Agriculture, which is mainly rain-fed, will depend more on the already overexploited groundwater, which will lead to falling water tables.

- *Glacier melt:* The melting of most Himalayan glaciers and snow cover would mainly destablize the glacier-fed rivers of north India, the Indus and the Brahmaputra rivers, and, to a lesser extent, the Ganges. Increased flows in spring and much reduced flows in summer will likely result, adversely affecting river basins in the Himalayan and sub-Himalayan regions, home to the largest number of indigenous communities.

- *Sea-level rise:* Increased coastal flooding, riverine flooding, and saltwater intrusion affecting groundwater are expected.

- *Tropical cyclones:* These would adversely impact agriculture, drinking water, and health, particularly on the east coast.

- *Energy security:* Long-term decreases in river flows negatively impact hydropower and thermal power generation. There are increased threats from landslides, flash floods, glacial lake outbursts, and other climate-related natural disasters.

35 The World Bank. India: Climate Change Impacts, 10 June 2013, https://www.worldbank.org/en/news/feature/2013/06/19/india-climate-change-impacts

36 Mean annual temperature will rise by 1.89°C (1.11°C to 2.84°C) in 2040-2059 and about 4°C by 2080-2099. See https://climateknowledgeportal.worldbank.org/country/india/climate-data-projections

37 Annual precipitation will rise by 51.56mm (-234.40mm to 370.88mm) in 2040-2059. ibid

- *Water security:* With falling watertables and erratic rainfall, particularly in central India, the Western Ghats and the northeastern states with substantial populations of Indigenous Peoples, people will face water shortages. Largely starved of piped drinking-water supply and irrigation, Indigenous Peoples will be impacted disproportionately as they depend on natural runoff, streams, rivers and wells.

- *Agriculture and food security:* The above impacts of climate change have led to a decline in yields of staple foods[38] such as rice and wheat, and, as demands and prices increase, food security is jeopardized.

- *Health:* Heightened food insecurity, increasing malnutrition and related disorders, vector-borne diseases and diarrhoeal infections are likely to spread. Injuries from extreme weather events are likely to increase. Furthermore, tribal regions are the least served by public and private health in the country.

- *Migration and conflict:* Migration of people from disaster-affected areas and social tensions arising from this could increase. Labour migrations of tribal peoples are on the increase from the central Indian belt and from Assam in the north-east. Such migrations are almost absent in the remaining north-east states where secure resource rights and autonomy results in a better score on the human development index.

- *Island regions:* The island regions of Andaman and Nicobar and the tropical archipelago of Lakshadweep are ecologically unique and fragile; the former are inhabited by some of the least contacted tribal peoples, who are under threat of extinction, while the latter is almost wholly dominated by tribal peoples. Climate events such as rising sea levels, coastal erosion and cyclonic storms are increasing threats.

Among the tribal peoples, those most excluded are the more marginalized in general; those who live in unruly terrains and deep in the forests; and those who are internally displaced, whose lands have been taken over for development and conservation projects, for extractive industries or as conflict zones. In general, the disabled and the women suffer the most, particularly in the aforementioned areas. The youth in these destablized regions are forced to forgo their education and migrate in search of meagre wages, often becoming subject to semi-bondedness.

38 A third of land area is used for cereal production, about 300 million tonnes per year (2016), See https://climateknowledgeportal.worldbank.org/country/india/impacts-agriculture

03
Climate policies

India signed the UN Framework Convention on Climate Change (UNFCCC) on 10 June 1992 and ratified it on 1 November 1993. It also signed and ratified the Kyoto Protocol on 26 August 2002.

The National Environment Policy 2006 provides the broad policy framework on environment and climate change. The National Action Plan on Climate Change (NAPCC) and state action plans on climate change (SAPCCs) are the guiding documents for mainstreaming climate change concerns in sectoral plans and policies, both at national and state level. The Ministry of Environment, Forest and Climate Change has been the focal point for climate change issues in India since 2009. A number of national programs have a bearing on climate change action plans; these include:

- the National Policy for Farmers, which focuses on sustainable development of agriculture
- the National Agroforestry Policy, which deals with agroforestry issues
- the *Pradhan Mantri Krishi Sinchayee Yojana*, which extends irrigation coverage and improves water use efficiency
- the National Watershed Development Programme which comprises three area-based watershed programs for developing wastelands / degraded lands, namely the Drought Prone Areas Programmes, the Desert Development Programme and the Integrated Wastelands Development Programme
- *Neeranchal*, which adds focus to watershed development
- the Mahatma Gandhi National Rural Employment Guarantee Act 2005, which provides at least 100 days of guaranteed wage employment in a financial year to every household for improving rural infrastructure, augmenting land and water resources, and enhancing the livelihood resource base of the rural poor.

3.1 Nationally determined contribution

India submitted its Intended National Determined Contribution to the UNFCCC on 2 October 2015, just before the Paris Climate Summit. India ratified the Paris Agreement on 2 October 2016.[39] The first NAPCC was proposed in 2008, followed by eight national climate missions closely tied to the pledges in the NDC. The state governments came up with their own SAPCCs in 2014–2015 and these are now being revised by most states.

The goals of India's NDC[40] for the period 2021–2030 are as follows:

1. Put forward and further propagate a healthy and sustainable way of living based on traditions and values of conservation and moderation.

2. Adopt a climate friendly and a cleaner path than the one followed hitherto by others at a corresponding level of economic development.

3. Reduce the emissions intensity of GDP by 33–35 per cent by 2030 from 2005 levels.

4. Achieve about 40 per cent 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, including from the Green Climate Fund.

5. Create an additional carbon sink of 2.5 to 3 billion tonnes of carbon dioxide equivalent (CO2-eq) by 2030 through additional forest and tree cover.

6. Better adapt to climate change by investing more in development programmes in sectors vulnerable to climate change, particularly agriculture, water resources, the Himalayan region, coastal regions, health, and disaster management.

7. Mobilize domestic funds, and new and additional funds from developed countries, to implement the above mitigation and adaptation actions in view of the resources required and the resource gap.

8. Build capacities, and create a domestic framework and an international architecture for quick diffusion of cutting-edge climate technology in India and for joint collaborative R&D for such future technologies.

The type of contributions, the greenhouse gas (GHG) targets and the non-GHG targets are provided as Annexure A.

39 See https://www4.unfccc.int/sites/submissions/INDC/Published%20Documents/India/1/INDIA%20INDC%20TO%20UNFCCC.pdf

40 See https://www.climatewatchdata.org/countries/IND#ghg-emissions

3.2 REDD+ strategy

India's NDC committed to create an estimated carbon sink of 2.5 million tonnes of CO2-eq through additional forest and tree cover by 2030.

Table 1. Forest cover in India

Forest		
	Area (sq km)	**Geographical area (%)**
Forest	712,249	21.67
Tree cover	95,027	2.89
Total forest and tree cover	807,276	24.56
Forest cover in the tribal districts	422,351	37.54

Source: India State of Forest Report 2019[41]

In 2019, the total carbon stock of forests (see Table 1) was estimated at 7,124.6 million tonnes, an increase of 42.6 million tonnes from 2017. This represents an annual increase of 21.3 million tonnes, or 78.1 million tonnes of CO2-eq. The carbon stock of both forest and tree cover was 28.12 billion tonnes of CO2-eq in 2005 and is projected to rise to 31.87 billion tonnes of CO2-eq in 2030, an increase of 3.75 billion tonnes of CO2-eq in 25 years. This leaves a shortfall of 0.25 billion tonnes of CO2-eq against the target of 2.5–3.0 billion tonnes, which is expected to be achieved through "activities such as restoration of open forests and afforestation on different kinds of available lands like wastelands, agroforestry along national and state highways, railway sidings, urban landscapes etc".[42]

The National REDD+ Strategy[43] was launched in 2018 to facilitate implementation of the REDD+ programme. Fourteen physiographic zones[44] were identified on the basis of topography, latitude and altitude, as well as climatic and soil properties broadly resembling the factors responsible for tree growth.

