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BEYOND LAND TITLES, TOWARDS RESILIENCE

An experience from India through the implementation of the Forest Rights Act, 2006

RAJITA KURUP AND SREETAMA GUPTA BHAYA

OXFAM INDIA

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ABOUT THE RESEARCH

Tenurial rights are critical for the Indigenous and forest-dwelling communities, and especially tribal groups of India. The discourse around the ownership, governance and management of forests in India underwent a significant change with the enactment of the Forest Rights Act, 2006. The livelihoods of people living close to and within forests are inextricably linked to the forest ecosystem. This paper demonstrates the learning that emerged through ground-level implementation of the Forest Rights Act, that recognition is only the beginning for building resilience. It also attempts to present the case of adaptation as the best mitigation and the most likely to be successful at the local level. A significant focus of the paper is to advocate that recognition of rights should provide a pathway to a process which is ecologically sustainable, socially just and economically beneficial for communities, and to suggest a way towards achieving convergence with government programmes.

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1 INTRODUCTION

Warming greater than the global annual average is being experienced in many land regions and seasons; warming is observed to be higher over land than ocean (IPCC, 2018). Greater incidences of rainfall deficit, excess and droughts are already being witnessed, causing irreversible damage to natural resources and biodiversity. Warming has already affected many land- and ocean-based ecosystems and has altered some of the eco system services that they render, with negative consequences for human wellbeing.

Natural resources, especially land, are crucial not only for human survival but also for regulating the carbon cycle. At the global level, 19% of carbon in the earth's biosphere is stored in plants and 81% in the soil. In all kinds of forests – tropical, temperate and boreal together – approximately 31% of the carbon is stored in the biomass and 69% in the soil. Access to land supports the livelihoods of a large number of populations that are dependent on the primary sector, including agriculture, forestry, animal husbandry and fisheries (FAO). This sector is extremely sensitive to weather variability; climate change-induced alterations in physical and biological systems are already impacting farm productivity and reducing opportunities, pushing people into debt, poverty and starvation.

Marginalized communities are bearing the brunt of global warming-induced climate change, despite contributing the least to the causes of climate change. They have a higher degree of exposure and sensitivity to climate change, while their adaptive capacities are the lowest. These communities are also playing vital roles in mitigating climate change locally by defending or protecting the natural ecosystems around which their lives revolve. It is vital to understand their level of deprivation. Local adaptation is the critical approach to make these communities resilient and lift them out of poverty. Central to local adaptation is tenurial security that gives communities legal rights and decision-making power to access and control natural resources – land, water and forest.

2. CLIMATE CHANGE AFFECTING LIVELIHOODS – THE INDIAN CONTEXT

India is a country with diverse physiography – a long coastline forming its eastern, western, south-western and southern borders, the Himalayas at its north, a vast plateau at its centre, deserts in its north-western region and low-rising hills in its south-eastern and south-western regions – resulting in a climate that is highly variable across the country's expanse.

A large proportion of India's population (almost 50%) is employed in agriculture, which contributes substantially (16%) to the Gross Domestic Product (Survey, 2017-18). Agriculture is the largest source of industrial land use in India, followed by forestry (BUR, 2015). Communities are already reporting crop loss due to weather uncertainties, as well as shifts in the flowering and fruiting patterns of trees which provide food and incomes, and weather-associated crop loss in silk and lac[1] cultivation, among others. Loss and damage associated with extreme weather events are mostly measured in terms of loss of lives; loss and damage to natural ecosystems and local livelihoods are yet to be factored in systematically. This fact, coupled with large-scale inequality and poverty across different social groups and states, makes India particularly vulnerable to climate change.

For India, the challenge is a dual one – to sustain its economic growth for alleviating poverty, while conserving its natural resources amid climate change associated uncertainties to help the primary sector-based occupations survive and thrive. Also of concern is the ability of the ecosystem, on which these livelihoods depend, to withstand the impacts of climate change. Adaptation is the key.

3. FORESTS – A LIFELINE

Forests play a vital role in climate change adaptation as well as mitigation. Healthy and growing forests sequester more carbon than any other terrestrial ecosystem. Forests also provide diverse ecosystem services that contribute to human and environmental wellbeing; about 300 million rural people (Parliamentary Standing Committee Report 324, 2019) draw supplemental incomes from the forests of India, which presently occupy 21.7% of the total geographical area of the country, stocking an estimated 7,124.6 million tonnes of carbon (ISFR, India State of Forests Report. Vol 1 (Chapter 2 & 10), 2019).

Under the Nationally Determined Contributions, the Government of India is committed to creating an additional carbon sink of 2.5 to 3 billion tonnes of CO_2 equivalent by 2030; this is amid the large-scale diversion of forests that is regularly being approved for executing development projects of various categories. Sadly, economics seems to be taking precedence over ecology, especially when environmental laws are diluted and eased for granting forest clearances; since 1980, about 15,372 square kilometres of forest land has been diverted for executing 27,571 development projects (E-greenwatch, September 21, 2020).

Considering the physiographic diversity of India, it is even more important to consider the amount of forest cover that needs to be maintained in each state or each region based on its regional ecology and the dependence of its people on the forest. This is in the interest of Indian states in view of extreme weather events, as meteorological trends are showing (IMD, 2019). For example, the central Indian region is drained by almost 10 rain-fed rivers which originate in forests; its western region is in proximity to the Thar desert, while its northern region is characterized by ravines and the hard rock terrain of Bundelkhand. Natural vegetation is extremely precious for this region, to enable it to continue with life in the warming world.

4. SCHEDULED TRIBES OR ADIVASIS

The early history of forests in India is closely bound with the history of its ancient inhabitants. A greater part of the country was covered with dense forests populated by the aboriginal tribes, even in the Post-Tertiary period (Stebbing, 1922). Adivasis, or 'Scheduled Tribes'[2] are among the most marginalized groups in India, constituting approximately 8.6% of the population (104 million), with 74% of Adivasis living in rural geographies (Census, 2011). The forest-dependent Adivasis of central and eastern India suffer from a classic case of 'resource curse' – they live in areas that are rich in minerals, forest cover and other natural resources, but which are also amongst the poorest in terms of human development indicators due to competing demands over these resources, with local and marginalized communities losing out in the process.

