MIDCOURSE MANOEUVRES: Community strategies and remedies for natural resource conflicts in India

Centre for Policy Research (CPR)–Namati Environmental Justice Program

June 2018

Author(s): Kanchi Kohli, Meenakshi Kapoor, Manju Menon and Vidya Viswanathan

Citation: Kohli, K., Kapoor, M., Menon, M., & Viswanathan, V. (2018). *Midcourse Manoeuvres: Community strategies and remedies for natural resource conflicts in India.* New Delhi: CPR-Namati Environmental Justice Program

This work has been carried out with the aid of a grant from the International Development Research Centre, Ottawa, Canada

Editing and Proofreading: Ruchi Vadehra

Photograph Credits: Joe Athialy, Maruti Gowda, Anjana John, Kanchi Kohli, Manju Menon, Vinod Patgar, Bipasha Paul, Manjit Yadav, Janabhiyakti and Centre for Integrated Rural and Tribal Development (CIRTD)

Contact Information: CPR-Namati Environmental Justice Program
Centre for Policy Research
Dharma Marg, Chanakyapuri
New Delhi-110021

Design and Layout: Printforce

MIDCOURSE MANOEUVRES: Community strategies and remedies for natural resource conflicts in India

CONTENTS

Acknowledgment

This study builds on the long history of work that social movements, researchers, and civil society organisations have been involved in for the last several decades. Other than primary and secondary data collection, the study has gained substantially through conversations with several people engaged in research and on-ground processes.

In particular, we would like to acknowledge the substantial inputs from R. Sreedhar (Environics Trust), Ramesh Sharma (Ekta Parishad), Rahul Chaturvedi (Foundation for Ecological Security), Rana Sengupta (Mine Labour Protection Committee), Namita Wahi (Centre for Policy Research), V. Vivekanandan (South Indian Federation of Fishermen Societies), Bipasha Paul (Janabhivyakti), Kumar Sambhav and Ankur Paliwal (Land Conflict Watch).

Ward Berenschot (Leiden University), Navsharan Singh (IDRC), Gino Cocchiaro (Natural Justice), Laura Goodman (Namati), Alok Shukla (Chhattisgarh Bachao Andolan), Mahabaleshwar Hedge (CPR-Namati) and Bharat Patel (CPR-Namati) were critical to designing the initial framework of the three country research that this India component is a part of. Preeti Venkatram and Anjana John contributed through the data collection and preliminary analysis. Krithika Dinesh (CPR-Namati) and Kush Tanwani (law student, Nirma University) provided specific inputs for the section on strategies and remedies. Law interns Harshit Pande, Sampada Nayak, and Fizza Zaidi contributed to data collection for the section on sectoral land use change.

We thank all the interviewees who generously shared their views, perspectives and facts related to the case studies. The list is available along with all the references used for this study. The study was made possible with the support from International Development Research Center (IDRC), Ottawa, Canada.

Abbreviations

AAQ	Ambient Air Quality
ADB	Asian Development Bank
ADC	Autonomous District Council
AP	Andhra Pradesh
APIIC	Andhra Pradesh Industrial Infrastructure Corporation
APPCB	Andhra Pradesh Pollution Control Board
BNHS	Bombay Natural History Society
CA	Compensatory Afforestation
CAO	Compliance Advisor Ombudsman
CBA	The Coal Bearing (Areas Acquisition and Development) Act
CEM	Community Environment Monitoring
CGPL	Coastal Gujarat Power Limited
CHP	Coal Handling Plant
CIDCO	The City and Industrial Development Corporation of Maharashtra
CIL	Coal India Limited
CM	Chief Minister
CM	Civil Miscellaneous
CPI (M)	Communist Party of India (Marxist)
CPMDI	Central Mine Planning and Design Institute
CPRs	Common Property Resources
CR&R	Chhattisgarh Rehabilitation and Resettlement
CRZ	Coastal Regulation Zone
CZMA	Coastal Zone Management Authority
CZMP	Coastal Zone Management Plan
DOLR	Department of Land Resources
EAC	Expert Appraisal Committee
EC	Environmental Clearance
ECEPL	East Coast Energy Private Limited
EIA	Environment Impact Assessment
EMP	Environmental Management Plan
FBV	Forum for Better Visakha
FCA	The Forest (Conservation) Act
FICCI	Federation of Indian Chambers of Commerce and Industry
FIR	First Information Report
FPIC	Free Prior Informed Consent
FRA	The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act
FSI	Forest Survey of India
GoI	Government of India
Ha	Hectares
HC	High Court
HCL	Hindustan Copper Limited
HFO	Heavy Fuel Oil
HTL	High Tide Line
IASRI	Indian Agricultural Statistics Research Institute
IBA	Important Bird Area
IFA	Indian Forest Act
IFC	International Finance Cooperation
IFI	International Financial Institution
IISC	Indian Institute of Sciences
IL&FS	Infrastructure Leasing & Financial Services
INR	Indian National Rupee
J&K	Jammu & Kashmir
JFM	Joint Forest Management
JPC	Joint Parliamentary Committee
KMPH	Kilometer per hour
KSTPS	Korba Super Thermal Power Station
LAA	The Land Acquisition Act
LPS	Land Pooling Scheme
MASS	Machimar Adhikar Sangharsh Sangathan
MCL	Mahanadi Coalfields Limited
MoEF	Ministry of Environment and Forests
MoEFCC	Ministry of Environment, Forests and Climate Change
MoSPI	Ministry of Statistics and Programme Implementation

MoTA	Ministry of Tribal Affairs
MoU	Memorandum of Understanding
MP	Member of Parliament
MPSEB	Madhya Pradesh State Electricity Board
MT	Million Tonnes
MTPA	Million Tonnes Per Annum
MW	Mega Watt
NAC	National Advisory Council
NAPM	National Alliance of People's Movements
NBA	Narmada Bachao Andolan
NBWL	National Board for Wildlife
NCLT	National Company Law Tribunal
NCPNR	National Committee for Protection of Natural Resources
NEAA	National Environmental Appellate Authority
NGO	Non-Government Organisation
NGT	National Green Tribunal
NH	National Highway
NHAI	National Highways Authority of India
NTFP	Non-Timber Forest Produce
NVDA	Narmada Valley Development Authority
NVDP	Narmada Valley Development Plan
NWMP	National Wastelands Monitoring Project
OC	Open Cast
ONGC	Oil and Natural Gas Corporation
PAs	Protected Area
PCB	Pollution Control Board
PEKB	Parsa East Ketan Besan
PESA	The Panchayats (Extension to Scheduled Areas) Act
PFAs	Project Affected Families
PFC	Power Finance Corporation
PIL	Public Interest Litigations
PM	Prime Minister
PM10	Particulate Matter of 10 micrometer or less in diameter
POSCO	Pohang Steel Company
PPP	Public Private Partnership
PRI	Panchayati Raj Institutions
PVTG	Particularly Vulnerable Tribal Groups
R&R	Rehabilitation & Resettlement
RFCTLARR	The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act
RRI	Rights and Resources Initiative
RTI	Right to Information
SANDARP	South Asia Network on Dams, Rivers and People
SCC	Supreme Court Cases
SCs	Scheduled Castes
SECL	South Eastern Coalfields Limited
SEKMC	South Eastern Koyla Mazdoor Congress
SEZ	Special Economic Zone
SIA	Social Impact Assessment
SLP (C)	Special Leave Petition (Civil)
SMHPCL	Shree Maheshwar Hydro-electric Power Corporation Limited
SPWD	Society for Promotion of Wasteland Development
SSS	Sarthak Srijanatmak Sanstha
STs	Scheduled Tribes
TC (C)	Tax Case (Civil)
TISCO	Tata Iron and Steel Company
ToR	Terms of Reference
TPA	Tonnes Per Annum
TPP	Thermal Power Plant
UCIL	Uranium Corporation of India Limited
ULCRA	The Urban Land (Ceiling & Regulation) Act
UMPP	Ultra Mega Power Project
UP	Uttar Pradesh
UPA	United Progressive Alliance
US	The United States of America
USD	United States Dollar
VEW	Vereinigte Elektrizitätswerke Westfalen
WII	Wild Life Institute of India
WLPA	The Wild Life Protection Act
WP	Writ Petition

1 Introduction

Since independence, and more so, from the 1990s, successive governments in India have emphasised the need for industrial expansion and privatisation as the foundation for economic stability and growth. These have led to the transformation of rural and peri-urban landscapes for industry and infrastructure, or for creating inviolate spaces for wildlife protection. These transformations have caused social conflicts and ecological impacts for land and resource-dependent people in the form of direct physical displacement, dislocation of livelihoods and impacts caused by pollution or land degradation.

Land use change has been central to the creation of industrial estates, port complexes, energy projects and transport infrastructure. Landscape mosaics that support a large number of people for their food security and traditional occupations have been transformed into "high value" infrastructure areas as part of the focus on macroeconomic growth. As a result, farming and livelihoods such as the collection of Non-Timber Forest Produce (NTFP), fishing, grazing and artisanal salt production have had to compete and have eventually lost out to industrial and infrastructural uses of land. According to a paper based on the Data Book-2011 of the Indian Agricultural Statistics Research Institute (IASRI), New Delhi, the total geographical area of India is 328.37 million hectares, which makes it the 7th largest country in the world. Data analysed by the IASRI for 305.27 million hectares of land from 1950-51 to 2007-08 indicates that while forest land cover in the country has increased, area available for cultivation has declined showing a greater shift to non-agricultural uses.