41 Forest Survey of India, Government of India. India State of Forest Report 2019, Executive Summary, https://fsi.nic.in/isfr19/vol1/executive-summary.pdf

42 Ibid. Chapter 9: Carbon Stock in India's Forests, https://fsi.nic.in/isfr19/vol1/chapter9.pdf

43 Ministry of Environment, Forest and Climate Change, Government of India. National REDD+ Strategy INDIA, 2018.

44 These are 1. Western Himalayas, 2. Eastern Himalayas, 3. North East , 4. Northern Plains , 5. Eastern Plains, 6. Western Plains , 7. Central Highlands , 8. North Deccan, 9. East Deccan, ,10. South Deccan, 11. Western Ghats, 12. Eastern Ghats, 13. West Coast and 14. East Coast,

The following REDD+ activities were to commence on a pilot basis:

- reducing emissions from forest degradation
- conserving forest carbon stocks
- sustainably managing forests
- enhancing forest carbon stocks.

The government has also launched new initiatives for enhancing forest carbon stocks (See Annexure B).

3.3 National adaptation plan

Assessment of risks indicates vulnerability of varying degrees and priority. The impacts due to these vulnerabilities are to be taken up together with the adaptation and mitigation potential that exists. This will indicate what needs to be done to deal with the perceived risks. A summary of these risks is provided in Table 2.

Table 2. Summary of India's climate risks by sector and region

Climate risks • Changing patterns of temperature and precipitation • Increased frequency of climate extremes across geographies such as glacier-fed river basins, semi-arid regions, and delta regions		**Key sources of vulnerability** • Large-scale dependence on climate-sensitive livelihood systems such agriculture, fisheries and livestock • Sociopolitical and cultural factors • Rapid and unplanned urbanization in many parts of the country
Vulnerable sector	**Illustrative potential impacts on vulnerable sector**	**Illustrative adaptation priority / measures by sector**
Agriculture	• Reduction in crop yield; for example, grain yield of rice declined by 10% for each 1 °C increase in the growing-season minimum temperature	• National Initiative on Climate Resilient Agriculture • Improved and efficient agricultural practices such as climate-smart Agriculture • Risk-transfer mechanisms such as the National Agricultural Insurance Scheme, which is the largest crop insurance scheme in the world
Water	• Decline in water quantity as well as quantity because of increased evapotranspiration and extreme weather events	• National Water Mission, as part of the National Action Plan for Climate Change (NAPCC)
Cities	• Greater exposure of coastal cities to risks such as cyclones and sea-level rise, and associated risk of flooding and infrastructure damage	• National Mission on Sustainable Habitats, as part of the NAPCC and ongoing Smart Cities initiatives • Preparation of a city resilience strategy for many cities
Health	• Increased incidence of waterborne diseases • Increased incidence of vector-borne diseases such as malaria and dengue	• Proposed National Mission on Health as part of the NAPCC • Specific actions such as the Ahmedabad Heat Action Plan to cope with extreme heat waves.
Coastal livelihoods and fisheries	• Decline in fish catch in inland and coastal fisheries due to changes in sea temperature and hydrological changes in major river systems	• Various actions under the coastal zone management plan, including livelihood support to coast-dependent communities • Proposed new mission on coastal resources under the NAPCC
Mountain systems	• Temperature changes causing snow to melt and glaciers to retreat in many parts of the Himalayas	• Specific mission on sustaining the Himalayan ecosystem and other programs
Particularly vulnerable regions	**Particularly vulnerable groups**	**Status of climate governance (policies, institutions)**

• Himalayas in the north, and northeast regions • Snow- and glacier-fed river basins of the Ganges, Indus, and Brahmaputra • Arid and semi-arid regions, mostly those of western India • Coasts and coastal regions • Deltas • Island ecosystems	• Small and marginalized farmers • Different groups of tribal populations, who are primarily resource-dependent • Women and children, because of existing sociopolitical structures	• Sector- and region-specific adaptation action plan in place since 2008 • Highest political priority accorded to India's climate change action plan • Sub-national climate change action plan prepared and endorsed by the federal agency • National Adaptation Fund for Climate Change established in July 2014

Source: 2016 Review of Current and Planned Adaptation Action in India[45]

According to the ND-GAIN Country Index[46] of the Notre Dame Global Adaptation Initiative, a measuring tool that examines the risk by climate change, India ranked 122 overall among 181 countries, with a score of 41.9 (higher scores are better).[47] India ranked 134 in vulnerability with a score of 0.509, and 123 in readiness with a score of 0.347 (For details, see Annexure C).

3.4 National and state action plans on climate change

The NAPCC addresses the national adaptation goals along with the state-specific state action plan on climate change (SAPCCs). Launched in 2008, the NAPCC[48] identifies measures to advance India's development-related and climate-change-related objectives of adaptation and mitigation. It is based on the principles of (a) a climate-sensitive, inclusive sustainable development strategy; (b) ecologically sustainable growth that mitigates GHG emissions; (c) efficiency and cost-effectiveness; (d) appropriate technologies for adaptation and mitigation of emissions; (e) new innovative market regulatory and voluntary mechanisms for sustainable development; (f) linkage with civil society, local government and

45 Patra, J. Review of Current and Planned Adaptation Action in India. CARIAA Working Paper no. 10. International Development Research Centre, Ottawa, Canada and UK Aid, London, United Kingdom, 2016, https://www.iisd.org/system/files/publications/idl-55866-india.pdf

46 See https://gain.nd.edu/our-work/country-index/rankings/

47 A country's ND-GAIN index score is composed of a Vulnerability score and a Readiness score. Vulnerability measures a country's exposure, sensitivity and ability to adapt to the negative impact of climate change. ND-GAIN measures the overall vulnerability by considering vulnerability in six life-supporting sectors – food, water, health, ecosystem service, human habitat and infrastructure.

48 See http://moef.gov.in/wp-content/uploads/2018/04/Pg0152.pdf

public-private partnerships and (g) international cooperation for R&D and the transfer of technologies through funding and global technology-transfer-friendly intellectual property rights.

The NAPCC is to be carried out through eight national missions:

- Jawaharlal Nehru National Solar Mission[49]
- National Mission for Enhance Energy Efficiency[50]
- National Mission on Sustainable Habitat[51]
- National Water Mission[52]
- National Mission for Sustaining the Himalayan Ecosystems[53]
- National Mission for a Green India[54]
- National Mission for Sustainable Agriculture[55]
- National Mission for Strategic Knowledge for Climate Change[56].

The NAPCC also lists other mitigation initiatives (See Annexure D). It also dwells on international cooperation for technology development and transfer issues, and clean development mechanisms supporting renewable energy projects, energy efficiency projects, forestry and municipal solid waste.

49 To increase the share of solar energy in the total energy mix along with other renewable and non-fossil options as nuclear energy, wind energy and biomass.

50 To enhance energy efficiency through Bureau of Energy Efficiency and designated State agencies facilitated by the Energy Conservation Act, 2001 targeting to save 10,000 MW by 2012, adopting market-based mechanism for cost effectiveness, using energy efficient appliances, financing and developing fiscal instruments.

51 To improve energy efficiency in buildings, management of solid waste and shift to public transport.

52 To ensure integrated water resource management systems to conserve water, minimize wastage and ensure more equitable distribution both across and within states.

53 To evolve management measures for sustaining and safeguarding the Himalayan glacier and mountain ecosystem, and to establish an observational and monitoring network for the Himalayan environment.