SOCIO-ECONOMIC VULNERABILITY

According to the Socio-Economic Caste Census (SECC) 2011, 73% of Adivasi rural households are deprived. Approximately 87% of them are engaged in casual and agriculture labour, earning a meagre Rs. 5,000 ($68) per month; 29% of them are landless. Most of the land holdings of Scheduled Tribes fall under the small and marginal category, i.e. 0-2 hectares (Agriculture Census 2015-16). The communities are living under constant threat of displacement and land alienation due to forest diversions. It is estimated that more than 60 million people have been displaced since India's independence, of which 30% are tribal communities (Report of High-level Committee, Ministry of Tribal Affairs, 2014). The IPCC Special Report on Land and Climate Change, 2019, recognizes that insecure land tenure affects the ability of people, communities and organizations to make changes to land that can advance adaptation and mitigation. Limited recognition of customary access to land and ownership of land can thus result in increased vulnerability and decreased adaptive capacity.

FOREST-BASED LIVELIHOODS

Agriculture and minor forest produce (MFP)[3] are the two major sources of livelihoods for Adivasis. In addition, community members seek temporary employment under the Mahatma Gandhi National Rural Employment Guarantee Scheme, as construction labourers in urban centres or as agricultural labourers in adjoining villages. Agriculture on forest land is not very lucrative, though communities consider it their primary occupation. In the absence of irrigation facilities, agriculture is largely rain-fed; hence it is seasonal (three to four months a year) and extremely sensitive to climate change. MFP is either collected and sold in local markets or collected for self-consumption. For example:

1. Lac and silk are high-value MFP with export markets. Adivasis cultivate lac and silk in the forests if they have appropriate host trees in their village customary limits.

2. Tamarind is the fruit of *Tamarindus indica* which is collected by forest-dependent communities and sold in local markets. Tamarind is a very important ingredient in Indian cuisine, hence there is a huge demand for it in markets.

3. The leaves of *Shorea robusta* (commonly called sal leaf) or *Bauhinia vahilii* (commonly called siali) are used to make plates and bowls. These also have a big market in India and, if promoted, could replace all the plastic plates which end up in landfill.

4. Flowers, fruits and seeds of *Madhuca indica* (commonly called Mahua) provide cash income to Adivasis.

5. Access to energy.

The villages where Adivasis reside are energy deficient. However, in recent times the Government of India has managed to connect most of them either with the grid or with a solar micro-grid. This has not necessarily led to the use of electricity by all households, primarily because it is not yet affordable to them. Unfortunately, electrification in such remote locations has remained limited to provision of domestic lighting for a few hours per day. Energy is an important driver of economic development; people living in poverty need energy for productive purposes to be able to increase their incomes. Improvement in local economic activity is crucial for reducing poverty and improving food security.

Firewood is still the primary cooking fuel for Adivasi rural households. The Government of India's flagship scheme, Pradhan Mantri Ujjwala Yojana (PMUY), which was launched in 2016, aspired to provide cleaner cooking fuel in the form of LPG (Liquified Petroleum Gas) to the most unserved and underserved households. 71.9 million new LPG connections have already been

provided to the targeted households, and the scheme aims to reduce the number of households that are dependent on solid fuels. However, mere access does not ensure sustained use, which should be the prime indicator used to measure real impact. A performance audit of PMUY revealed that LPG refill consumption has been extremely low and that sustained usage is a big challenge to the scheme (CAG, 2019).

The problem of sustained usage is even more pronounced in tribal regions in forest areas. In addition to the genuine issues of affordability and cylinder delivery, there are considerations in relation to local cooking practices and needs. Rural, especially tribal, cooking needs include preparing meals for humans and animals, boiling paddy, steaming seeds before extracting oil, etc. Most importantly, the communities often use cooking vessels that are very large. These are some of the social aspects that are usually ignored during policy formulation, resulting in inappropriate designs and technologies.

For Adivasi households, the basic prerequisites to improve their quality of life and livelihoods are tenurial rights over land, granted by The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, and targeted interventions to support local economic activities like irrigation ,value addition of MFP etc.

5. THE SCHEDULED TRIBES AND OTHER TRADITIONAL FOREST DWELLERS (RECOGNITION OF FOREST RIGHTS) ACT, 2006

There is no denying that tenurial rights are critical for the Adivasis in India. The discourse around the ownership, governance and management of forests in India underwent a significant change with the enactment of The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (henceforth the FRA). This was a watershed moment in the history of the forest rights movement in the country, and the product of a long period of struggle by tribal groups. While following the colonial custodial approaches to govern and manage the forests, the country had denied its communities their rights to the land and resources they had traditionally used and conserved. The FRA aims to address this historical injustice done to the tribal and forest communities. It is an attempt to recognize and record their existing rights on the forest land. The legislative intent which underlies the FRA is stated clearly in its preamble:

The FRA aims ‘to recognize and vest the forest rights and occupation on forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations, but whose rights could not be recorded’.

There are two main aspects of the FRA:

1. Recognizing and vesting of substantive rights and providing a framework for recording of rights.
2. Empowering forest rights holders, *Gram Sabhas* (village councils) and other local-level institutions with the right to protect, regenerate, conserve and manage any community forest resource. This marks a decisive step towards resource governance.

Rightly hailed as a milestone, the FRA endeavours to facilitate people's political empowerment to govern the forests for sustainable use and conservation. Precisely for these reasons, it represents a paradigm shift in the governance of forests in India. The FRA provides a framework for recognition of rights, both at an individual and community level, for tribal as well as other traditional forest-dwelling communities.