Studies also indicate that despite the official claim that forest cover, in general, has increased, large tracts of officially recorded forest land have been diverted for uses such as mining, industry, road and rail infrastructure, power generation and allied activities (CAG, 2013; Das, 2012). Lele and Menon (2014) state that despite the

Hydropower project under construction in Himachal Pradesh

claim by the Forest Survey of India (FSI) that there has been a 21% increase in the geographical area under forests, many such lands are also being converted for developmental purposes. In a press release issued by the Ministry of Environment and Forests (MoEF) in October 2012, the Minister of Environment, Jayanthi Natarajan disclosed that as of 2012, a total 11,44,861 hectares of forest land had been diverted in the last 32 years, since the Forest (Conservation) Act (FCA), 1980 came into force, to regulate forest land diversions by the central government.[1]

Land has also been taken up by wildlife conservation. The area under PAs in 2000 was 1,55,475.63 sq km covering 578 PAs. During the years 2000-2018, 6596.86 sq km of land was added to the PA network with the creation of another 191 such areas. Data put forward by the Wild Life Institute of India (WII) shows that 769 officially declared Protected Areas (PAs) in India (including wildlife sanctuaries, national parks, conservation reserves and community reserves) cover 1,62,072.49 sq km. of land area as of January 2018.[2] This amounts to 4.93% of the total land in the country. In many of these areas protected for wildlife and biodiversity, there are partial or complete restrictions on forest access for livelihood purposes. This is as per mandatory requirements of the Wild Life Protection Act (WLPA), 1972.

India's Draft National Land Utilisation Policy of 2013 states that there are likely to be competing demands by different sectors for land. It says that infrastructure expansion, industrial acceleration, and urbanisation demands are likely to increase the pressure on existing land uses (Department of Land Resources, 2013). According to this draft policy, such changes in land use are likely to pose critical challenges for sustainable development. On the basis of past data, the Department of Land Resources (DOLR) justifies that in future, the land use change will go beyond the use of lands, which are termed as "barren", uncultivable or fallow. The next phase of land use change will be in the forestry and agriculture sectors, says the policy.

Transmission lines cutting through forests in Sikkim

[1]The figures were released in a note titled Forest Clearance Approvals granted from 13.07.2011 to 12.07.2012 by Smt. Jayanthi Natarajan as Minister for Environment and Forests uploaded on the website of MoEF in October 2012.

[2]Data available on http://wiienvis.nic.in/Database/Protected_Area_854.aspx; accessed on April 10, 2018

This change of land use is not without conflicts. A 2015 report of the World Bank predicted "enormous strains" in the Indian land governance system in the future, which could lead to several conflicts including social dislocation, food insecurity and environmental degradation. The demand for land would grow as the country continues to "urbanise and move towards less agricultural and more industry-based economy." Data in the report indicates that in the coming years, there would be the requirement for 4–8 million hectares of land for residential use alone and the demands for infrastructure and industry would be about of 5–10 percent of the land area currently used for agriculture (The World Bank, 2015).

This study is an attempt to understand the lived experience of people affected by land use change and related conflicts. Equally, if not more importantly, this research seeks to analyse what affected people do when such conflicts arise. What are the strategies they adopt and what kinds of remedies do they seek? Further, what drives these choices? Section 1 looks at the nature of land governance in India, including how land area has been classified and administered. It also presents a quick read of the history of land reforms in the country, especially in the states of West Bengal and Kerala. The next section presents an overview of the constitutional and legal provisions through which land use change is permitted and regulated. Section 3 is a detailed account of land use change as permitted through the environment clearances under the EIA notification, 2006. Since there is no comprehensive account of land use change available on government record, the land area approved for the use of industrial, mining or infrastructure projects has been analysed through the collation of primary data.

Section 4 is an analysis of the different kinds of impacts such land use change results in. The analysis is structured through the themes of displacement and dispossession, livelihood-related impacts and environmental pollution. Section 5 presents a broad range of conflicts, which manifest as a result of the impacts of land use change. Finally, in Section 6, the study looks at the strategies adopted by the affected people for achieving a variety of remedies to redress the impacts they face on a daily basis. The strategies include both legal and non-legal routes. Litigation, protest actions, approaching the local administration or international financial institutions, as well as media advocacy, are understood through primary and secondary data collected as part of this study.

For the purposes of this study, land use change is defined as planned government policy induced land transformations for industrialisation and development. This does not include land use changes due to conservation projects, natural disasters or other social disruptions such as communal conflicts. The study focuses on conflicts caused by the anticipated or unanticipated environmental and social impacts of these projects that are undertaken without prior informed consent and/or the provision of due compensations, and abetted by the failure of administrative or judicial remedies.

2 Land Governance

Until 1949-50, the land area in India was classified into five categories known as the fivefold land utilisation classification. These categories were: forests, area not available for cultivation, other uncultivated lands excluding the current fallows, fallow lands and the net area sown. However, this fivefold classification was a very broad outline of land use in the country and was inadequate and to meet the needs of agricultural planning in the country (Misra, 2014). It was also difficult for the states to present comparable data based on this classification as there was a lack of uniformity in the definitions and scope in these fivefold broad categories.

To resolve the issue of the non-comparability and to break up the broad categories into smaller constituents for better comprehension, the Technical Committee on Co-ordination of Agricultural Statistics was set up in 1948 by the Ministry of Food and Agriculture and the committee recommended a ninefold land use classification replacing the old fivefold classification. It also recommended standard concepts and definitions for all the states to follow.[3]

1950-51 onwards, all states (except West Bengal) have adopted this ninefold land use classification system that is:

i. **Forests:** The state-owned and private land classified as forest under any legal enactment dealing with forests or administered as forests (wooded or maintained as potential forest land) (This also includes the areas of crops raised in the forest and grazing lands or areas open for grazing within the forests).

ii. **Area under non-agricultural uses:** The land occupied by buildings, roads, and railways or under water, e.g., rivers and canals, and other lands put to uses other than agriculture.

iii. **Barren and unculturable land:** Mountains, deserts, etc. and also land, which cannot be brought under cultivation.

iv. **Permanent pastures and other grazing land:** Grazing land (permanent pastures and meadows or not), inclusive of village common grazing land.

v. **Land under miscellaneous tree crops:** The cultivable land, which is not included in 'net area sown', but is under some agricultural use (This includes the land under Casuarina trees, thatching grasses, bamboo bushes and other groves for fuel, etc. which are not included under 'orchards').

vi. **Culturable waste land:** The land available for cultivation (irrespective of whether taken up for cultivation once or not taken up for cultivation), but not cultivated in the present year and the last five years or more in succession (Also, such lands may be either fallow or covered with shrubs and jungles, which are not put to any use; they may be assessed or unassessed and may be situated within cultivated holdings or be present in isolated blocks).

vii. **Fallow land other than current fallows:** The land taken up for cultivation, but temporarily out of cultivation for a period of one to five years.

viii. **Current fallows:** Cropped area kept fallow during the current year (This includes any seeding area that is not cropped again the same year).

ix. **Net area sown:** The total area sown with crops and orchards (The area sown more than once in the same year is counted only once).[4]

[3] Ninefold classification of land use available on the website of Ministry of Statistics and Programme Implementation (MoSPI): http://www.mospi.gov.in/45-nine-fold-classification-land-use accessed on October 26, 2017.

[4] ibid.

One of the critiques of this classification is for the area defined as wastelands. Although government records continue to record land as "waste", research has shown that these areas have had several common uses for both urban and rural communities. This includes lands for grazing, cremation grounds, rotational agriculture and other such uses. Singh (2013) traces the history of this categorisation to British colonial times when the government separated private property and public lands. Land that was not under cultivation was termed as "wasteland" and brought under state ownership. The practice was carried on by the Indian government post-independence. Till date the government maintains a Wasteland Atlas and has a national programme to monitor the changes in wastelands in the country- 'National Wastelands Monitoring Project (NWMP)' (MoRD and NRSC, 2010; Mani, 2010). Both the terminology and ownership rights are contested by communities and civil society organisations in different parts of the country as river flood plains, salt affected areas, steep slopes which continue to be under community use for a variety of needs and occupations, are on record as government wastelands.

Land Rights and Reforms

According to Entry 18, List II, Seventh Schedule of the Constitution of India, 1950, "Land" is classified as a state subject, implying that most decisions related to the administration of land lay with respective state governments in India. However, this needs to be understood along with two other entries. First, that the "acquisition and requisitioning of property" finds a place in the Concurrent list of the Indian Constitution (under Entry 42, List III, Seventh Schedule, The Constitution of India, 1950). The manner in which the Concurrent list works is that if there is a central law on any subject in the list, the states are required to comply with this law and allocate funds for the same (PRS Legislative Research, 2012). The second relates to forests, including land recorded as forests and not revenue category. These lands also rest in the Concurrent list giving dual jurisdiction to both central and state governments. Over the years, new legislations have also institutionalised a framework of legal rights of communities to govern forest land after the record of rights is clarified.

The contemporary governance of land in India is also influenced by how it was historically administered. In different parts of the country, there were varying models that have been adapted by pre-colonial and colonial governments. As a result, the country has different frameworks through which revenue and forest land administration has been practised over the years. Together these factors add complexity to the ownership, use, and decision-making on land use in India.

Revenue land

The colonial administration adopted the zamindari system of revenue collection in several parts of northern India. It recognised the zamindars as landowners and in return required them to collect taxes. The amount of the tax was left to the discretion of zamindars in this system, and huge taxes were collected by them from peasants. Also, the owners of the land had no participation in the production but were entitled to have a share of the produce. Although the zamindari system was present in some parts of southern India, the administration of land was mostly through the ryotwari (cultivator) method of collection. This involved farmers being recognised as land owners and required them to remit their taxes directly (Jafferlot, 2000).