54 To enhance ecosystem services including carbon sinks with special importance on reforestation and afforestation.

55 To make agriculture more resilient to climate change through new technologies, integrating traditional knowledge, and employing new credit and insurance mechanisms.

56 To identify the challenges of, and the responses to, climate change through a global exchange in research and technology development

State action plan on climate change

Initiated in 2009, India's 28 states and eight union territories (administered by the central government) each drafted a state action plan on climate change (SAPCC) describing state-specific adaptation and mitigation measures providing for short-, medium- and long-term strategies. The plans, which were subsequently fine-tuned and revised, effectively describe the background; the profile of the region, including ecological, demographic, economic and sectoral profiles; the climate profile (trends and change), climate risks, threats and vulnerabilities; and the adaptation and mitigation strategies required and adapted in line with the national plan and its eight missions, including activities identified by sector, such as urban development, transport, energy, industries, mining, agriculture, water resources, habitat, forestry, biodiversity, coastal, tourism, health and disaster management. A committee consisting of key government functionaries steers the process.

A list of other sector-related policies and responses and their targets are provided in Annexure E. The laws and policies that have a bearing on climate change response are provided in Annexure F.

3.5 Recognition of rights in climate policies

India's NDC, REDD+ strategy, NAPCC and SAPCCs alike portray tribal peoples as poor people living in interior areas endowed with rich natural resources, who lack basic facilities and depend on natural resources, especially forests. The policies also portray these people as having a natural-resource-intensive lifestyle, particularly due to the *Jhum* (shifting) cultivation practised mainly in the northeast and in parts of central India—a view that is outdated and false.[57]

Because of this view, the government response, through the above-mentioned climate change policies, is to facilitate coping capacities to weather variability; improve tribal peoples' livelihoods through strategies for the sustainable management and marketing of non-timber forest produces; support livelihood activities; wean tribal peoples away from shifting cultivation,[58] encourage agroforestry / farm forestry; establish tree plantations on their uncultivated lands; and provide employment through afforestation activities. Official documents portray tribal peoples as victims of various processes, both natural and externally induced human activities. Climate response plans depict them as mere beneficiaries of the planned responses.

57 Chhakchhuak, Linda. Jhum works. Shillong meet declares shifting cultivation environment-friendly , Down to Earth, 15 November 2004, https:// www.downtoearth.org.in/ news/ jhum--works-12057

58 NITI Aayog, Government of India. Report of Working Group III. Shifting Cultivation: Towards a Transformational Approach, August 2018, https://niti.gov.in/writereaddata/files/document_publication/ doc3.pdf#:~:text=Shifting%20Cultivation%3A%20Towards%20a%20Transformational%20Approach%20Executive%20Summary,of%20the%20Act%20East%20Policy.%20Transformation%20of%20shifting

Nowhere are tribal peoples seen worthy of having valuable insights on climate impacts, mitigation and adaptation, even when it comes to the ecosystems that they have sustained for generations.

The NDC, REDD+ strategy, NAPCC and SAPCCs do not at any stage refer to tribal peoples as having special status in the Constitution, particularly to (a) governance and autonomy with distinct territorial jurisdiction conferred at various levels, such as the habitation, village, district and, in two cases, the state level and (b) control over lands and forests. They ignore the fact that these provisions (described in Section 1) applicable to specific areas populated largely by tribal peoples are distinct and different from the rest of the country and its population. Neither do any of these documents refer specifically to tribal women, youth and persons with disabilities, either in terms of impacts, vulnerabilities or risks or participation in climate action plans. However, references are made to small and marginal farmers, resource-dependent tribal populations, and women and children in general as vulnerable sections of society. Given the emphasis on forest protection, afforestation and carbon sequestration in the national climate policies—efforts that will primarily be carried out on lands notified as forest and outside forests—it is a missed opportunity that the legally recognized authorities of tribal peoples who govern these lands are neither referred to nor considered as partners. Rather they are perceived as mere recipients of standardized programs that are developed at a national level.

While the constitutional provisions and the aforementioned laws that specifically empower tribal peoples are ignored, the major focus on carbon sequestration through carbon sinks from massive tree plantations—catalysed by international and national policy, plans and funding—has given a boost to the regressive and repressive provisions in forest laws that are no longer legally valid (overridden, as they are, by the FRA 2006 which nullifies their rights-restricting provisions and the governance authority of the forest bureaucracy). This has set in motion a process of dismantling laws that recognize the rights of tribal peoples at two levels. First, the Environment Ministry and its forest bureaucracy are resisting the FRA implementation on the ground, administratively and in the courts. Second, they are seeking to challenge and modify the law through administrative and legal means.[59] These efforts are continuously being resisted by the tribal peoples in defence of the FRA. It is crucial that the FRA is recognised and acknowledged as a conservation-based, community-centric, eco-specific model, in contrast to the disastrous fortress conservation approach, as per the findings of conservation science.[60] This is absolutely critical to combating the climate crisis, given that

59 For a detailed examination of the manner these are executed, see Bijoy, C.R. Forest Rights Struggle: The Making of the Law and the Decade After, Law, Environment and Development Journal, Vol.13/2, 2017, http://www.lead-journal.org/content/17073.pdf and Bijoy, C.R. Democracy In The Forests: The Governance That Is To Be, 17/0 Law, Environment and Development Journal (2021), http://www.lead-journal.org/content/a1702.pdf

60 Bijoy, C.R. Why India's Forest Rights Act Is the Most Viable Forest Conservation Law, The Wire, 11 May 2021, https://science.thewire.in/environment/why-indias-forest-rights-act-is-the-most-viable-forest-conservation-law/

tribal peoples make up 87 million of the 300 million people who derive "their livelihoods and sustenance from forests".[61] That is a massive 84 per cent of the tribal peoples in India whose forest rights are hardly recognized despite the passing of 13 years since the FRA was operationalized in 2008. Further, the large investment and land grab for tree plantations, besides violating forest rights, could be harmful ecologically, threatening biodiversity, groundwater and soil fertility.[62]

3.6 Issues and concerns for Indigenous Peoples in national climate policies

The climate change impacts, be they floods or droughts, manifest on livelihood, habitat and ecology in different ways. Tribal peoples generally see them as just natural disasters. That their frequency and intensity have increased is also generally acknowledged as the vagaries of nature rather than any emerging climate crisis. Of course, they know that the climate has been changing. Their primary concern and cause of worry is how to cope with and survive the crisis and its aftermath, and reorganize their lives and livelihoods. The indigenous women, the persons with disabilities, the aged, the children and the youth are the ones who are in dire straits.

Tribal peoples and their organizations have been raising several issues that are at the core of climate action. Their homelands are mineral rich, particularly coal in parts of central India. Tribal peoples' organizations, activists and trade unions have repeatedly resisted the auctioning of coal mines[63] which leads to displacement and pollution. So too have there been protests against India-headquartered mining companies displacing Indigenous Peoples in other countries.[64] Tribal peoples' forest rights groups have been critiquing the exclusionary forest management and climate change policies and programs that violate the FRA, a crucial weapon in the fight against climate change.[65]

61 Ministry of Environment, Forests & Climate Change, National Policy on REDD++ (Final Draft), 2014, http://moef.gov.in/wp-content/uploads/2019/06/Draft-National-REDD-Policy-and-Strategy-2014_0.pdf

62 Dasgupta, Shreya. The risks of tree plantation in grassland and non-forest areas, Mongabay, 25 May 2021, https://india.mongabay.com/2021/05/the-risks-of-tree-plantation-in-grassland-and-non-forest-areas/

63 Tribals in 3 states against Centre's decision to auction coal mines, say it would displace them, Hindustan Times, 26 June 2020, https://www.hindustantimes.com/india-news/tribals-in-3-states-against-centre-s-decision-to-auction-coal-mines-say-it-would-displace-them/story-ZLV9t7RubQdO6iiYOUqTCM.html