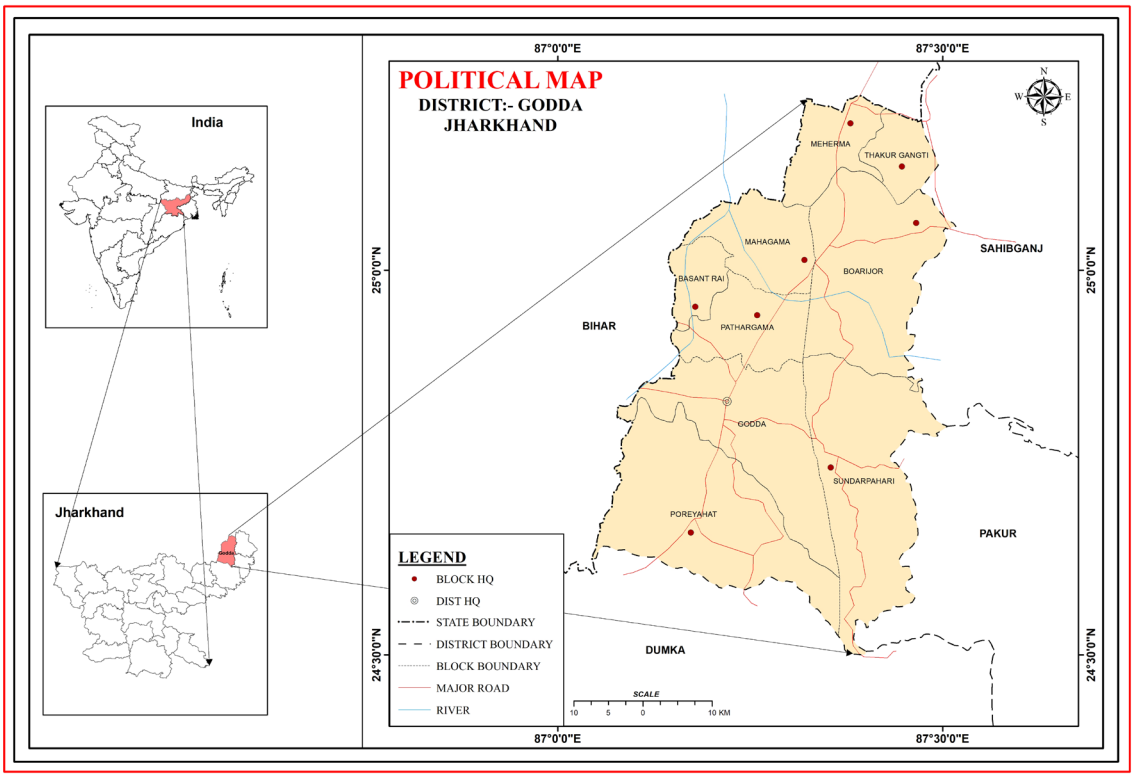
However, the potential of the FRA can only be realized when the forest governance mechanisms acknowledge the need for – and create – spaces where communities can plan and manage their forest resources, for example selecting species and designating areas for grazing or harvesting and areas which they want to maintain as sacred and pristine. Communities should be able to determine and negotiate the price of forest products and be part of conservation measures. Currently, even when their rights are realized, communities constantly face issues with exercising these rights.

Recognition of tenurial rights is only the beginning of building resilience among forest-dependent communities. Rights recognition should provide a pathway to a process which is ecologically sustainable, socially just and economically beneficial for communities. The role of village institutions in the governance of forest resources, the legal validity of these institutions, and state policies with adequate space for them to raise their concerns are critical. Decentralized planning and governance have to be modified such that the local economic activities and needs of communities are accommodated. Capacity building of local actors, community-based institutions and local administration is very important. Equally important is the search for locally adaptable and innovative solutions that can make livelihoods and ecosystems resilient. Governments at block and district levels have to develop an understanding of the local economic activities which communities pursue, to be able to help them break out of poverty and deprivation.

6. THE CASE OF JHARKHAND

Jharkhand is a state of India (see Figure 1) which was carved out of Bihar in the year 2000. Its total geographical area is 79,716 square kilometres, accommodating 32.96 million people; approximately 26% of them are Scheduled Tribes (Census, 2011). The state is immensely rich in mineral resources; 40% of the country's total minerals come from Jharkhand. The state is also India's sole producer of coking coal, uranium and pyrite. Major known minerals are iron ore, coal, copper, mica, bauxite, asbestos, manganese, limestone, graphite, kainite, chromite and thorium, while the geological exploration and exploitation of gold, silver, base metals, precious stones etc. are potential areas for future development (Minerals in Jharkhand, 2020).

Figure 1. Location of Jharkhand (coloured red) in the map of India



Source: Oxfam India, based on an open source map using GIS software

Geographically, the state has four major plateaus which are separated by steep slopes; Chhota Nagpur is the most prominent plateau and covers much of the state. Close to 30% of the state's geographical area is covered by forests. The total carbon stock of these forests is estimated to be 178 million tonnes, which is 2.5% of the total forest carbon of India (ISFR, India State of Forest Report. Vol 2., 2019).

It is estimated that the rights of over 200 million Adivasis and other traditional forest dwellers in more than 170,000 villages should be recognized under the FRA, mostly through the Community Rights and Community Forest Resource Rights provisions. The minimum area that can potentially be claimed under the Community Forest Resource (CFR) rights in Jharkhand is 5.26 million acres (CFR-LA, 2016).

PROJECT INTERVENTION AREA

Oxfam India started working in 35 villages of Sundarpahari block of Godda District (picture 2) in Jharkhand in 2012, with the objective of securing Adivasi rights to govern and conserve forests for livelihood and ecological security. Godda is known for the tribes called Santhals, and for its rich coal reserves. It is mostly rural, with Godda as the only town; the district is still without any rail link. Sundarpahari block has a total population of 65,463 (Census, 2011), the majority of whom are Adivasis – Santhals and Pahadiyas. Pahadiyas belong to the 'Particularly Vulnerable Tribal Group' category. Agriculture is the primary economic activity, which people do either on their own land or on the small pieces of land recognized under Individual Forest Rights.

Oxfam India's intervention began with helping the communities to claim their forest rights as envisaged in the FRA, because tenurial security was emerging as a tool for assertion of rights. In this context, recognition of CFR rights has particular importance in enabling communities to govern their forest. CFR rights grant the 'right to protect, regenerate, conserve and manage any

community forest resource which communities have been traditionally protecting and conserving for sustainable use', as per the FRA. The CFR claiming process is very intense. While the communities of these villages were claiming their CFR rights, the process of planning for conservation and management of resources was taken up simultaneously, given the vulnerability of the ecosystem and livelihoods; the health of the forest in this area is not very good.

In order to draft livelihood-integrated CFR conservation and management plans, community participation was imperative. Capacity building to enable communities to understand the law and their rights as enshrined in the law was thus very important. Equally important was capacity building within Oxfam to understand the local context, village institutions and their rules, and the needs of communities to carry on with their lives in these challenging locations.