Post-independence, the zamindari system was abolished, and a land reform policy was introduced in 1951. The Second Five Year plan set the objectives of the land reforms to twofold: increasing agricultural productivity and efficiency as well as creating an egalitarian society to eliminate poverty. The government gave the call "land to the tiller" and aimed that this distribution and transfer of income will increase demands for consumer goods (Venkatasubramanian, undated).

Besley and Burgess (2000) have categorised the four major aspects of India's land reform policy to be abolition of intermediaries (rent collectors under the pre-independence land revenue system); tenancy regulation (to improve the contractual terms including security of tenure); a ceiling on landholdings (to redistributing surplus land to the landless) and attempts to consolidate disparate landholdings.

Since India's independence in 1947, there have been state-initiated land reforms in several states with the dual objective of efficient use of land and ensuring social justice. The best-known examples of land reforms are from the states of West Bengal and Kerala. The land reforms in Kerala are considered to be the "most extensive

land, tenancy and agrarian labour wage reforms in the non-socialist late-industrialising world" (Heller, 1999). The Kerala Land Reforms Act 1963 set an absolute ceiling on the amount of land a family could own. The tenants and hut dwellers received claim to the excess land on which they had worked for centuries under the feudal system. In addition, the law ensured fixity of tenure and protection from eviction.

The land reforms in Kerala imparted drastic changes to the prevalent political, economic and social outlook (ibid). Different types of feudal relations existed in Travancore-Cochin and Malabar at the time of the formation of the state. The landless farmers and those who were evicted from their land wanted to get their grievances redressed. The clamour for changes gathered strength. After the formation of Kerala, the first elected communist state government that came to power in 1957 introduced the Land Reforms Bill in the Legislative Assembly. From 1958 to 1964 several bills related to land and wage reforms were passed, and this culminated in the Kerala Land Reforms (Amendment) Act, 1969. The Act has been amended several times since then.

The land reforms process in West Bengal is often traced back to 1953 Estate Acquisition Act for the abolishment of the zamindari system. Following this, the state government enacted the Land Reforms Act of 1955 to address issues such as ceiling on holdings, distribution of vested land amongst the landless, reducing rents, giving ownership rights to tenants and other related challenges. However, there were several loopholes that affected its implementation. The Communist Party of India (Marxist) (CPI (M)) elected to power in West Bengal in 1977 initiated the Operation Bargadar to record the names of sharecroppers, inform them of their rights to produce from the land as well as become landowners.

There have also been attempts towards land reforms through ceiling in urban areas. For instance, The Urban Land (Ceiling & Regulation) Act (ULCRA) was enacted in 1976 to allow government acquisition of vacant land exceeding a ceiling limit in urban areas and made available for housing for middle and low income groups (Bakore 2007). It was believed that it would prevent concentration of urban land with select private hands and allow equitable distribution of urban land to realise orderly urbanisation. However, land owners took advantage of the clauses that allowed exemptions, and it also encouraged corruption and litigation in cases where exemptions were not easily attained. Land owners hesitated to pronounce vacant land in excess of the ceiling, as the compensation that would be provided was paltry. Further, there was no monitoring of whether houses were indeed built on surplus land acquired. These issues ended up making the Union Government, and many states repeal the ULCRA in 1999 (ibid).

Forest Land

According to the Forest Survey of India, the total forest cover in the country in 2013 was 69.79 million hectares, which is 21.23% of the total land mass of the country (Forest Survey of India, 2013). However, not all this is under the direct jurisdiction of the State Forest Department. The forests might be owned, used and managed by village level institutions, private estates or revenue administration. Owing to multiple ownership claims, jurisdiction, and management regimes through India's modern history, forest governance has involved complex legalities (Kohli and Menon, 2011).

Lele and Menon (2014) divide forest governance related debates into two phases, the colonial and post-colonial period. They state that the colonial forest administration was directed at revenue maximisation and industrial production from areas designated as forests. This involved taking control of the land, so that resource extraction could be maximised. It is for this purpose, in their view, that the colonial administration created an exclusive Forest Department. After independence, the same model of forest governance continued and expanded through the creation of Reserved Forests as well as Protected Areas (PAs) for wildlife. In government administration, "forest land" is directly owned and managed by the State Forest Departments through a collection of laws and administrative policies of the centre and states.

Since the colonial period, the legislation that has predominantly guided the management of forests in India is the Indian Forest Act (IFA), 1927. The law essentially seeks to reserve forests for their timber value and puts forth mechanisms through which the transit of forest and non-forest produce can be regulated. Once such a reservation was in place, only a limited number of rights could be entertained in such forest areas that are

designated for specific utilisation and management. Post-independence, even though the IFA continues to be operational, there is a range of state enacted legislations that determines how forest conservation and management take place. These laws put forth the system of Forest Working Plans with long-term cycles (10 years or more)- the most crucial guiding documents of the Forest Department, to carry on their forestry activities. Other "non forestry" activities are not addressed through the forest working plans, although the Act allowed for dereservation of a Reserved Forest and tree felling by the state governments (Kohli and Menon, 2011). Since 1980, "the diversion of forest land for non-forestry purpose", or use of forest land for mining and other industrial operations, is regulated through the Forest Conservation Act.

In many states, there were also ongoing community forest conservation initiatives that had been backed by local, state or national laws such as the Van Panchayat Act of 1931 in Kumaon region of Uttarakhand (erstwhile Uttar Pradesh). The official national recognition of these initiatives came through the National Forest Policy of 1988 (ibid).

In the 1990s, the Indian government introduced the Joint Forest Management (JFM) as an attempt towards participatory forest management. While it was an attempt to move away from top-down nature of forest governance, the programme had limited success. Research has pointed out that the poor performance of JFM can be attributed to the quality of implementation and the policy structure of the programme itself. Under this system, there is restricted coverage of forest lands, inadequate produce rights to communities, absence of autonomy in everyday operations related to forest management, lack of transparency and accountability of the forest department, uncertainty of tenure, and a profit-making focus over maximising returns to labour. Even in states like Gujarat, Madhya Pradesh and Andhra Pradesh, where it was felt that some success had been achieved, efforts are proving to be unsustainable in the long term (Lele and Menon, 2014).

In 2006, the passing of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA) brought in a new dimension to forest governance in India. Proposed first by a large coalition of forest workers and forest-dependent communities and civil society organisations supporting

Farm forest landscape in Uttara Kannada, Karnataka

them, the passing of this law is stated to be a watershed moment in India's history of land reforms. The discourse around the ownership, governance and management of forests in India underwent a significant change with the enactment of the FRA. The law put in place a clear legal mechanism for recognition of rights over forests both at an individual and community level for tribal as well as other traditional forest dwelling communities, including forest workers who have been living in a designated forest area for 75 years or 3 generations (ibid).

Common Lands

Literature on property rights refers to common property as a private property for a group, in contrast to an individual. The rights to common use areas were "a matter of observation and record based on degree of access arising out of both ownership and use." Till the time common lands were in possession of communities and in use, the rights to these were clearly defined. However, over a period of time, these ownership or use rights have eroded. As a result, today commons or Common Property Resources (CPRs) are viewed in general parlance as a "category on which ambiguous rights exist." (Chopra, 2001).

The legal and proprietary regimes around Commons have been historically defined based on ownership, management, and use regimes. Their governance is also diverse, spread across different administrative departments, like revenue, forest, fisheries, or under the direct control of district councils, making decisions related to land-use change a result of multiple agencies.

For example, Betta, or soppina betta is a unique system existing in Uttara Kannada district of Karnataka since colonial times. This district has about 580 sq km of betta land. Such lands were assigned to farmers by the British Government after long debates between the farmers and the government over the rights of farmers on these lands as well as the ecological importance of forest produce, especially leaf litter, for areca farming. When the British Government introduced forest legislation to take over the control of forest land and attempted to stop the harvest of green leaves from the forests, local farmers agitated (Buchy, 1996). As a result, the

Grazing commons in coastal Gujarat

government constituted a committee in 1899, known as the Mollison Committee. Based on the Committee's report, for 1 acre of spice garden, 7 to 9 acres of forest land was given to farmers for farm related uses. Though the government officially owns the land, farmers can use green leaves and fodder from these forests on some conditions.

Nearly 15-25% of the entire land in India is common use area. It is often termed as wasteland or grazing land and has defined common use rights (Singh, 2013). In recent years, the conservation and governance of common lands have been defined by court and parliament made law. On January 28, 2011, in the case of Jagpal Singh & Others versus State of Punjab & Others[5], the Supreme Court of India delivered a significant ruling related to village Commons. The order observes:

"(t)hese public utility lands in the villages were for centuries used for the common benefit of the villagers of the village such as ponds for various purposes e.g. for their cattle to drink and bathe, for storing their harvested grain, as grazing ground for the cattle, threshing floor, maidan for playing by children, carnivals, circuses, ramlila, cart stands, water bodies, passages, cremation ground or graveyards, etc. These lands stood vested through local laws in the State, which handed over their management to Gram Sabhas/Gram Panchayats. They were generally treated as inalienable in order that their status as community land be preserved..."

Noting that these lands were under severe threat and encroachment, the apex court stated that long duration occupation, large expenditure incurred for construction on common land or political connections cannot be treated as a justification for condoning illegal possession of village land or regularisation of encroachment. Further, the regularisation of construction/ 'encroachment' of Commons should only be permitted in exceptional cases, e.g. public purposes including where lease has been granted under government notification to landless labourers or members of Scheduled Castes (SCs) and Scheduled Tribes (STs) or where there is already a school, dispensary or public utility (Bhutani and Kohli, 2016).