64 Adivasis and Indigenous People in India Condemn the Decision of Adani and Australian Governments on Mining and Displacement, Counter Currents, 23 January 2020, https://countercurrents.org/2020/01/adivasis-and-indigenous-people-in-india-condemn-the-decision-of-adani-and-australian-governments-on-mining-and-displacement/

65 Campaign for Survival and Dignity, Two Days Before Supreme Court Hearing, Groups from 24 Countries Say Government Undermining Fight Against Climate Change by Attacking Forest Rights, 22 July 2019,https://forestrightsact.com/2019/07/22/two-days-before-supreme-court-hearing-groups-from-24-countries-say-government-undermining-fight-against-climate-change-by-attacking-forest-rights/

As mentioned earlier, the legal framework provides for legally sanctified institutional authorities at each of the hundreds of thousands of habitations who are competent to devise eco-specific, location-specific, sustainable climate-change mitigation and adaptation programs that also address issues of livelihood in a more efficient and cost-effective manner. This would not only be in harmony with the existing framework, but could progressively build capacity endogenously, paving the way forward for the emergence of good practices, blending the vast accumulated indigenous knowledge and potential. In the case of forests alone, over 40 million hectares could be brought under this conservation regime, covering over 10 per cent of the total lands in the country.

3.7 Participation of Indigenous Peoples in climate change policies

There were no large-scale consultations during the development of India's NDC, NAPCC, SAPCCs and national REDD+ strategy. Discussions and consultations were limited to a small section of bureaucrats from the relevant ministries, departments, institutions and experts. Generally, there are provisions for involving civil society and local communities as participants in the programs initiated. However, the documents propound this "participation" primarily in the form of local community awareness and receipt of benefits, mostly in terms of employment generated with reference to tribal people, for instance in compensatory afforestation.[66]

At the national level, the Ministry of Tribal Affairs is mandated to deal with all matters related to Scheduled Tribes. Since 2006, the subject of forest rights has been carved out from the responsibilities of the Environment Ministry and entrusted to the Tribal Ministry. Yet, the Environment Ministry ignores the Tribal Ministry, often drafting policies related to forests and climate change, and issuing orders in violations of the FRA, disregarding objections from the Tribal Ministry. Another government institution exclusively concerned with Scheduled Tribes is the National Commission of Scheduled Tribes, essentially a recommendatory body that seeks to address concrete issues and problems faced by tribal peoples anywhere in the country, which could include issues of adverse impacts on the lives and property of tribal peoples due to climatic events.

At the state level, the tribal department is the institution, with structures at the district and sub-district (block) levels that implement tribal development and welfare programs of the central and state governments. This is one of the departments that can be charged with delivering the various services envisaged under mitigation and adaptation programs, including the eight national missions.

66 Atmanirbhar Bharat Package: CAMPA funds of Rs 6,000 crore for tribal employment in orestry jobs, says FM, Moneycontrol News, 14 May 2020, https://www.moneycontrol.com/news/business/economy/atma-nirbhar-bharat-campa-funds-of-rs-6000-crore-for-tribal-employment-in-forestry-jobs-says-fm-5266891.html#:~:text=Sitharaman%20said%20that%20the%20CAMPA%20funds%20would%20help,about%20employment%20generation%20for%20the%20tribals%20and%20adivasis.

Where the tribal population is significant, the tribal department might be represented at the state-level steering committee on climate change. Statutory bodies have been constituted and activated at the habitation level under the FRA and in the Fifth Schedule area through PESA. There are the district autonomous councils in the Sixth Schedule Areas. Equally vibrant traditional institutions also coexist. Yet, instead of democratic institutions, the state bureaucratic machinery prefers and promotes bodies created by them and under their control, servile creatures of the administration as they are, to carry out the tasks that they allot.

For instance, to execute the programs under their mandate, the Forest Department prefers the village forest committees / joint forest management committees that it has created and controls, numbering "over 100 thousands involving around 20 million people managing over 22 million hectare of forest area",[67] and the eco-development committees. The various statutory democratic institutions created by tribal peoples, the *Gram Sabhas*, are ignored because they are most likely to exhibit and assert authority and autonomy. Numerous committees are required to be constituted under various schemes and programs of various line departments, such as the self-help groups which too are considered bodies who would be engaged in the climate action. That said, some states do recognize that these statutory bodies are legal entities that have a legitimate role to play in climate action and whose cooperation is mandatory, especially where there is a history of sustained community assertion leading to the state authorities engaging with them. However, an explicit mechanism to involve tribal peoples in the climate action plan at the state level is not known to exist.

In reality, knowledge about and involvement in international-level climate efforts is limited to the very few non-government organizations implementing projects that relate to international processes. For the most part, these projects are alien and unknown to most of the tribal organizations, traditional institutions and statutory bodies of tribal peoples created by laws. There is hardly any interaction or communication between the former and latter. This phenomenon of working in silos is widespread.

67 Ministry of Environment, Forests & Climate Change, National Policy on REDD++ (Final Draft), Op Cit.

04
The impact of current climate interventions on Indigenous Peoples

4.1 Land conflicts

Solar power plants require large amounts of land, giving rise to many land conflicts with farmers, pastoralists and villagers. The number of conflicts is expected to increase due to India's high target (100,000 MW) for solar power by 2022 compared to the currently installed capacity of 40,085 MW.[68]

4.2 Forest rights violations

The FRA became operational in 2008. Recognition of forest rights and *Gram Sabha* consent for forest diversion was made mandatory in 2009. Between 2009 and 2019, 253,179 ha were diverted for non-forestry purposes while another 182,817 ha were diverted for tree plantations to compensate the former diversion under 'compensatory afforestation'. Of this 182,817 ha, 25 per cent was degraded forest. The rest was revenue land consisting of community land, agricultural land and homesteads.[69] When forests are diverted for non-forestry purposes, an equivalent area of land outside the forest areas, or double the area of land if within the forest land, must be afforested. The fund for compensatory afforestation accrues from the user agencies for forest diversion. By 2019, of the INR748.25 billion thus received, INR653.78 billion had been disbursed to the states for compensatory afforestation.

FRA implementation and *Gram Sabha* consent for diversion were pre-conditions for admissibility of the forest diversion proposals. These provisions have been tweaked in the Rules of the Forest (Conservation) Act 1980. Now, the District Collector's certificate certifying that these pre-conditions have been met are sufficient for approval for diversion, and that too only after in-principle first-stage clearance by the Environment Ministry, literally making the diversion a fait accompli. Even this procedure is not followed for forest diversion for

68 Ministry of New and Renewable Energy, Government of India, Programme/ Scheme wise Physical Progress in 2020-21 & Cumulative up to March, 2021, https://mnre.gov.in/the-ministry/physical-progress

69 Bijoy, C.R. How Land Diversion Laws Threaten Forests and Forest Dwellers, IndiaSpend, 25 September 2020, https://www.indiaspend.com/how-land-diversion-laws-threaten-forests-and-forest-dwellers/

afforestation. Diversion for non-forestry purposes and consequent afforestation without recognition of rights or ignoring rights, and without consent, is not only illegal but also gives rise to conflict which often leads to violence.

In India, 179,230 villages, each having one or more hamlets, access forests. According to the Environment Ministry, at least 40 million ha of forests (56 per cent of the total forests) are accessed by forest-dwelling communities, primarily tribal peoples, and are to be transferred by the forest bureaucracy to the village-level institutions.[70] However, FRA implementation has been very poor. By the end of 2020, only 5.3 million ha were titled, just 13.18 per cent of the potential area and 6.9 per cent of forests. The forest bureaucracy aggressively resists FRA implementation, especially in protected areas.