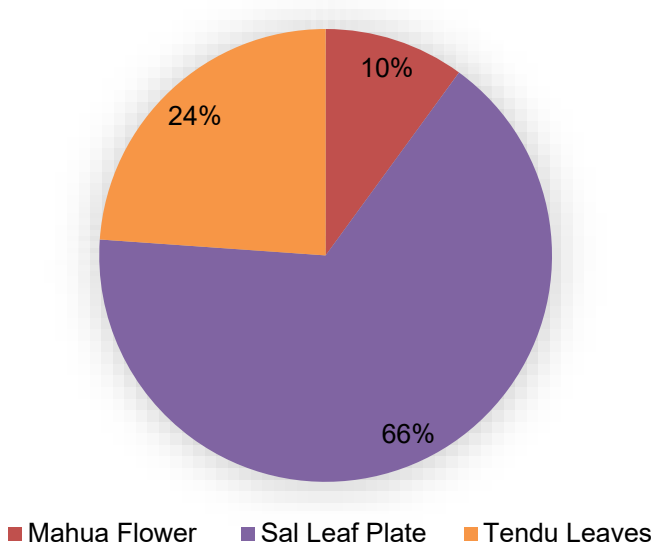
LIVELIHOOD INTEGRATED CFR CONSERVATION AND MANAGEMENT PLANS

For this intensive process, six sample villages that had already submitted their CFR claims and had active Community Forest Resource Management Committees were selected in early 2018. The villages were Bada Sabaikundi, Bada Jolo, Dumartari, Tiliapara, Salodih and Sagar.

Phase 1: Keeping the sustainable use of forest resources and livelihoods at its centre, the process began by mapping the existing livelihood options pursued by the communities.

Excerpts from the assessment (KABIL, 2018): 'The farmers are engaged in subsistence agriculture and are growing cereals (paddy and maize), apart from few other vegetables. Some farmers do cultivate pulses, oil seeds, and sweet potato. Apart from sweet potato, all other crops are consumed. Livestock rearing has been an integral part of life, where pig rearing and goat rearing have some importance in terms of generating income. Backyard poultry is done by all the households for self-consumption and emergency cash needs.'

Figure 2. Share of minor forest produce in incomes



Among the minor forest produce (MFP) (Figure 2) it was observed that harvesting sal *(Shorea robusta)* leaves is the most important activity which is done throughout the year and makes a meaningful contribution to the income of the villagers. Other important contributors to villagers' livelihoods are the collection and sale of tendu *(Diospyros melanoxylon)* leaves and mahua *(Madhuca indica)* flowers. Other MFP includes mango *(Mangifera indica)*, mahua seeds, baheda *(Terminalia bellerica)*, amla or Indian gooseberries *(Phyllanthus emblica)*, mushroom, tendu fruits, kukri (spine gourd), blackberry, pindra, kappu and chiraita (*gentianaceae*). Firewood, tooth stick and bamboo are collected in a few villages, depending on availability, climatic conditions, market conditions, government rules and proper harvesting techniques. Although tasar (silk) rearing is one of the highest earning of all the MFP available around the villages, it is highly sensitive to climate variability and pest attacks. A typical seasonal livelihood calendar of the communities is presented in Table 1.

Table 1: Seasonal community livelihood calendar (KABIL, 2018)

	Activities/month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	*Agriculture (paddy, maize)*												
2	*Wage labour*												
3	*Goat rearing*												
4	*Piggery*												
5	*Cattle rearing*												
6	*Sal leaf and plates*												
7	*Mahua flower*												
8	*Mahua seeds*												
9	*Tendu leaf*												
10	*Tasar (pre-cocoon)*												
11	*Mango*												
12	*Firewood*												
13	*Chhatti (mushroom)*												
14	*Tooth stick (sal, neem plants)*												
15	*Chiraita*												
16	*Baheda*												
17	*Amla*												

Phase 2: In this phase, an attempt was made to learn from communities about their village and forest. Before resources conservation and management plans are developed, it is important to learn exactly where the resources come from, i.e. which patch of the forest. A bottom-up and top-down approach were combined to develop this understanding.

Step 1: As a first step (using a bottom-up approach) in this phase, the project team engaged with the communities to understand their terrain, forest and biodiversity, village resources, categories of land (revenue and forest[4]) in the village, their conservation approach, etc. This activity led to the preparation of visual maps. Three kinds of map – social, resource and forest – were developed for each village.

Figure 3. Social map of Dumartari

Figure 4. Resource map of Dumartari

Figure 5. Forest map of Dumartari

The social map (Figure 3) depicts the general fabric of the village, as described by the communities, on which their lives and livelihoods depend. It includes information on approach roads to the village and the location of hamlets, agricultural land (revenue and Individual Forest Rights) and forest area which they have claimed as Community Forest Resource, etc.

The resource map (Figure 4) shows the available natural resources in the village, as described by the communities. It includes sources of water, types of agricultural land, location of forest, etc.

The forest map (Figure 5) illustrates the entire stretch of forests in the village as described by the communities. It has information on the forest area claimed as CFR, biodiversity, local names of forest patches and the use these patches are put to, etc.

With regards to the CFR area, more information was collected from communities on the local names of different forest patches, the use of each patch in their lives, the main MFP collected from each patch, patches under shifting cultivation and the cultural importance of each patch. For example, communities of the village Bada Sabaikundi identified 30 patches of forests in their customary boundary. Information on each patch, as described above, were collected; details of few patches are presented in Table 2.