[5]Civil Appeal No.1132 of 2011 which went on to become Special Leave Petition 3109 of 2011, wherein the 'commons order' of January 28, 2011 was passed by the bench.

3 Key Constitutional and Legal Provisions Governing Land Use Change

Land in India is governed by a range of statutes and constitutional provisions that are enacted by the parliament and administered by the executive. While some of these lay down processes through which the government can acquire land for different uses, others are in the form of providing regulatory oversight to land use change from an environmental or social justice point of view. The inclusion of provisions for prior informed consent by communities in the specific legislations is a recent development. This section seeks to bring together a set of sectoral legislations, which have a bearing on how land use change is to be approved and regulated.

Right to Property: Legal not a Fundamental Right

In 1950, when the Constitution of India came into effect, under Article 19 1 (f), all citizens had the right to "acquire, hold and dispose off property" and under 31(1) it was stated that "No person shall be deprived of his property save by authority of law." This meant that all citizens had the fundamental right to property which was constitutionally upheld. The state could acquire it for public purpose but only with due compensation. However, a series of constitutional amendments removed the limits on the state's power to acquire property. This was especially regarding the payment of market value of land in lieu of acquisition.

However, as per the 44th Amendment in 1978, the Right to Property was removed as a fundamental right, i.e. Article 19 1 (f) was deleted. Article 31 (1) was shifted under Article 300 A, thereby making the Right to Property only a legal right thereafter. Wahi (2016) argues that this made "the limitations on the state's power to acquire property non justiciable", i.e. not legally enforceable by the courts for their violation. However, several aspects of the Right to Property have been open to legal scrutiny since the enactment of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (ibid), discussed further in this section. This scrutiny is especially on aspects of consent, public purpose and compensation.

Acquisition of Land

Acquisition of land in India is informed by the principle of Eminent Domain. Ramanathan (2009) states that the term "is understood as the power that the State may exercise over all land within its territory. Eminent Domain, and the law related to the compulsory acquisition of land, requires that this power be invoked only for a public purpose, but what constitutes public purpose is wide open to interpretation and use."

One of the main instruments of acquisition of land in India was the Land Acquisition Act of 1894 (LAA). Other than the central land acquisition legislation, land has been acquired in India through at least 13 other national level sector-specific statutes, like those for highways, coal mining, atomic energy, railways and so on.[6] State governments also have their own land acquisition legislations which have been in operation from even before independence. One of these is the Punjab Town Improvement Trust Act, 1922, that has operated in a similar manner as the 1894 law where land is acquired directly through the issuance of a notice and payment of compensation (Singh, 2013).

The LAA has been subject to many controversies and criticisms since its enactment. Scholars have pointed out that inspite of its many amendments,[7] the law failed to address certain important issues like forcible acquisitions,

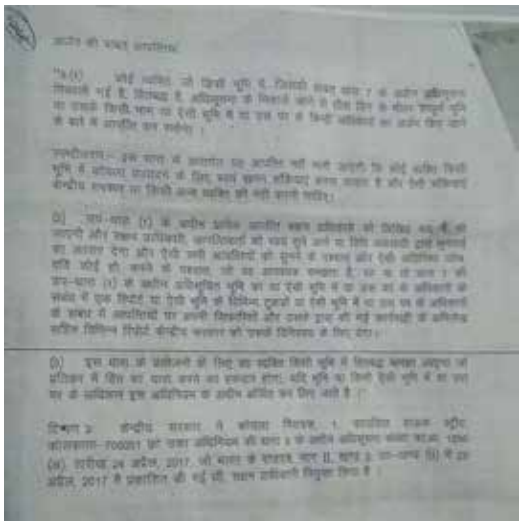
[6]The Fourth Schedule of the RFCTLARR Act, 2013 lists these as The Ancient Monuments and Archaeological Sites and Remains Act, 1958 (24 of 1958); The Atomic Energy Act, 1962 (33 of 1962).; The Damodar Valley Corporation Act, 1948 (14 of 1948); The Indian Tramways Act, 1886 (11 of 1886); The Land Acquisition (Mines) Act, 1885 (18 ofl885); The Metro Railways (Construction of Works) Act, 1978 (33 of 1978); The National Highways Act, 1956 (48 of 1956); The Petroleum and Minerals Pipelines (Acquisition of Right of User in Land) Act, 1962 (50ofl962); The Requisitioning and Acquisition of lmmovable Property Act, 1952 (30 of 1952); The Resettlement of Displaced Persons (Land Acquisition) Act, 1948 (60 of 1948); The Coal Bearing Areas Acquisition and Development Act, 1957 (20 of 1957); The Electricity Act, 2003 (36 of 2003); The Railways Act, 1989 (24 of 1989).

[7]Post-independence, both the Union and the states made several amendments to this law, with the last major amendment in 1984 (Wahi, et al 2017).

definition of "public purpose", widespread misuse of the "urgency" clause, timely and adequate compensation, lack of transparency in the acquisition process, and inadequate rehabilitation and resettlement (Fernandes, 2008, Wahi, 2016, Wahi et al., 2017). Since the definition of "public purpose" remained ambiguous, it resulted in the administration granting itself a broad range of discretionary powers to decide the contours of "public purpose" under particular circumstances.[8]

The acquisition of land has been highly contested both in court and outside. Wahi et al., (2017) studied 1269 cases involving litigation under the Land Acquisition Act, and found challenges to acquisitions made under 15 central and 87 state statutes. However, over 87% of the cases were related to disputes arising out of acquisition under the 1894 law.

Over the years several large social movements have raised these issues and demanded amendments to the 1894 law. One of the significant demands was to combine, with one new legislation, the processes of acquisition and rehabilitation. The National Committee for Protection of Natural Resources (NCPNR), the National Alliance of People's Movements (NAPM), also presented alternate versions of such a law in the 1990s (Datta, 2008). In 2010, a collective of social movements, "Sangharsh", came together to demand the implementation of the recommendation of the Parliamentary Standing Committees related to the Land Acquisition (Amendment) Bill 2009 and the Resettlement and Rehabilitation Bill, 2009 (Kattakayam, 2010). As observed by Ramanathan (2009), "Development debates stoked by the mass displacement that accompanies large infrastructure projects have placed a severe strain on the acceptability of the power of Eminent Domain."



Notice under Coal Bearing Areas Act in Chhattisgarh

Singh (2013) in his paper highlights that the "use of Eminent Domain to acquire land for developmental purposes has become highly controversial. Several parts of India have experienced violent protests against the compulsory acquisition of land." One of the primary reasons for this, says Singh, is because of the manner in which compensation has been calculated and paid out, making the issue of compensation "crucial for an efficient use of the Eminent Domain." Wahi et al., (2017) in their comprehensive study of land acquisition related cases in the Supreme Court highlight that 63.4% of the total 805 land acquisition related cases in the SC are related to compensation claims.

Critiques also emerged from within the government. The National Advisory Council (NAC) advised the government to combine acquisition, compensation, rehabilitation and resettlement into one single law.[9] It emphasised that acquisition, and rehabilitation and resettlement "are two sides of the same coin". The Standing Committee report on the Land Acquisition Bill states, that "The provisions made under 'The Land Acquisition Act, 1894' have been found to be inadequate in addressing certain issues related to the exercise of the statutory powers of the State for involuntary acquisition of private land and property as acknowledged in the Statement of Objects and Reasons of the aforesaid Bill."[10]

[8]Pandit Jhandu Lal and Others vs The State of Punjab and Another AIR 1961 SC 343; R L Arora vs The State of Uttar Pradesh AIR 1962 SC 764; Smt Somawati & Others vs State of Gujarat AIR 1963 SC 151.

[9]See Chapter II of the LARR Act.

[10]Standing Committee's Report on the Land Acquisition (Amendment) Bill, 2007. Accessed from http://www.prsindia.org/uploads/media/Land%20Acquisition/scr1226484896_SC_Report_Land_Acquisition_Bill__2008.pdf on January 23, 2017.

The law, which presently governs the acquisition of land for "public purpose", is the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (also Land Acquisition Act, 2013). The process of enacting this legislation picked up in 2011.[11] This was two years after the United Progressive Alliance (UPA) led by the Indian National Congress was well within its second consecutive term since it was voted into power in 2004. During its rule from 2004 to 2014, the country saw the enactment of several progressive judgments related to rural employment guarantee, right to information and forest rights.

The 2013 Act differs from the 1894 Act in several ways. It narrows the definition of 'public purpose', i.e. the types of projects for which land can be acquired. It requires the consent of land owners if the project is for a public private partnership (PPP) or a private company. Compensation is set at 2-4 times the prevailing market rates and minimum norms for rehabilitation and resettlement of affected persons are prescribed. The Act also requires a Social Impact Assessment (SIA) to be conducted to determine whether the potential benefits of the project outweigh the social costs. While many of the older state and sectoral laws for acquisition are still in operation, the compensation and R&R process will be followed as per the 2013 land acquisition law.

Land Pooling versus Land Acquisition

Land pooling is an approach used by a few state governments in India where the state government suggests to the landowners to pool their land for the purposes of a project rather than acquire it. The Andhra Pradesh government led this approach for the creation of Amaravati, the new capital of the state, after its bifurcation in 2013. 33,000 acres of land were pooled by individual farmers from Vijayawada and Thullur areas, along the banks of the Krishna River.

Landowners hand over ownership rights voluntarily to the government that "develops" the area with roads, electricity, sewage lines, etc. Once done, a smaller, predetermined portion of the land is returned to the original occupants (Dua, 2017). The idea is that this would increase the market value of the land and thereby benefit land owners in the long run.