The significant Compensatory Afforestation Fund, along with the funds available under the National Mission for Green India—one of the eight missions outlined under NAPCC with INR46,000 *crores* for 'greening' 10 million ha over the next 10 years (as on 2012)—could pose a major threat to tribal peoples' land rights and livelihoods. The Compensatory Afforestation Fund is also used for relocating tribal inhabitants from protected areas, especially tiger reserves. INR60 billion of this fund was released to generate employment for the tribal people as a relief measure for migrant workers forced to return home in large numbers due to COVID-19-related lockdowns. Afforestation in the way it is practised denies people rights to the lands afforested, deepens food insecurity and depletes biodiversity. Further, the funds have also been subject to corruption and scams.[71]

4.3 Land banks and violation of land rights

Government lands and lands acquired from communities for various projects that have later been shelved have been put together as 'land banks' and made available for new industrial projects. The land bank concept has been extended to include land for compensatory afforestation. The Environment Ministry asked the states in 2014[72] and again in 2017[73] for non-forest land and degraded forestland for creating a land bank for compensatory afforestation. Over 2.68 million ha were identified in Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Jharkhand, Odisha, Tamilnadu, Rajasthan and Uttar Pradesh for inclusion in land banks.[74]

70 Ministry of Environment, Forest & Climate Change, Government of India, India Forestry Outlook Study' (2009) Asia-Pacific Forestry Sector Outlook Study II, Working Paper No. APFSOS II/ WP/ 2009/ 06, pp.75-6, http:// www.fao.org/ 3/ am251e/ am251e00.pdf.

71 Rupavath, Prudhviraj. What happened to Rs.6,000 crore tribal employment generation under Atmanirbhar Bharat, News Click, 18 August 2020, https:// www.newsclick.in/ Rs%206%2C000-Crore-Tribal-Employment-Generation-Atmanirbhar-Bharat

72 See http:// forestsclearance.nic.in/ writereaddata/ public_display/ schemes/ 686571466$guide.pdf

73 See http:// forestsclearance.nic.in/ writereaddata/ public_display/ schemes/ 553905943$11%20 423%202011.pdf

74 Bhasker Tripathi, As States Create Land Banks for Private Investors, Conflicts Erupt Across India, The Wire, 19 September 2017, https:// thewire.in/ banking/ statescreate-land-banks-private-investors-conflicts-erupt-acrossindia

Land for compensatory afforestation is largely found in the tribal regions and is taken in violation of traditional rights, both formally recognized and unrecognized rights, and without the consent of the customary land owners.

4.4 Protected areas and violation of rights

Rich forests and wildlife are being brought under an expanding protected area regime, progressively pushing tribal peoples out even though this is no longer legal. At the same time, these areas are being secured as global ecotourism hotspots. They are under the general sway of the larger national trend which could now lead the state and businesses to increase their political control over tribal peoples' livelihood resources and lives in the name of climate action through forest growth and conservation. Tribal peoples' continuous assertion of their rights over their lands and natural resources continues to thwart these incursions.

Violation of traditional resource rights, whether recognized or yet to be recognized under extant laws, or those rights yet to be brought under the purview of any law, impacts tribal peoples differentially. Those who sustain themselves by foraging, most of whom are included under the official category of Particularly Vulnerable Tribal Groups,[75] live precarious lives. Their rights are the least recognized, and they are the most neglected and unreached by government services. Any change in land use or exclusion from access to the lands they depend upon hits directly at the very source of their food. The pre-agricultural, nomadic and pastoral communities are the next most threatened by changes in land use or exclusion. The settled agriculturists too, for the most part inhabiting the forests and forest fringe areas, usually depend on forests and common lands to varying degrees for their livelihood. Often, agriculture is only a subsidiary source of livelihood. They are susceptible to being induced or forced to part with their land for a pittance; their access rights to common resources also get denied. And within all of them, the impact is felt differentially. Indigenous women whose role in food production is extensive are the worst effected, having to labour much more to achieve fragile food security of the community; they may even be forced to seek an alternative source of succour. People with disabilities, the old and infirm are faced with increasing hunger. The able-bodied youth become prey to bondage to labour contractors, and sent to far-off places for meagre wages for the hard labour and long hours of work extracted from them. None of these realities are considered and factored into the decision-making and planning of climate interventions.

75 There are 75 Scheduled Tribes who are in this category. For State-wise list of Particularly Vulnerable Tribal Groups (PVTGs), see https://tribal.nic.in/DivisionsFiles/SwLPVTGs.pdf

05
Indigenous Peoples' contributions to addressing climate change

Considering that the vast majority of the tribal peoples of India are forest-dwellers or forest-dependent peoples, it is important to recognize that forests constitute the critical cross-cutting geographical space for these peoples, the governments and climate change action plans. Of the 640 districts in 27 states / union territories, 218 are identified by the government as tribal districts under the Integrated Tribal Development Programme. These districts registered an overall increase of forest cover of 1,181 sq km between 2017 and 2019, although the officially recorded forest area shrank by 741 sq km.[76] This implies that forest cover outside notified forests—i.e. land under the management of Indigenous Peoples—has increased.

India's first National Forest Policy of 1952 declared that each state should strive to have 33 per cent of its land area covered by forest. By 2019, 13 of the 28 states had 33 per cent or more land area as forests. This included all eight states in the north-east. Over half of the north-east is forested. Of this, 55 per cent is not notified by the government as forests under the forest law and, consequently, the Forest Department does not administer these forests. Instead, they are governed by local communities and are categorized as unclassed forests in government records. Of the top five states with forests in India, four are north-east states where Scheduled Tribes make up the majority of the population. The forested areas in these states almost remained the same between 2017 and 2019 and dense forests increased. A similar trend is seen in the regions in central India that remain dominated by tribal peoples. Forests have more or less been retained while dense forests have expanded. And these regions are either not administered by the forest bureaucracy or are minimally administered for reasons of accessibility and other factors.[77] In summary, the above shows that tribal peoples have steadfastly resisted and continue to resist forest diversion and destruction.

76 Forest Survey of India, Government of India. India State of Forest Report 2019, Chapter 2: Forest Cover, pg.35, https://fsi.nic.in/isfr19/vol1/chapter2.pdf

77 Bijoy, C. R. Lessons from the wilderness, The Telegraph, 8 January 2020, https://www.telegraphindia.com/opinion/lessons-from-the-wilderness/cid/1734087

This historic contribution of forest-dwelling tribal peoples to carbon sequestration remains unaccounted for, unrecognized and unreckoned by the government despite Section 28 of the Indian Forest Act 1927 providing for forests to be assigned to villages. This needs to be addressed for two obvious reasons: the first is that it relates to the dignity of tribal peoples and the second is that it is crucial for successful climate action.

Indigenous Peoples are the least responsible for the climate crisis and have the world's smallest carbon footprint. North-east India, except for the state of Assam, presents living examples of societies thriving with sustainable low-carbon lifestyles with an above-national-average human development index in most of the states where tribal people account for about a third or more of the state's population. The north-east is also endowed with unique constitutional provisions that recognize community control over land and forests combined with political autonomy and considerable self-governance.

In stark contrast, in the central Indian tribal belt, despite the land and forests being rich in natural resources, the tribal peoples are the most deprived of all peoples in the country. Their traditional and customary rights to the land, forests and natural resources have been progressively undermined and denied in law. They have been termed encroachers on their own lands, displaced, driven out, and robbed of their land titles, with large tracts destroyed by extractive industries. Village autonomy—which largely falls within the purview of the Fifth Schedule and PESA, along with the FRA—is legally stronger here than in most parts of the country (excepting the north-east). But these statutory powers are suppressed and violated by the states. Political struggles for implementation of the extant laws that empower the tribal communities persist.