Table 1 Summarized information on forest patches in Bada Sabaikundi

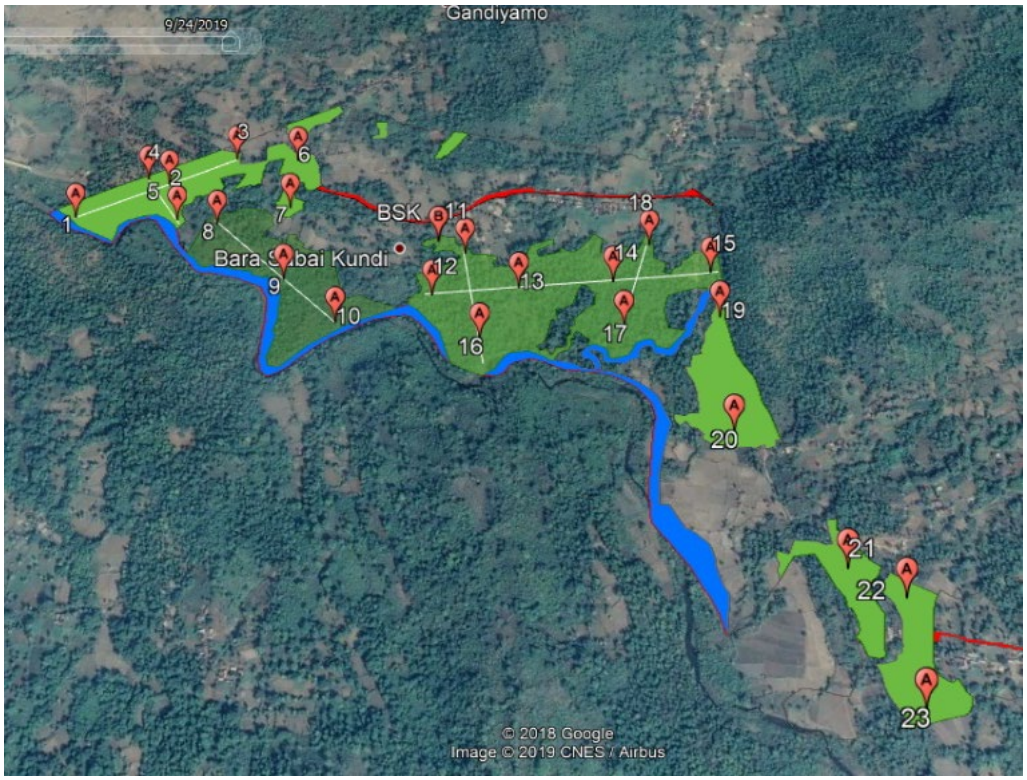
Name of the forest patch	Uses of each patch of forest	Main MFP collected	Shifting cultivation	Cultural and utility importance	Present status
Kurcho Beda	Medicinal plants, herbs and firewood, Kendu leaf, Sal leaf, Masroom, Aasan, Arjun	Sal, Kendu, Herbs, Masroom, Aasan, Arjun	Jhoom cultivation	Border of Rajabita	-
Tinsiman Barajolo Badasindri Manikbad	House-making wood, Mushroom, Sal leaf, Beedi leaves, Kendu tree, Aasan tree and Arjun trees	Sal, Kendu, Herbs, Masroom, Aasan, Arjun	-	-	Tree cover is good
Tinsimana Barajolo Manikbathan Jolobairago	Firewood, Beedi leaves, Sal tree, Sal leaves, house-making wood, Aasan tree and Mahua	Sal, Kendu, Mahua Aasan, Arjun, firewood	-	-	-
Burugoda	House-making wood, Piyar, Kendu, Velwa and Blackberry	Kendu, Piyar, Velwa, Blackberry	-	-	-

Step 2: Tree enumeration in the CFR area was carried out to record the varieties of trees and their numbers in the various patches of forest. This exercise is important for monitoring trees' sustainable use, as people depend on them for various produce, as shown in Table 2 above. In Bada Sabaikundi, community members were trained to estimate tree density using the Point Centre Quarter Method (PCQM), sampling points are shown in Figure 6. In the remaining five villages, community members carried out the estimations. Tree girth was also measured and recorded for the purpose of future monitoring. Figure 7 depicts the tree density recorded in Bada Sabaikundi in November 2019.

Step 3: This step integrated geoinformatics in the process and used a top-down approach. GPS (Global Positioning System) based mapping was carried out for the village customary boundary and CFR areas claimed under the FRA. This was done to develop a sense of the topography of the area with its forest cover. Figure 8 presents the customary boundary and CFR area of Bada Sabaikundi, with customary landmarks depicted by the green points. The GPS-based CFR map was integrated with a toposheet, as presented in Figure 9. The revenue map of the village was then integrated with the GPS-based maps to avoid any future conflict or confusion that may arise due to a mismatch between the community information and the government's revenue

records. This exercise also helped the project team to develop an understanding of the land-use pattern in the village boundary. The integrated map is presented in Figure 10.

Figure 6. Sampling points for PCQM method of estimating tree densities in Bada Sabaikundi



Source: Oxfam India (based on Google Maps)