Mridula Chari (2015), in her analysis, points out that *"Land pooling is also much cheaper for the government. The centre's land acquisition law says that compensation for land acquired can go up to 4 times the rate of land. Andhra Pradesh has fixed the compensation at 2.5 times the revenue rate. Even this amount is far higher than the figure the government will pay to farmers who give up their land for the pool."*

At the same time, both the concept and the process have seen opposition from a small but significant number of land owners. As Chari's article quotes, M Seshagiri Rao, a lawyer and activist associated with the People's Union for Civil Liberties in Vijayawada, questions the land pooling as being anti-constitutional. He is quoted to say, *"The land pooling scheme cannot be a model for the country because it is a biased agreement that does not give the farmer fair compensation. If the government is taking land, it has to give fair compensation. It is trying to avoid paying farmers the market value of their land."*

An ongoing study on Conflict Indices in Amaravati region of Krishna River Basin, Andhra Pradesh, is tracking and monitoring everyday manifestations related to land, water and environmental resources. One of the reasons for this conflict is around "implementing the Land Pooling Scheme (LPS) for building Amaravati, the new capital city of Andhra Pradesh."[12]

Recently, states such as Delhi have also initiated a land pooling policy for housing schemes and projects (Anon.2017). In Rajasthan too there is a Land Pooling Scheme Bill which allows for the consolidation of small landholding (Kohli and Gupta, 2017).

This mechanism does not address the dependence of labour, share croppers, seasonal graziers on such land, which is now assessed through Social Impact Assessment (SIA) under the 2013 law. Secondly, it does not address the question of food security. The 2013 law requires that multi-cropped irrigated land not be acquired unless absolutely necessary.

[11] Bill No. 77 of 2011, The Land Acquisition, Rehabilitation And Resettlement Bill, 2011 [LokSabha], Statement of objects and reasons.

[12] More details available at: http://www.cprindia.org/projects/conflict-incidence-monitoring-systems-cims; accessed on March 28, 2018.

Diversion of Forest Land

Forest lands recorded under the IFA, 1927 and other State Forest Acts are directly governed by the State Forest Departments. The departments struggle with the dual and contradictory priorities of conserving and reserving forests for their ecological functions and wildlife protection on the one hand and the increasing demand for using these lands for mining, irrigation, hydro power, industry and railways on the other.

State governments have the final authority to sanction the use of forest lands for non-forest use. Till 1980 this give and take was only between a concerned user agency (public or private) and the state government (through its forest department). Since 1980, with the enactment of the Forest Conservation Act, the requirement for a prior permission from the central Ministry of Environment and Forests was made a legal requirement. In order to use a forest for an explicit non-forest purpose or de-reserve it (from its Reserved Forest status), an approval needs to be sought from the Ministry of Environment, Forests and Climate Change (MoEFCC) (MoEF, 2004; Kohli et al., 2011). The law defines non-forest purpose broadly as the breaking up or clearing of any forest land for the cultivation of tea, coffee, spices, rubber, palms, oil-bearing plants, horticultural crops or medicinal plants and for any purpose other than reafforestation.

With the enactment of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA) and subsequent clarifications issued by both the MoEFCC and the Ministry of Tribal Affairs (MoTA),[13] forest lands cannot be diverted for non-forest purposes unless there is evidence that the consent of all gram sabhas (village assemblies) has been sought and the recognition of rights under the FRA has been completed.

Once the change of land use is approved, it needs to be compensated for by the user agency. The land is to be identified, and money has to be transferred into the government's account before the land use is altered. The requirement for "Compensatory Afforestation" (CA) is the most important condition stipulated when forests are 'diverted' for non-forest use, or when felling of trees is to be done or forests are to be de-reserved. Compensatory Afforestation (CA) is to be done over an equivalent area of non-forest land, e.g. for 100 hectares 'lost' to non-forest purpose, another 100 hectares of non-forest land is to be afforested. In case of non-availability of non-forest land, afforestation needs to be taken up on double the amount of degraded forest land, than what is being diverted for non-forest use. The official guidelines for CA allow for other categories of forests (other than RFs) recognised by The Indian Forest Act, 1927 to be also used for CA. This has added to the complexity of this practice as lands under the legal jurisdiction of the revenue administration and having unique ownership and management practices have been made eligible for CA. Such forests include zudpi jungle/chhote/bade jhar ka jungle/jungle-jhari land/civil – soyam lands (ELDF and WWF-India, 2009; Kohli et al, 2011).

Constitutional Provisions (including those related to Scheduled Areas)

India's constitution has set a framework that allows for decision making around land use change to not just be a jurisdiction of the national or state governments. These are also subject matters of institutions set up at the village or urban wards. These constitutional provisions can be understood through 3 specific aspects: Decentralisation to Panchayats through the 73rd Amendment; the enactment of PESA, 1995 for 5th Schedule areas recognised by the Constitution and the functioning of the ADCs in sixth schedule areas.

Decentralisation to Panchayats (73rd amendment)

In the 1990s in India, there was a movement towards decentralisation of national resource governance. Saxena (2012) has described this phase as having presented an "unprecedented opportunity for participative, accountable governance." It has also been justified as being important for increased efficiency, more thoroughgoing equity, and/or greater participation and responsiveness of government to citizens (Agarwal et al.1999).

[13]Advisory issued by the MoEFCC on 3.8.2009 to all state governments [F. No. 11-9/1998-FC (pt)] and MoTA Guidelines on the implementation of FRA [No. 23011/32/2010-FRA [Vol .II (Pt.)] dated 12.7.2012.

One of the most significant steps towards decentralisation in contemporary India was through the 73rd Amendment to the Constitution in the year 1992. There are 2 significant elements of this amendment. First, is the establishment of a three-tier structure for Panchayati Raj Institutions (PRI), with elected bodies at village block[14] and district levels." Second, it recognised the Gram Sabha or village assembly as the main deliberative body at the village level (GoI, 1992; Johnson, 2003). The Indian Constitution defines Gram Sabhas as "a body consisting of persons registered in the electoral rolls relating to a village comprised within the area of Panchayat at the village level." This amendment ushered in the era of devolution of powers to Gram Panchayats (village councils) so that they could exercise authority and function as institutions of self-governance.

The experience with such decentralisation has been mixed. Saxena (2012) has emphasised that the mere creation of a three-tier structure has not implicitly resulted in citizens' participation and accountability. A joint study by the Ministry of Panchayati Raj and the Tata Institute of Social Sciences highlights that it is the discretionary nature of the devolution of powers, which has made the implementation of the 73rd Amendment's provisions dependent on the intention and strength of state level laws. A 2015 ranking presented in this study showed that states like Kerala, Tamil Nadu, Maharashtra and Karnataka were at the top, whereas Jammu and Kashmir, Uttar Pradesh, Punjab and Jharkhand were the low performers when it came to devolution of powers to PRIs.

PESA (V schedule) and ADCs/Regional Councils (VI Schedule)

Areas primarily inhabited by constitutionally recognised Scheduled Tribes have been granted special governance and protection status in India. This is through the Fifth and Sixth Schedule as prescribed under Article 244 of the Constitution. While the fifth schedule covers 10[15] states in India, special administrative status is recognized in the states of Assam, Meghalaya, Tripura and Mizoram, as the Sixth Schedule Areas. Wahi (2013) writes that "the Fifth Schedule covers central India and it mandates the creation of Tribes Advisory Councils, consisting of three-fourths representation from the Scheduled Tribes. The schedule also requires that laws be passed to regulate land transfers in these areas. The Sixth Schedule covers northeast India, and provides for elected Autonomous District and Regional Councils in these areas." Any decision on land use in the Sixth Schedule areas requires the approval of these councils.

In 1995, a committee headed by Dileep Singh Bhuria had suggested that the mandate of the 73rd Amendment be extended to Fifth Schedule Areas (GoI, 1995). This led to the enactment of the Panchayats (Extension to the Scheduled Areas) Act, 1996 (PESA) with the explicit purpose of extending provisions of the 73rd constitutional amendment to Scheduled Areas. Under the PESA Act, 1996, Gram Sabhas must approve of social and economic development plans prior to their being implemented at the village level by the Panchayat. It is also mandated that before any land acquisition takes place in Scheduled Areas, or the resettling/rehabilitating of affected persons takes place, Gram Sabhas are to be consulted. The planning and implementation though will take place at the state level.[16]

Environment Regulation

Since the early 1990s, use of any land or water resource by projects of a specific kind and scale, is required to be appraised by specialised environmental expert committees or approval bodies. In addition to going through the legal procedures for land acquisition or forest diversion, industrial, infrastructure or extractive projects are required to go through regulatory requirements of preparing environmental impact assessments reports, public consultations and expert scrutiny before land use can be changed by specific types of projects.

[14] States with populations less than 2 million are not required have block-level Panchayats.

[15] 10 States, namely, Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Telangana have Fifth Schedule Areas. (http://pesadarpan.gov.in/en_US/fifth-schedule-areas/-/asset_publisher/LmZ9LplaCh7b/content/fifth-schedule-are-2?inheritRedirect=false&redirect=http%3A%2F%2Fpesadarpan.gov.in%2Fen_US%2Ffifth-schedule-areas%3Fp_p_id%3D101_INSTANCE_LmZ9LplaCh7b%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3Dcolumn-1%26p_p_col_count%3D1; accessed on March 26, 2018).

[16] http://indiacode.nic.in/coiweb/amend/amend73.htm; accessed on July 10, 2017.