To facilitate the contribution that tribal peoples can make to climate change mitigation efforts, it is important to recognize and protect their rights, not only to land and resources, but also to autonomy and self-governance so that they are able to determine a sustained path towards low-carbon development.

In summary, being mostly forest-dwellers, India's tribal peoples undeniably have historically contributed to the climate change 'solution' through carbon sequestration and their consistent forest stewardship, even though they invariably have contributed little, if anything, to the 'problem', with their relatively low carbon footprint or perhaps even carbon-negative lifestyle. Clearly, India places significant importance on carbon sequestration through afforestation—it is possibly the primary task in its climate action plan. Consequently, the forest-dwelling tribal peoples, armed now with the statutory authority to protect, conserve, manage and control the forests, should constitute a leading partner of the government in national climate actions.

ANNEXURE A. Contributions and targets

Contribution Type	GHG Target	Non-GHG Target
Mitigation contribution type: GHG target and non-GHG target	Target year: 2030	"To achieve about 40 percent 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 including from Green Climate Fund." "To create an additional carbon sink of 2.5 to 3 billion tonnes of CO2 equivalent through additional forest and tree cover by 2030." "Wind energy has been the predominant contributor to the renewable energy growth in India accounting for 23.76 GW (65.2%) of the renewable installed capacity, making India the fifth largest wind power producer in the world. With a potential of more than 100 GW, the aim is to achieve a target of 60 GW of wind power installed capacity by 2022. Solar power in India is poised to grow significantly with the National Solar Mission as a major initiative of the Government of India. Solar power installed capacity has increased from only 3.7 MW in 2005 to about 4,060 MW in 2015, with a Compound Annual Growth Rate [CAGR] of more than 100% over the decade. The ambitious solar expansion programme seeks to enhance the capacity to 100 GW by 2022, which is expected to be scaled up further thereafter. A scheme for development of 25 Solar Parks, Ultra Mega Solar Power Projects, canal top solar projects and one hundred thousand solar pumps for farmers is at different stages of implementation. Government of India is also promoting solarization of all the 55,000 petrol pumps across the country out of which about 3,135 petrol pumps have already been solarized. Biomass energy constitutes about 18% of total primary energy use in the country and more than 70% of the country's population depends on it. However, it is currently used in an inefficient manner with high levels of indoor pollution. A number of programmes have been initiated for promotion of cleaner and more efficient use, including biomass-based electricity generation. It is envisaged to increase biomass installed capacity to 10 GW by 2022 from current capacity of 4.4 GW." India also lists the mitigation technologies that the country plans to implement which include "accelerated-driven systems in advanced nuclear fuel cycles" and "renewable energy."
Target type: Intensity target	Sectors covered: Not specified; various sectors mentioned for mitigation and adaptation strategies such as energy, industry, transportation, agriculture, forestry, waste.	
Adaptation included: Yes		

ANNEXURE B. New initiatives for enhancing forest carbon stocks

Namami Gange

The National Ganga River Basin Authority, as part of depolluting and augmenting water flow in river Ganga, proposes to afforest 83,946 sq km of diverse forest areas in five Ganga Basin states—Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal—over the next five years.

Forestry interventions for other major river catchments

Includes protection, habitat management, afforestation, catchment treatment-soil and moisture conservation work, ecological restoration of vital riparian forest buffer, bioremediation, improved livelihood of forest-dependent communities and forest-dwellers, and alternative income-generation activities through regulated tourism and awareness for other major river catchments such as Brahmaputra, Yamuna, Narmada, Tapti, Godavari, Krishna, Kaveri and Mahanadi. Planting four columns of trees and shrubs alongside highways by developers as per the Green Highways (Plantation, Transplantations, beautification & Maintenance) Policy, 2015, earmarking one per cent of project covering about 140,000 km of national highways.

Innovative programs

Partnerships with people from all walks of life through public engagement.

Strategies to address the identified drivers

Providing free LPG connections to 50 million women belonging to the 'Below Poverty Line' families over a period of three years from 2016, reducing dependency on conventional fuels such as coal and firewood. Provided gas to 33 million families by September 2017. This can increase forest carbon stocks.

ANNEXURE C. ND-GAIN Country Index for vulnerability and readiness

Vulnerability: Ranked 134 score 0.509 (lower scores are better) A country's ND-GAIN index score is composed of vulnerability score and a readiness score. Vulnerability measures a country's exposure, sensitivity and ability to adapt to the negative impact of climate change. The ND-GAIN Country Index measures the overall vulnerability by considering vulnerability in six life-supporting sectors – food, water, health, ecosystem service, human habitat and infrastructure.	Ecosystem Services[78]	Ranked 147; Score 0.547
	Food[79]	Ranked 134; Score 0.573
	Health[80]	Ranked 143; Score 0.620
	Human habitat[81]	Ranked 62; Score 0.462
	Infrastructure[82]	Ranked 60; Score 0.312
	Water[83]	Ranked 164; Score 0.542
	Adaptive capacity[84]	Ranked 109; Score 0.596
	Exposure[85]	Ranked 184; Score 0.572
	Sensitivity[86]	Ranked 99; Score 0.363

78 The score of Ecosystem services captures the vulnerability of natural capital to climate change, the ecological resources that humans rely upon to support lives and livelihoods. Indicators include: projected change of biome distribution, projected change of marine biodiversity, natural capital dependency, ecological footprint, protected Ranked biome, and engagement in international environmental conventions.

79 The Food score captures a country's vulnerability to climate change, in terms of food production, food demand, nutrition and rural population. Indicators include: projected change of cereal yields, projected population growth, food import dependency, rural population, agriculture capacity, and child malnutrition.

80 The Health score captures a country's vulnerability of public health to climate change, in terms of the spread of communicable diseases and provision of health services. Indicators include: projected change of deaths from climate change induced diseases (diarrhea and malnutrition), projected change of malaria hazard, dependency on external resource for health service, slum population, medical staffs, and access to improved sanitation facilities.

81 The score of Human habitat captures a country's vulnerability of human living conditions to climate change, considering weather extremes, urban development, demography, and transport infrastructure. Indicators include: projected change of heat wave hazard, projected change of flood hazard, urban concentration, age dependency ratio, quality of transport and trade infrastructure, and paved roads.

82 The Infrastructure score captures the vulnerability of coastal and energy infrastructure to climate change, primarily general preparedness to climate-related natural disasters, coastal hazards, and energy supply challenges. Indicators include projected change of hydropower generation capacity, projected change of sea level rise impacts, dependency on imported energy, population living under 5m above sea level, electricity access, and disaster preparedness.

83 The Water score captures a country's vulnerability of fresh water supplies to climate change. Indicators include: projected change of annual runoff, projected change of annual groundwater recharge, fresh water withdrawal rate, water dependency ratio, dam capacity, and access to reliable drinking water.

84 The availability of social resources for sector-specific adaptation. In some cases, these capacities reflect sustainable adaptation solutions. In other cases, they reflect capacities to put newer, more sustainable adaptations into place.

85 The nature and degree to which a system is exposed to significant climate change. A component of vulnerability independent of socio economic context.