Figure 7. Tree Density per acre as measured in Bada Sabaikundi in 2019

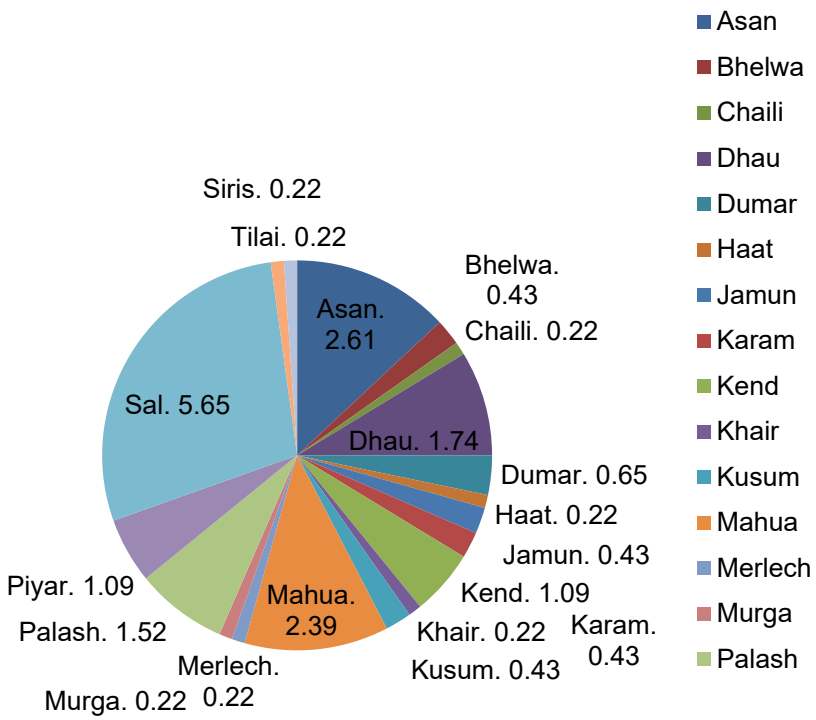


Figure 8. Custom boundary

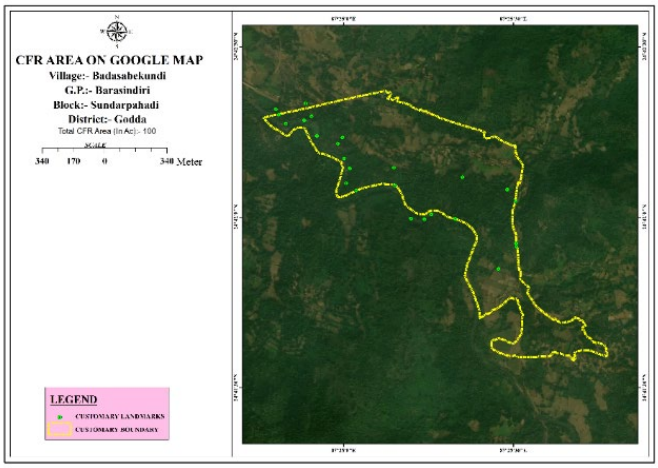


Figure 9. CFR area on toposheet

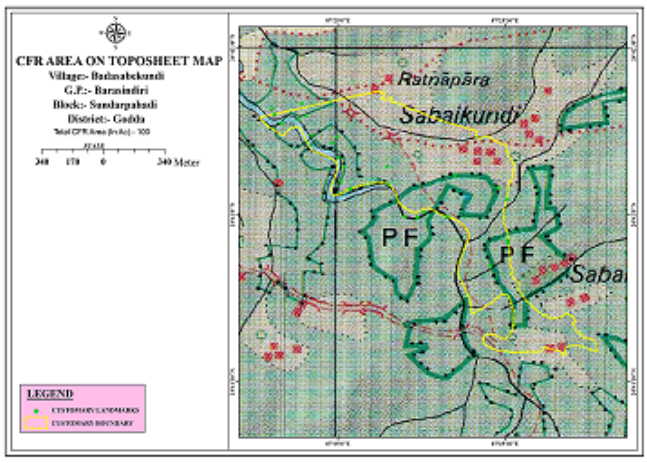
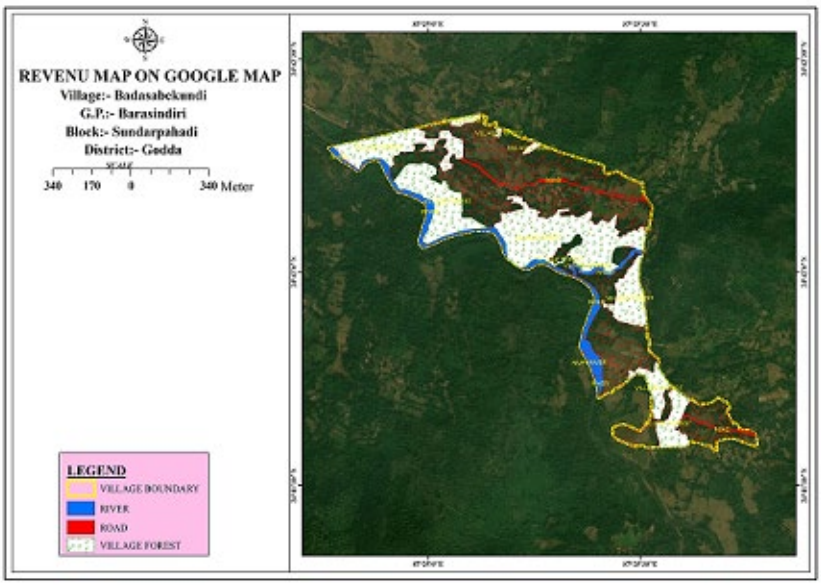


Figure 10. Integrated land-use map



Source for Figures 8-10: Oxfam India, based on Google Maps

IRRIGATION

Understanding local contexts is extremely important to ensure that interventions are carried out in an ecologically sustainable manner. Exposure to the terrain revealed that access to electricity for irrigation is not necessarily required everywhere; the undulating terrain of Sundarpahari provides scope to put gravity to use. Under the project, technically assessed detailed project reports (DPRs) with geo-coordinates of source and outlet of water, command area, number of people that would benefit, recommended capacity of irrigation pump (if any required), recommended source of energy and an estimate with bill of materials were developed for the villages.

Figure 11 shows the point of the water source and the land that could be irrigated by it in Tiliapara village Only surface water sources were considered in these reports. Wherever the topography supported proposals for diversion-based irrigation were developed, and in the remaining cases lift irrigation proposals were developed. All the DPRs were submitted to the Jharkhand Tribal Development Society (JTDS).

In September 2019, the JTDS executed the proposal outlined in the DPR of Tiliapara village (a diversion-based irrigation proposal). The water that was brought down to the land is now irrigating almost seven acres for agriculture, benefitting 19 families in one hamlet. The village has four hamlets, with 72 households in total. Access to irrigation made agriculture possible on this piece of land.

Figure 11. The route of diversion-based irrigation executed by JTDS in Tiliapara village

Source: Oxfam India, based on Google Maps

Communities reported that this has provided them with a constant source of water. Before implementation of the project, women used to trek up and down the hill three times a day to collect water. In summer, the flow slightly recedes, so community members also expressed their interest in digging a pond in the low-lying area, where excess water could be diverted and stored. They also indicated that if the canals were extended, two more hamlets could benefit from this water supply. Section 3 (2) of the FRA facilitated this massive change in the lives of these villagers. The improved water supply has boosted the local economy, will improve the food intake of the villagers in due course, and has relieved women of the burden of walking up and down the hill to collect water.

VALUE ADDITION TO MFP-BASED LIVELIHOODS

Production of plates made from the leaves of the sal tree

The leaf of *Shorea robusta* (commonly called the sal tree) is a very important MFP, which provides income throughout the year (KABIL, 2018). Women and girls spend significant time collecting and stitching the leaves into plates, using sticks. In the local market these plates are

called Pattal, and are in huge demand. Women sell the hand-stitched plates to local traders who come to their doorstep. This whole trade, in whatever form, is led and managed by women.