A village sharing its boundary with a coal mine in Sarguja, Chhatisgarh

two such regulations for environmental decision-making are the Environment Impact Assessment (EIA) notification, 2006 (earlier 1994) and the Coastal Regulation Zone (CRZ) notification, 2011 (earlier 1991). The EIA notification requires a range of projects to go through an environmental scrutiny before land use can be altered by specific kinds of projects such as mining, industry or real estate projects. Prior to grant of approval under these laws, the project proponent is only allowed permission for "securing land" which by the ministry's own definition implies "protecting land from encroachment, misuse, etc. by way of proving fencing, boundary wall guards, etc."[17]

The CRZ is a framework that regulates human activities in coastal areas by zoning, managing, and restricting environmentally damaging land use change. It divides coastal land 500 metres from the High Tide Line (HTL) and the land between the HTL and the Low Tide Line into 3 zones, each with its distinct set of prohibited and regulated activities. Zone IV is 12 nautical miles into the sea from the coast. Land use change in these areas for ports, tourism facilities, residences, mining and railways cannot be undertaken without permissions. The CRZ also requires coastal states to prepare management plans for the designated coastal areas that can aid the regulatory process.

[17] Right to Information response from Ministry of Environment and Forests dated April 25, 2007 [File No. J-110012/14/2007-IA-II (I)].

Cement jetty in coastal Gujarat competing for space with artisanal fishing

Constitutional Rights

As per the Constitution of India, Article 48 A under the Directive Principles of State Policy, states that the State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country, and Article 51 A (g) under the Fundamental Duties states that it shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures.

It has become common practice to interpret the Fundamental Right under Article 21, protection of life and personal liberty, which states that no person shall be deprived of his life or personal liberty except according to procedure established by law, as implicitly stating that an environment conducive to one's wellbeing too is guaranteed. This has been met with success in court cases. Landmark cases [e.g. Subhash Kumar vs. State of Bihar (1991)[18], Attakoya Thangal vs. Union of India)[19]] have interpreted Article 21 as the guarantee to safe drinking water. Environmental problems (e.g. air pollution, improper hazardous waste disposal, etc.) compromise one's right to life by causing health issues in individuals and this too has been acknowledged as part of Article 21 [e.g. L.K. Koolwal v. State of Rajasthan (1986)[20]].

[18] 1991 AIR 420, 1991 SCR (1) 5.

[19] 1990 KLT 580.

[20] AIR 1988 Raj 2, 1987 (1) WLN 134.

4 Land Use Change

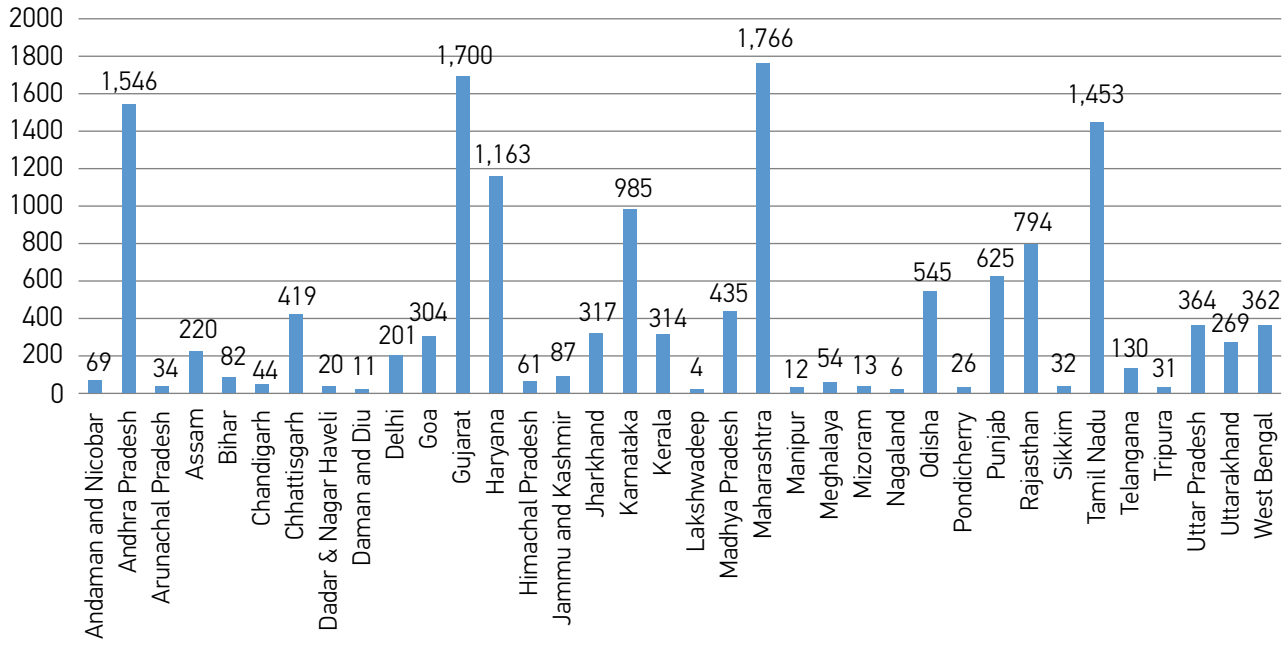
For this section, attempts were made to access government records that would indicate the extent of recorded land use change across various development sectors such as infrastructure, energy, irrigation and transport. However, no such records were available.

In order to get a picture of land use change across sectors and regions, this study has collated the number of environmental approvals granted to projects of different sectors across states. According to the environment ministry's website, the total number of projects that have at the central level from 1968[21]-2017, as of October 2017, is 14,498. This does not include one significant sector, Railways, for which environment clearances are not required as per existing environment This also does not include the environment clearances granted by the State Environment Impact Assessment Authorities, since 2006. Based on the number of approvals till October 2017, Maharashtra, Gujarat and Andhra Pradesh top the list with over 1,500 total projects approved by the Central Ministry. Although the environment clearance process is applicable across all states in the country, these few states peak over the others.

In terms of sectors, industries have obtained the most environmental approvals followed by construction projects and mining. This comparison of approvals across sectors and regions is not a clear indicator of the extent of land use change across these states due to sectoral projects as land area approved for projects may vary greatly.

Approval of Land Use Change by environment clearances to projects

Figure 1: State-wise distribution of environment clearances up to October 2017



[21]Even though the requirement of environment clearance was made mandatory since 1994, there were some projects (especially dams), which underwent environmental scrutiny even prior to the enactment of the EIA notification, 2006.

A sectoral and regional distribution of environment clearances for all projects granted environmental clearance up to October 2017 is presented in the graph below (Figure 3). It indicates that states such has Andhra Pradesh, Gujarat, Maharashtra and Tamil Nadu have a large number of environment clearances for industrial projects. For a relatively new state like Chhattisgarh, which was formed in 2000, the number of projects approved (as of October 2017) in 17 years is 419, out of which 100 are coal mining, 157 industries, 56 thermal power plants and 84 non-coal mining which includes iron ore, sand, stone, bauxite, manganese, uranium and other minerals.

Figure 2: Sector-wise distribution of environment clearance to projects up to October 2017

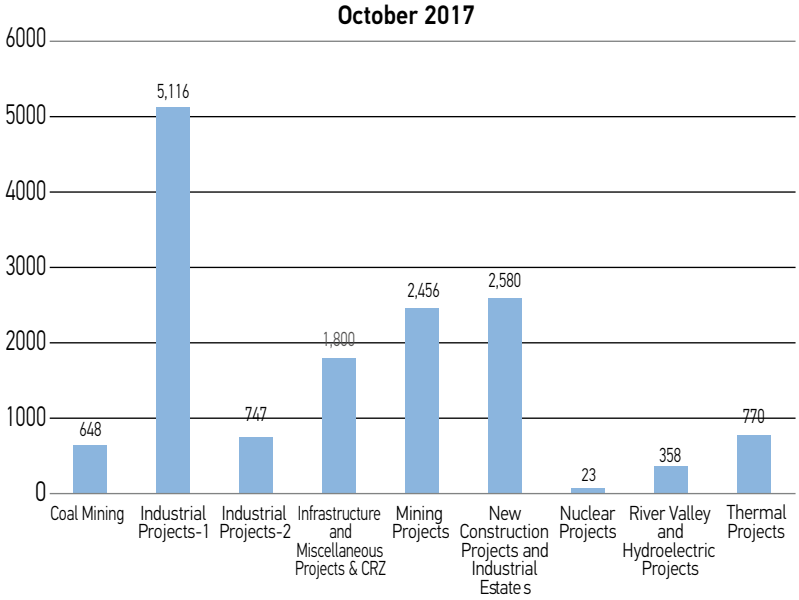
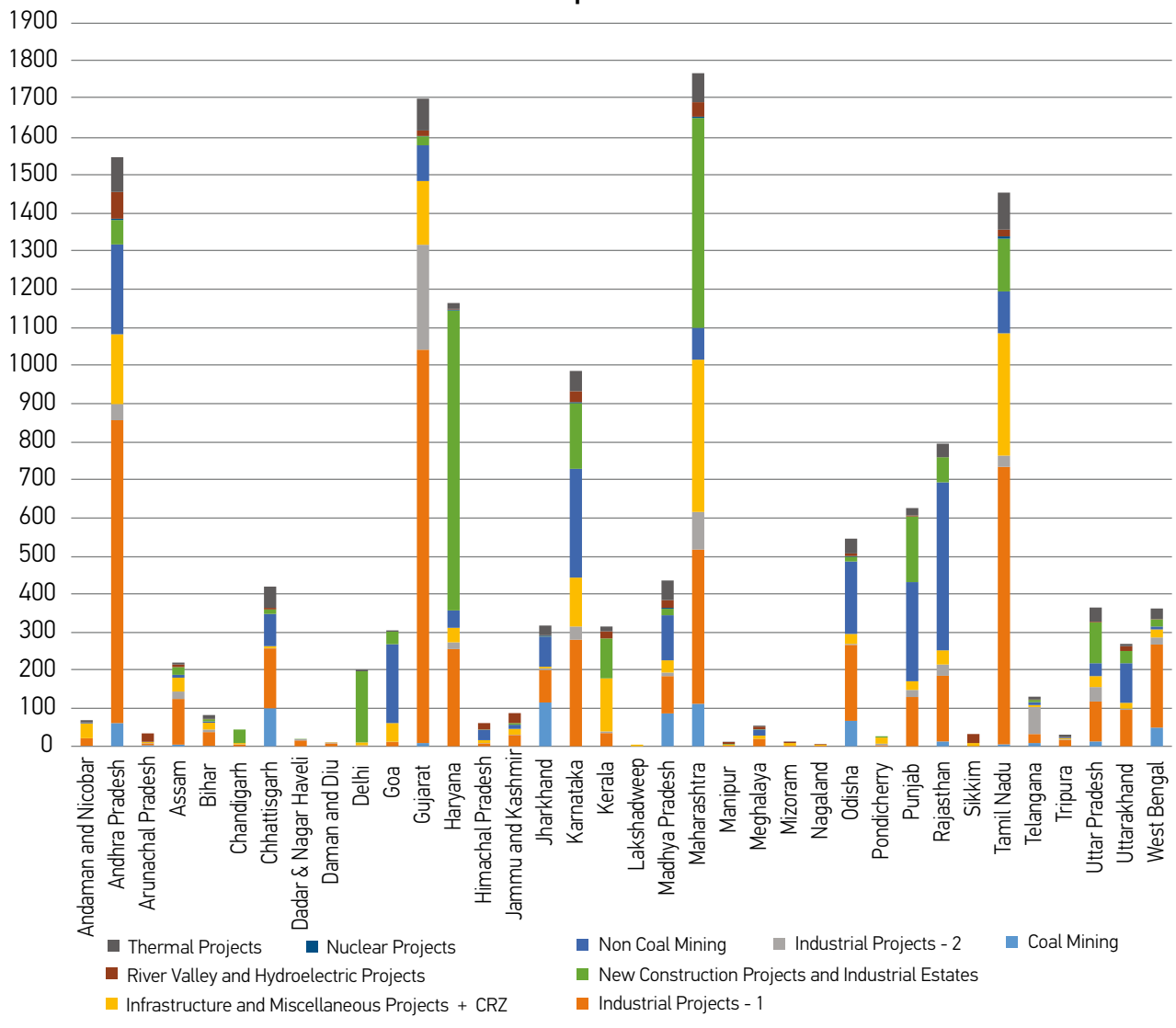