86 The extent to which a country is dependent upon a sector negatively affected by climate hazard, or the proportion of the population particularly susceptible to a climate change hazard

Readiness: Ranking 123; Score 0.347 (higher scores are better) A country's ND-GAIN index score is composed of a vulnerability score and a readiness score. Readiness measures a country's ability to leverage investments and convert them to adaptation actions. The ND-GAIN Country Index measures overall readiness by considering three components – economic readiness, governance readiness and social readiness.	Economic[87]	Ranking 142; Score 0.286
	Governance[88]	Ranking 107; Score 0.446
	Social readiness[89]	Ranking 97; Score 0.310

ANNEXURE D. Other mitigation initiatives

- GHG mitigation in power generation – supercritical technologies and integrated gasification combined cycle technology for improved efficiencies in coal-based power generation, natural-gas-based power plants and closed-cycle three-stage nuclear power programme, and efficient transmission and distribution, and hydropower
- Other renewable energy technologies programmes – biomass-based power-generation technologies, small-scale hydropower, solar and wind technologies, and grid-connected systems
- Disaster management response to extreme climate events – reducing risk to infrastructure through better design, strengthening communication networks and disaster management facilities
- Protection of coastal areas – coastal protection and early-warning systems
- Health sector – enhanced public healthcare services and assessment of increased burden of disease due to climate change
- Creating appropriate capacity at different levels of government – policy research, implement R&D activities; redefine goals and area of operation of state agencies.

87 The score of Economic readiness captures the readiness of a country's business environment to accept investment that could be applied to adaptation in the form of business formation and maintenance. A simple multi-factor index, Doing Business Index from the World Bank is the measure of economic readiness.

88 The score of Governance readiness captures the institutional factors that enhance application of investment for adaptation. Indicators include: political stability and non-violence, control of corruption, regulatory quality, and rule of law. All come from the World Governance Indicators (WGI).

89 The score of Social readiness captures the social factors that enhance the mobility of investment to be converted to adaptation actions. Indicators include: social inequality, ICT infrastructure, education and innovation.

ANNEXURE E. Other policies and responses

Targets in laws and policies[90]

	Sector	Target type		Target	National laws and policies with targets available for India for the sector
1.	Adaptation	Targets in Submitted NDC	Target type not defined	Capacity Building And Knowledge Transfer Provide skill training in various sectors including sustainable development to about 400 million people by 2022	There are no adaptation targets found in laws and policies
2.	Agriculture	-		No agriculture targets found in the NDC	No agriculture targets found in laws and policies
3.	Buildings	-		No buildings targets found in the NDC	No buildings targets found in laws and policies
4.	Coastal Zones	-		No coastal-zones targets found in the NDC	No coastal-zones targets found in laws and policies
5.	Cross-Cutting Area	-		No cross-cutting-area targets found in the NDC	No cross-cutting-area targets found in laws and policies
6.	Disaster Risk Management	-		No disaster-risk-management-drm targets found in the NDC	No disaster-risk-management-drm targets found in laws and policies
7.	Economy-wide	Targets in Submitted NDC	Intensity target	Economy-wide 33% to 35% reduction in the emissions intensity of its GDP by 2030 compared to 2005 level	No economy-wide targets found in laws and policies

90 See https://www.climatewatchdata.org/countries/IND?sector=water#climate-vulnerability

8.	Energy	Targets in Submitted NDC	Target type not defined	Renewable Energy: Wind 60 GW by 2022	Two national laws and policies have targets for the energy sector: 1. Tariff Policy 2006[91] 2. National Policy on Biofuels, 2009[92]
		Targets found in Tariff Policy 2006	Fixed-level target	Renewable Energy: Waste Mandatory percentage of energy from Waste-to-Energy plants by distribution licensees by 2017 against a 2016 baseline	
			Base-year target	Energy Efficiency Objectives of smart meters mandates by 2017, 2019 against a 2016 baseline	
		Targets found in National Policy on Biofuels 2009	Fixed-level target	Renewable Energy: Biofuels An indicative target of 20% blending of biofuels, both for biodiesel and bioethanol, by 2017	
9.	Environment	-		No environment targets found in the NDC	No environment targets found in laws and policies
10.	Finance	-		No finance targets found in the NDC	No finance targets found in laws and policies

91 National Tariff Policy was passed in January 2006 by the Ministry of Power in continuation of the National Electricity Policy of 2005. It included certain provisions on renewable energy and cogeneration. The central and the state electricity regulatory commissions must purchase a certain percentage of grid-based power from renewable sources. Solar power is to comprise 0.25% of power purchases by states by 2013, and 3% by 2022.

In January 2011, the Tariff Policy was amended to align with the National Solar Mission strategy. State electricity regulators to purchase a fixed percentage of solar power. This will be supported by a Renewable Energy Certificate (REC) mechanism. See https://climate-laws.org/geographies/india/policies/tariff-policy-2006

92 A National Policy on Biofuels was announced in December 2009 with ethanol production and proposing an indicative target of 20% blending of biofuels by 2017, both for bio-diesel and bio-ethanol. Only fuels derived from non-edible plants, waste, degraded or marginal lands are to be produced in order to avoid a conflict between energy security and food security. The policy offers farmers and cultivators a minimum support price for non-edible oil seeds, as well as a minimum purchase price for fuel. Financial incentives are to be introduced to develop R&D for production and commercialisation of ethanol and jatropha and establish a national biofuel development board. The policy set a uniform price of INR21.50 (USD0.35) per litre for ethanol. Since October 2007, 5% blending of ethanol with petrol has been mandatory, increasing to 10% from October 2008. See https://climate-laws.org/geographies/india/policies/national-policy-on-biofuels

11.	Health	Targets in Submitted NDC	Target type not defined	Disease Surveillance And Control Eliminate malaria by 2030	
12.	Industry	-		No industry targets found in the NDC	No industry targets found in laws and policies
13.	Land use, land-use change, and forestry (LULUCF)	Target type not defined	Target type not defined	LULUCF/Forestry: General Additional carbon sink of 2.5 to 3 billion tonnes of CO2-eq by 2030 with forest and tree covers	No LULUCF targets found in laws and policies
14.	Other	-		No other targets found in the NDC	No other targets found in laws and policies
15.	Public Sector	-		No public-sector targets found in the NDC	No public-sector targets found in laws and policies
16.	Residential and commercial	-		No residential-and-commercial targets found in the NDC	No residential-and-commercial targets found in laws and policies
17.	Rural	-		No rural targets found in the NDC	No rural targets found in laws and policies
18.	Social Development	-		No social-development targets found in the NDC	No social-development targets found in laws and policies
19.	Tourism	-		No tourism targets found in the NDC	No tourism targets found in laws and policies
20.	Transport	-		No transport targets found in the NDC	No transport targets found in laws and policies
21.	Transportation	-		No transportation targets found in the NDC	No transportation targets found in laws and policies
22.	Urban	-		No urban targets found in the NDC	No urban targets found in laws and policies
23.	Waste	-		No waste targets found in the NDC	No waste targets found in laws and policies
24.	Water	Targets in Submitted NDC	Target type not defined	Water Conservation And Reuse Enhance water use efficiency by 20%	No water targets found in laws and policies

ANNEXURE F – Laws and policies

The following laws and policies have a bearing on India's response to climate change.[93]

Legislative actions		
1	Factories Act, 1948	Deals with the working environment of the workers, environmental and hazardous processes.
2	River Boards Act, 1956	Enables the states to enrol the central government in setting up an Advisory River Board to resolve issues in interstate cooperation.
3	Merchant Shipping Act, 1970	Deals with waste arising from ships along the coastal areas within a specified radius.
4	Wildlife Protection Act 1972	Provides for the protection of birds and animals lists out prohibited acts and penalties, and creates a protected area regime..
5	Water (Prevention and Control of Pollution) Act, 1974	Establishes an institutional structure to prevent and abate water pollution, sets standards for water quality and effluent, permits and regulates polluting industries discharge of waste into effluent bodies through the central and state pollution control boards.
6	Water (Prevention and Control of Pollution) Cess Act, 1977	Provides for the levy and collection of cess or fees on water consuming industries and local authorities.
7	Forest (Conservation) Act 1980	Regulates forest diversion and provides procedures for forest diversion and compensatory afforestation.
8	Air (Prevention and Control of Pollution) Act, 1981	Provides for the control and abatement of air pollution and makes the central and state pollution control boards the enforcement authority.