Figure 12. Bundles of machine-pressed plates from one of the villages

Source: Oxfam India

Oxfam India's intervention provided leaf-pressing machines to women's groups engaged in this business. Most of the villages are connected to the grid-based power, and while quality of supply is an issue, the necessary infrastructure to begin the work was in place. The leaf-pressing machine heats the leaves and moulds them into the shape of a plate (see Figure 12). This small value-addition measure has almost doubled the incomes of the women involved.

Before this intervention, women used to earn 15 paise per hand-stitched plate. Two such plates are pressed together to make a machine-pressed plate, i.e. the input cost of making one machine-pressed plate is 30 paise; this is sold in the local market at 70 paise. These products are completely organic. Women are not using paper or plastic to add strength to the plates. With the recent ban on single-use plastics, there will be a huge market in urban India for these products. Seven machines have already been installed in seven villages. For villages not supplied with electricity, Oxfam India is planning solar PV integrated leaf-pressing machines. This is work in progress. A mechanism also needs to be established to monitor the capacity of forests to cater to the market demand of leaf plates so as to ensure sustainability.

Reducing firewood consumption by introducing improved and energy-efficient cookstoves

India has a long history of improved cookstoves programmes. The Ministry of New and Renewable Energy started implementing improved cookstoves in 1986 and continued for sixteen years. After this, much of the focus was on research and development; the Ministry then launched the Unnat Chulha Abhiyan programme to provide improved biomass cookstoves, but could meet only 1% of the set target of 2.75 million chulhas (stoves) during its implementation period 2014-17 (Jain, 2018). As described by communities in Odisha and Chhattisgarh, there were several limitations with stove design and quality and with programme execution. In the villages of Jharkhand, no trace of these efforts were even seen. Secondary literature on this subject does not have a view different from that expressed by communities.

Despite the reach of LPG through Ujjwala Yojana, the Government of India's flagship programme to provide LPG to underserved communities, firewood is still the primary fuel used by these communities for cooking, heating and warming. LPG could not replace firewood as a fuel for three simple reasons – affordability, timely supply and communities' behaviour. The requirement for firewood is a huge burden on forests, and also on women and girls. Women and girls still spend two to three hours per trip to collect firewood from the forest. In winter, they sometimes do this as often as three times a day to meet the additional need to keep homes warm.

Figure 13. Improved cookstove (Sarala model) in use in Bada Sabaikundi

Source: Oxfam India

With technical help from Technology Informatics Design Endeavour (TIDE), improved cookstoves (Sarala model, see Figure 13) were constructed in 80 households in Bada Sabaikundi and Dumartari. These cookstoves are fuel efficient and were customized after taking the measurements of the cooking vessels used by the community.

In these two villages, the new designs have replaced the traditional cookstoves. As a result, women have reported a substantial reduction in firewood usage. A few women in Bada Sabaikundi reported that the wood they had stocked up on before this intervention in December 2018 is still supporting them; hence they had made almost no trips to the forest for firewood. Some women are of the opinion that twigs are now enough to meet their fuel needs, saving a lot of wood. While the smoke from traditional stoves used to cause women discomfort and additional work, now they say their eyes are comfortable while they are cooking, the time taken to cook meals has reduced, smoke does not choke them, cooking vessels do not blacken as much as they used to and there is far less black soot. Encouraged by these positive results, Oxfam India constructed 80 more stoves in Tiliapara and Tadobandh. A team of stove constructors has been trained to carry on with this activity.

CONCLUSION

Forests in India have always been contested spaces. Given the multiple uses of forests and different agencies claiming control over them, and the fact that forest landscapes cover over 21.7% of the country, governance has largely been a cause of social conflict. There is a constant tussle for control and decision making over the forest. Therefore, while the rights of forest dwellers are being recognized, exercising these rights poses a great challenge.

While the Forest Rights Act (FRA), 2006, addresses the issues around tenurial rights of forest-dwelling communities, the Tribal Affairs Ministry, which is the nodal agency (i.e. the one responsible for ensuring the Act is implemented), is largely silent on the processes and procedures that should be followed when community resources or agricultural land recognized under the FRA are diverted for infrastructure projects.

It is in fact the Forest (Conservation) Act (FCA), 1980, that lays down the procedure for diversion of forests for non-forest purposes, with the Environment Ministry being the nodal agency. Through a circular issued in 2009, the Environment Ministry linked the FRA and the FCA, which is now reflected in the Forest Conservation Rules, 2017. According to the rules, a Gram Sabha's written consent for diversion and completion of the rights recognition process is mandatory to proceed with the forest diversion process. In addition to these two, there are other legislations also which influence the decision to divert forest for non-forest purposes and its procedures. The diversion process also recognizes the role of communities in decision making when linked with the FRA , whereas the Coal Bearing Areas (Acquisition and Development) Act, 1957, which guides forest diversion for coal mining, has no such provisions.

The FRA is an empowering legislation which has tremendous potential to improve the overall quality of life of Adivasis in India. The potential of this Act has not yet been properly explored; however, its implementation has been dismal.

Before state management, communities living in the forests had long been using and conserving the forests using traditional practices. India has always had traditional knowledge systems guiding forest protection and management, central to which were the community institutions. However, the state management of forests overlooked these traditional systems and led to the erosion of community institutions and the decline of managed ecosystems (Kurup, 2020). The Community Forest Resource Rights provision of the FRA, if implemented to its full potential, will prove instrumental in resuscitating these institutions, which in turn will have a remarkable positive impact on the health of India's forests.

Proper implementation of the FRA will also prove instrumental in reducing the widespread deprivation of forest-dwelling communities, especially tribal groups or Adivasis. Giving these groups tenurial security over the traditionally occupied forest land has the potential to increase opportunities to strengthen small-scale agricultural practices. Minor investment of public funds in these villages will help the communities come out of poverty. Minor forest produce (MFP) provides a vital source of food and income for forest-dwelling communities. The sustainability of this source depends primarily on the existence of the rich floral biodiversity of these forests which is threatened by the commodification of forest for extracting timber and other commercially useful produce. Community-based forest conservation and management deploying traditional knowledge is key to maintain the biodiversity of forests and the community-driven forest governance which the FRA envisages is fundamental to this.