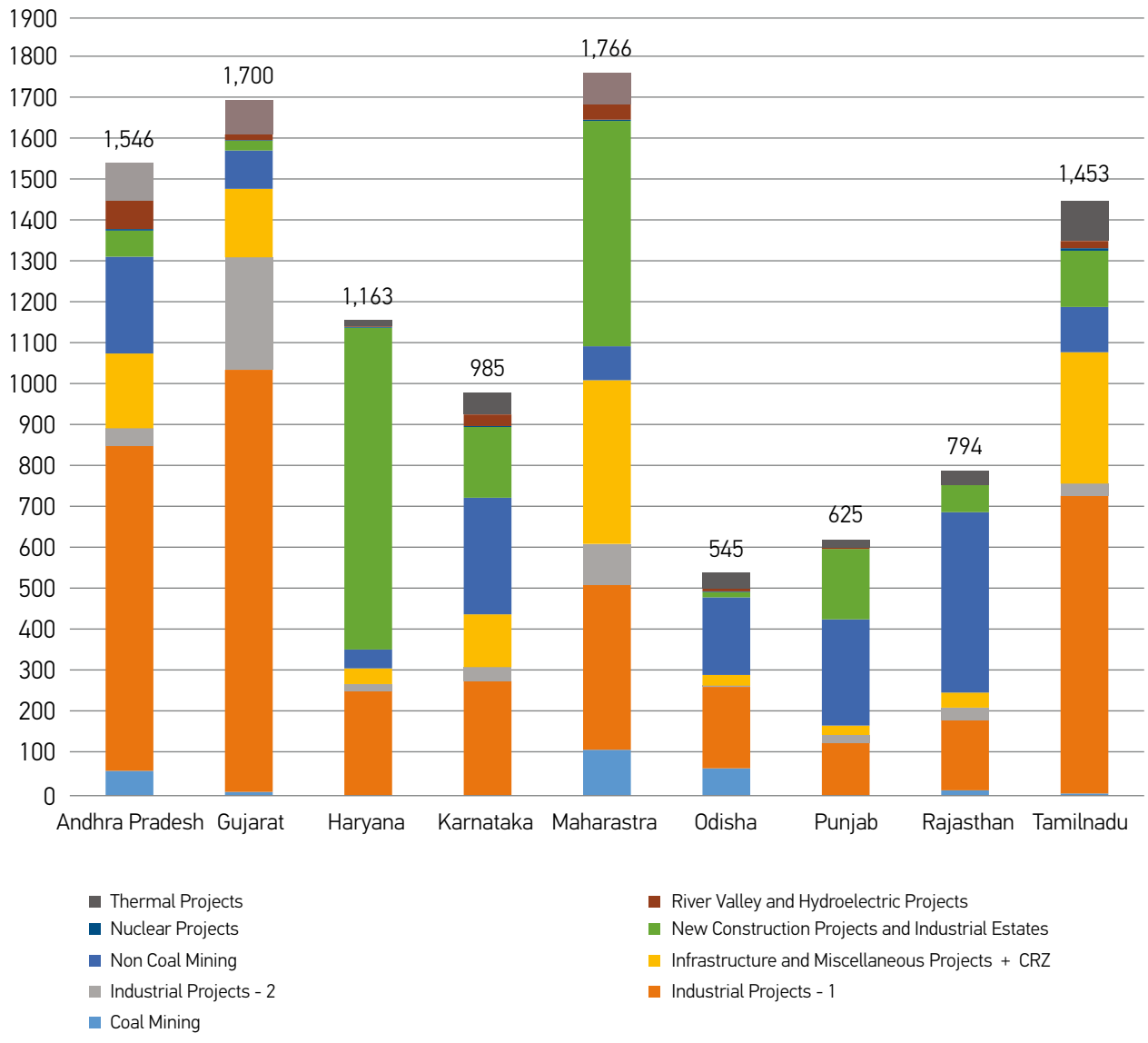
Figure 3: Sectoral distribution of central environmental approvals to projects across states up to October 2017



The sector that dominates in Rajasthan is non-coal mining. Several of these are stone mining projects. These approvals had spiked after 2013-2014, when it became mandatory for mine leaseholders even below 5 hectares to seek approval. The state has several small stone quarries, which have had to go through the approval process. Reports have indicated that mining in Rajasthan has led to change in common lands used for occupations such as grazing (Times News Network, 2017).

Figure 4 below highlights that the most dominant sector for Andhra Pradesh, Tamil Nadu and Gujarat is industry, while in Maharashtra it is infrastructure, construction projects, as well as industries that dominate the projects approved that would have subsequently resulted in land use change. Haryana has a dominance of construction projects in its mix of approved projects.

Figure 4: Sector-wise environment clearances across states with over 500 projects approvals (from 1968-2017)



Sectoral impact on land use change

This study has generated data on land use change for four sectors based on all projects in these sectors that received environment clearance from 2005 to 2016. A total of 4553 projects, listed on the environment ministry's website as of October 2017, was assessed across four sectors: mining, thermal power, river valley project as

well as infrastructure and CRZ.[22] Since the environment ministry maintains a record only of the number of approvals and not the land area approved for siting of the project, this study has used environment clearance letters that were uploaded on the environment ministry's website as on January 2018, to create this primary source of data. The data analysis below shows the extent of land use change caused by centrally approved projects in these specific sectors.

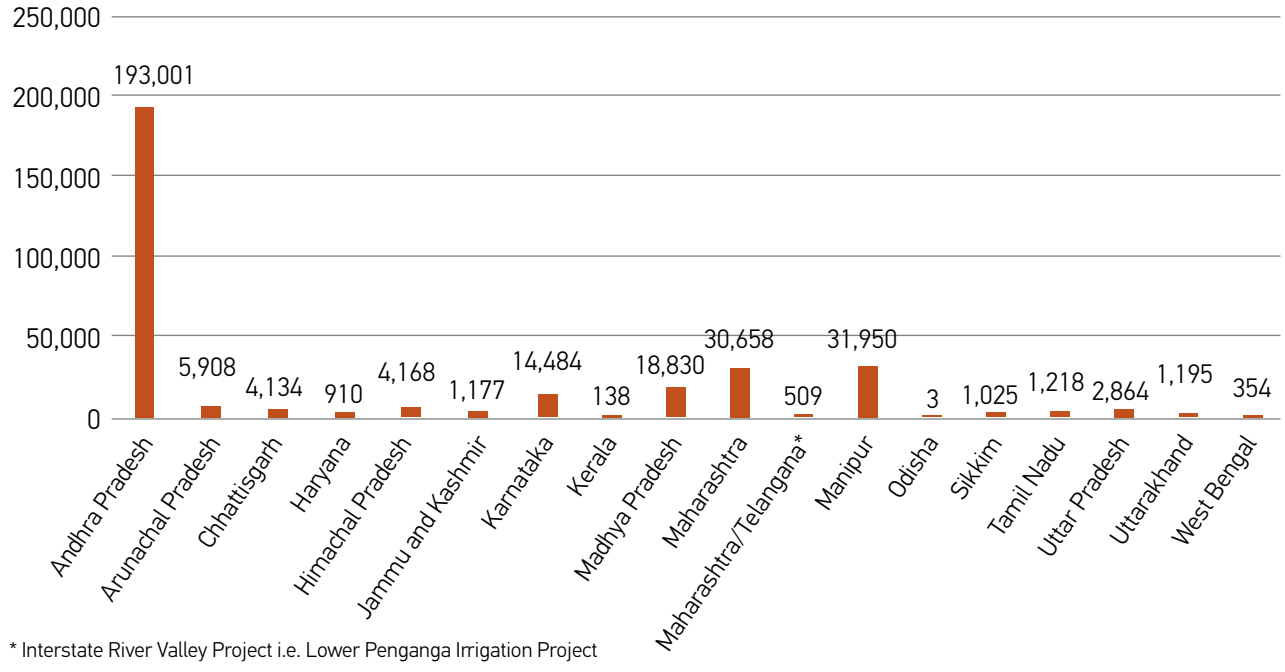
The environment clearance letters give a break up of forest and non-forest land involved in a project. However, the grant of environment clearance does not assure the use of the forest land that is subject to approval under the Forest Conservation Act, 1980. This section presents data on how much forest land has or is likely to undergo land use change, once the project obtains approval for forest diversion and initiates construction.