93 Compiled from (a) Wasnik, Jitendra G. Climate Change and Challenges in India, International Journal of Politics and Good Governance, Volume 5, No. 5.2, Quarter II 2014, and (b) Grantham Research Institute on Climate Change and the Environment. Climate Change Laws of the World, https://climate-laws.org/legislation_and_policies?geography%5B%5D=

9	Environment (Protection) Act, 1986	Obligates the central government to protect and improve environment, control and reduce pollution from various sources, and prohibit or restrict the setting and /or operation of any industrial facility on environmental grounds. • The Environment (Protection) Rules, 1986 lay down procedures for setting standards of emission or discharge of environmental pollutants. • The Hazardous Waste (Management and Handling) Rules, 1989 controls the generation, collection, import, storage, handling and treatment of hazardous waste. • The Manufacture, Storage, and Import of Hazardous Rules, 1989 constitutes an authority to inspect the industrial activity connected with hazardous chemicals and its storage facilities. • The Coastal Regulation Zone Notification, 1991 regulates various activities, including construction to protect the backwaters and estuaries. • The Environment (Siting for Industrial Projects) Rules, 1999 details provisions of areas to be avoided for siting of industries, precautionary measures to be undertaken for site selection and environmental protection that are to be incorporated during the implementation of the industrial development projects. • The Municipal Solid Wastes (Management and Handling) Rules, 2000 apply to every municipal authority responsible for the collection, segregation, storage, transportation, processing, and disposal of municipal solid wastes. • The Ozone Depleting Substances (Regulation and Control) Rules, 2000 Regulates the production and consumption of ozone depleting substances.
10	National Environmental Tribunal Act, 1995	Awards compensation for damages to persons, property, and the environment arising from any activity involving hazardous substances.
11	National Environment Appellate Authority Act, 1997	Hears appeals with respect to restrictions of areas in which classes of industries etc. are carried out or prescribed subject to certain safeguards under the Environment Protection Act.
12	Energy Conservation Act, 2001	Requires large energy consumers to adhere to energy consumption norms; new buildings to follow the Energy Conservation Building Code; and appliances to meet energy performance standards and to display energy consumption labels. Grants energy savings certificates to consumers whose consumes lesser energy than the prescribed norms which can be purchased by consumers who consumes more energy than the prescribed norms.
13	Biological Diversity Act, 2002	Provides for the conservation of biological diversity, their sustainable use and fair and equitable sharing of the benefits arising out of its use and knowledge associated with them.
14	Electricity Act 2003	Provides a comprehensive framework for power development consolidating laws relating to generation, transmission, distribution, trading and the use of electricity; promoting competition in the industry; and promoting efficient and environmentally benign policies. Recognizes the role of renewable energy in National Energy Policy and tariff policy and optimal utilization of resources such as coal, natural gas, nuclear substances or materials, hydro and renewable sources of energy.
15	The Disaster Management Act, 2005	Organizes response to human-made and natural disasters, capacity-building, preparedness and mitigation of disasters.
16	The Finance Bill 2010-11 and the Clean Energy Cess Rules, 2010	Proposes to create the National Clean Energy Fund to invest in entrepreneurial ventures and research in the field of clean energy technologies to be approved by an interministerial group. The Central Board of Excise & Customs notified the Clean Energy Cess Rules, 2010.

17	Compensatory Afforestation Fund Act (Act no 38 of 2016)	Creates National Compensatory Afforestation Fund Management and Planning Authority (CAMPA) with funds notably from Net Present Value of forest lands diverted for non-forestry purposes for compensatory afforestation. In 2020, the government announced allocation of INR60 billion to create jobs among indigenous tribes through afforestation.
Executive actions		
1	National Electricity Policy, 2005	Promotes non-conventional energy sources, reduction of capital cost of projects based on non-conventional and renewable sources of energy; promotes competition among renewable projects; proposes progressively the share of non-conventional resources through competitive bidding process; emphasizes development of hydro-power, make thermal power cleaner by using low-ash coal, improving lignite mining, and through increased use of natural gas and nuclear power; promotes efficient technologies and more funding for R&D; emphasizes the need for conservation and demand-side management including a national awareness campaign.
2	Tariff Policy 2006	Includes provisions regarding renewable energy and cogeneration.
3	Integrated Energy Policy, 2006	Addresses all aspects of energy, including energy security, access and availability, affordability and pricing, efficiency and the environment. Requires power regulators to encourage utilities to integrate wind, small hydro, cogeneration and so on into their systems, link incentives to energy generated as opposed to capacity created.
4	National Action Plan on Climate Change, 2008	Identifies measures that simultaneously advance development and climate-change-related objectives of adaptation and mitigation. Creates eight national missions as the core of the National Action Plan for achieving key goals of climate change : 1) National solar mission; 2) National mission for enhanced energy efficiency; 3) National mission on sustainable habitat; 4) National water mission; 5) National mission for sustaining the Himalayan ecosystem; 6) National mission for a green India; 7) National mission for sustainable agriculture; 8) National mission on strategic knowledge for climate change.
5	National Policy on Biofuels, 2009	Proposes a target of 20% blending of biofuels by 2017, both for biodiesel and bioethanol.
6	National Afforestation Program - Revised Operational Guidelines - 2009	Decentralizes the project to expedite fund transfer to the joint forest management committees and eco-development committees, and promotes livelihoods of its members with value addition and marketing of forest products. Promotes sustainable development and management of forest resources; increase forest and tree cover; rehabilitate degraded forests through decentralized/participatory forest management.
7	National Electricity Plan (Generation), 2012	Aims to ensure reliable access to electricity with initiatives and measures for GHG mitigation, and aims to keep CO2 intensity declining while massively expanding rural access and increasing power generation to meet the demands of a rapidly growing economy.
8	National Mission for Electric Mobility Plan 2020 of 2012	Provides the vision and the roadmap for the adoption of electric vehicles (full range of hybrid and electric vehicles) and their manufacturing in the country.
9	National Auto Fuel Policy (2003) and Auto Fuel Vision and Policy 2025 of 2014	The National Auto Fuel Policy (2003) mandated that all new four-wheeled vehicles in 11 cities meet Bharat Stage III emission norms for conventional air pollutants (similar to Euro III emission norms) and comply with Euro IV standards by 2010. The Auto Fuel Vision and Policy 2025 makes fuel and emissions standards more stringent.
10	National Urban Transport Policy, 2014	Recommends that Indian cities “bring about comprehensive improvements in urban transport services and infrastructure”. Encourages public transport, cycling, walking, energy efficiency and clean fuels to mitigate sectoral greenhouse gas emissions.

11	National Agroforestry Policy 2014	Sets up a National Agroforestry Mission or an Agroforestry Board to coordinate various agroforestry activities of various agencies to improve productivity; employment, income and livelihood opportunities of rural households; meeting increasing demand of timber, food, fuel, fodder, fertilizer, fibre, and other agroforestry products; conserving natural resources and forest; protecting and increasing the forest / tree cover.
12	Union Budget 2019-2020	Provides incentives for battery-operated electric vehicles.
13	Notification S.O. 4259(E) creating the Apex Committee for Implementation of Paris Agreement, 2020	Ministry of Environment, Forest and Climate Change creates the Apex Committee for Implementation of Paris Agreement.

Author profile

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C.R Bijoy is an independent researcher examining resource conflict and governance issues for over three decades. He has been associated with initiatives of activists and indigenous Peoples' mass organisations to strengthen political autonomy and self-governance resulting in such legislations as Panchayat (Extension to Scheduled Areas) Act, 1996 with National Front for Tribal Self Rule, and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, with Campaign for Survival and Dignity, both coalitions of Indigenous Peoples mass organisations from across India that emerged and steered the processes at that historical juncture.

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