In a nutshell, forest-dwelling communities and their knowledge and skills can help India achieve its Nationally Determined Contributions (NDCs) targeting increased forest cover as a climate change mitigation strategy. Maintaining rich biodiversity and dense forests is extremely

important to sustain the river catchments of this sub-continent – especially Peninsular India, which is drained by many non-glacial rivers. It is also key to maintaining the water resources of this country in the warming climate, which is projected to be 4.4 degrees Celsius warmer by the end of this century (Krishnan R, 2020)

The straight-jacketed tribal welfare policies, which are completely disconnected from forest management policies and implemented in a linear fashion, have not been able to bring people out of poverty and deprivation. For this to happen, local needs and local opportunities should be tapped. The more these requirements are contextualized, the more they will be ecologically sustainable, especially in the warming and uncertain world. Local-level adaptation will only help people survive. Forest-dwelling communities already pursue a range of livelihood options; they need to strengthen and enhance them. Block and district-level governments have pivotal roles to play in this sphere. Mechanisms will have to be evolved to integrate village-level micro-plans into the state's decentralized planning. If this happens, public resources will be put to appropriate use.

State government, especially the Forest Department, should use the opportunity created by the FRA to engage constructively with forest-dwelling communities. State forest departments will never have enough field staff to monitor and manage the length and breadth of the forested landscapes of India. Communities who live deep inside the forest are best able to do this. From de-weeding to arresting forest fires to regenerating degraded forest patches, these communities can function as the forest department's extended arms. Instead of taking a linear approach to conserve one species or another, departments must tap community knowledge and skills for better conservation and management of the forest ecosystem (Kurup, 2020).

NOTES

[1] Lac is the resinous secretion of a number of species of lac insects, of which the most commonly cultivated is *Kerria lacca*. More than 400 host plants on which this insect can be cultivated have been noted, of which three are used for the majority of commercial cultivation of the insect: Palash (*Butea monosperma*), Kusum (*Schleichera oleosa*) and Ber (*Ziziphus mauritiana*).

[2] Adivasis is a general term used for the original tribal inhabitants of India. 705 individual ethnic groups are notified as 'Scheduled Tribes' in India. Some changes have been noticed in the list of Scheduled Tribes in states and Union Territories in the last decade – Census 2011

[3] Section 2 (i) of the Forest Rights Act, 2006, defines 'minor forest produce' as all non-timber forest produce of plant origin, including bamboo, brush wood, stumps, cane, tussar, cocoons, honey, wax, lac, tendu or kendu leaves, medicinal plants and herbs, roots, tubers, etc.

[4] In India, Government held land are managed by two department. The revenue land which is primarily used for agriculture or residence or pastoral land. The government can also earn revenue from this land from the land owners. Forests and forest land are held by forest department and managed by them. No individual or company or any private entity can own forest land.

BIBLIOGRAPHY

BUR. (2015). *India - First Biennial Update Report to UNFCCC.* India: Ministry of Environment, Forest and Climate Change, Government of India. Retrieved from http://moef.gov.in/wp-content/uploads/2017/08/indbur1.pdf

CAG. (2019). *Executive Summary, Performance Audit of PMUJ, Report No. 14 of 2019.* Comptroller and Auditor General of India. Retrieved from https://cag.gov.in/content/report-no14-2019-performance-audit-pradhan-mantri-ujjwala-yojana-ministry-petroleum-and

Census. (2011). *Census of India.* India: Office of the Registrar General & Census Commissioner, Ministry of Home Affairs.

CFR-LA. (2016). *Promise and Performance. Citizens' Report.* India: CFR Learning and Advocacy Platform. Retrieved from https://www.fra.org.in/document/Promise%20and%20Performance%20Report.pdf

E-greenwatch. (September 21, 2020). *State-wise Summary of FCA Projects.* New Delhi: Ministry of Environment, Forest and Climate Change, Government of India. Retrieved from http://egreenwatch.nic.in/FCAProjects/Public/Rpt_State_Wise_Count_FCA_projects.aspx

FAO. (n.d.). *Forests and climate change.* FAO. Retrieved from http://www.fao.org/3/ac836e/AC836E03.htm

IMD. (2019). *Statement on Climate of India during 2019.* New Delhi: Ministry of Earth Sciences, Government of India. Retrieved from https://mausam.imd.gov.in/backend/assets/press_release_pdf/Statement_on_Climate_of_India_during_2019.pdf

IPCC. (2018). *Summary for Policymakers. In: Global Warming of 1.5°C.* Geneva, Switzerland: World Meteorological Organization. Retrieved from https://www.ipcc.ch/sr15/chapter/spm/

ISFR. (2019). *India State of Forest Report. Vol 2.* Dehradun: Forest Survey of India, Ministry of Environment, Forest and Climate Change. Retrieved from http://fsi.nic.in/isfr19/vol2/isfr-2019-vol-ii-jharkhand.pdf

ISFR. (2019). *India State of Forests Report. Vol 1 (Chapter 2 & 10).* Dehradun: Forest Suvey of India, Ministry of Environment, Forest and Climate Change. Retrieved from http://fsi.nic.in/forest-report-2019

Jain, A. S. (2018). *Access to Clean Cooking Energy and Electricity: Survey of States 2018.* New Delhi: CEEW.

KABIL. (2018). *Livelihood mapping of forest dependent communities.* New Delhi: Oxfam India.

Krishnan R, e. a. (2020). *Assessment of climate change over Indian Region.* MoES, New Delhi.

Kurup, R. S. (2020). *We Belong to the Forest.* New Delhi: Oxfam India.

(2020). *Minerals in Jharkhand.* Ranchi: Jharkhand State Mineral Development Corporation Ltd., Government of Jharkhand. Retrieved from https://www.jsmdc.in/web/AvailabilityofMineralsinJharkhand.php

(2019). *Parliamentary Standing Committee Report 324.* New Delhi: Rajya Sabha Secretariat. Retrieved from https://rajyasabha.nic.in/rsnew/Committee_site/Committee_File/ReportFile/19/108/324_2019_9_12.pdf

Stebbing, E. (1922). *The Forests of India Vol.1.* London: John Lane The Bodley Head Limited.

Survey, E. (2017-18). India: Ministry of Finance, Government of India.

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Oxfam GB, Oxfam House, John Smith Drive, Cowley, Oxford, OX4 2JY, UK.

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