The data analysed is for an 11 year period for the years 2005-2016. It was in 2004 when several new sectors such as building and construction projects were brought under the purview of the EIA notification. This time frame allows us to include the impact of these sectors. With increased urbanisation, these sectors have had a significant bearing on land use change (India Brand Equity Foundation, 2018). According to the Federation of Indian Chambers of Commerce and Industry (FICCI), the real estate sector has been on a "roller coaster ride" since 2005 and is growing at the rate of 20% per annum.[23]

River valley and hydro electric projects

From 2005-16, more than 3,12,524 ha of land was diverted for 116 river valley projects (total river valley projects approved during this period). Out of this, 51,130 ha was forest land. The state wise distribution of the land use change due to river valley projects is presented below. Manipur and Andhra Pradesh stand out because of Tipaimukh (31950 ha) and Polavaram (46060 ha) multipurpose dams.

Figure 5: Land Use Change for approved River Valley Projects across states from 2005-2016 (in ha)

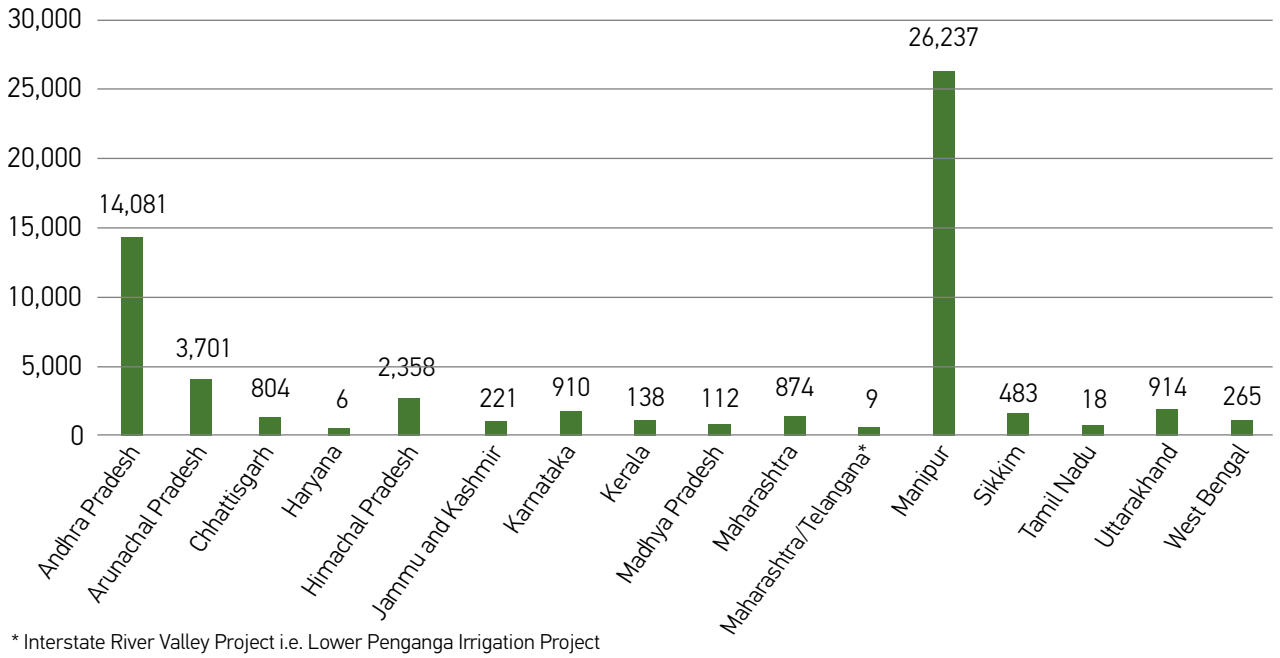


* Interstate River Valley Project i.e. Lower Penganga Irrigation Project

[22]This assessment is structured according to the categorisation of projects by the MoEFCC as appraised by different Expert Appraisal Committees (EACs) constituted for this purpose.

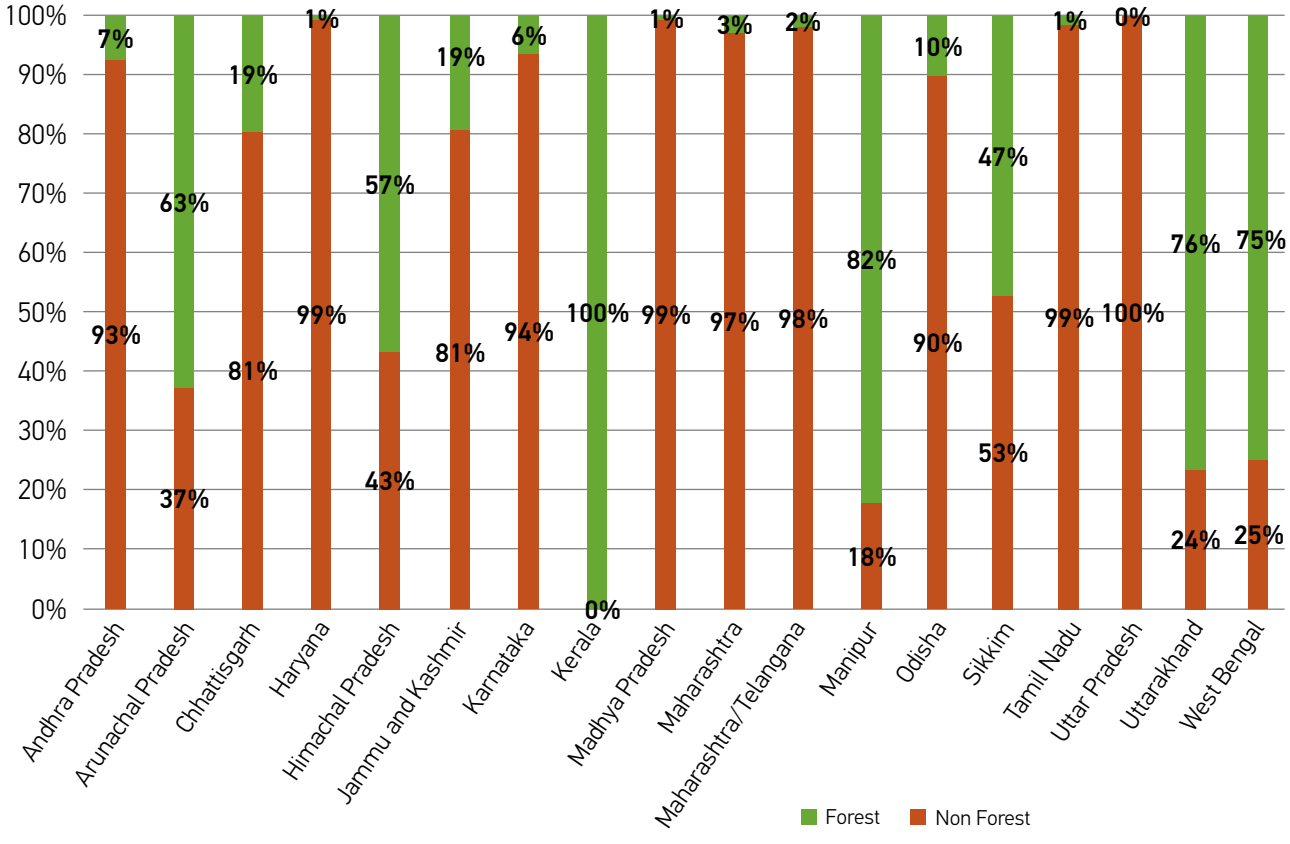
[23] Note on FICCI website accessed on March 26, 2018: http://ficci.in/sector/59/Project_docs/real-eastate-profile.pdf

Figure 6: Extent of Forest Land Use Change for approved River Valley Projects across states from 2005-2016 (in ha)



* Interstate River Valley Project i.e. Lower Penganga Irrigation Project

Figure 7: Extent of total Land Use Change for approved River Valley Projects across states from 2005-2016



The same data can be also be analysed to understand the year-wise land use change for both forest and non-forest land from 2005-2016 for 116 (out of 163) river valley projects approved during that period. The maximum non-forest land was diverted between 2005 and 2006, amounting to a total of 2,04,315 ha. When it comes to forest land, the big peak is in 2008 because of the approval for the Tipaimukh multipurpose project (26237 ha).

Figure 8: Year-wise land use change for approved River Valley Projects from 2005-2016 (in ha)

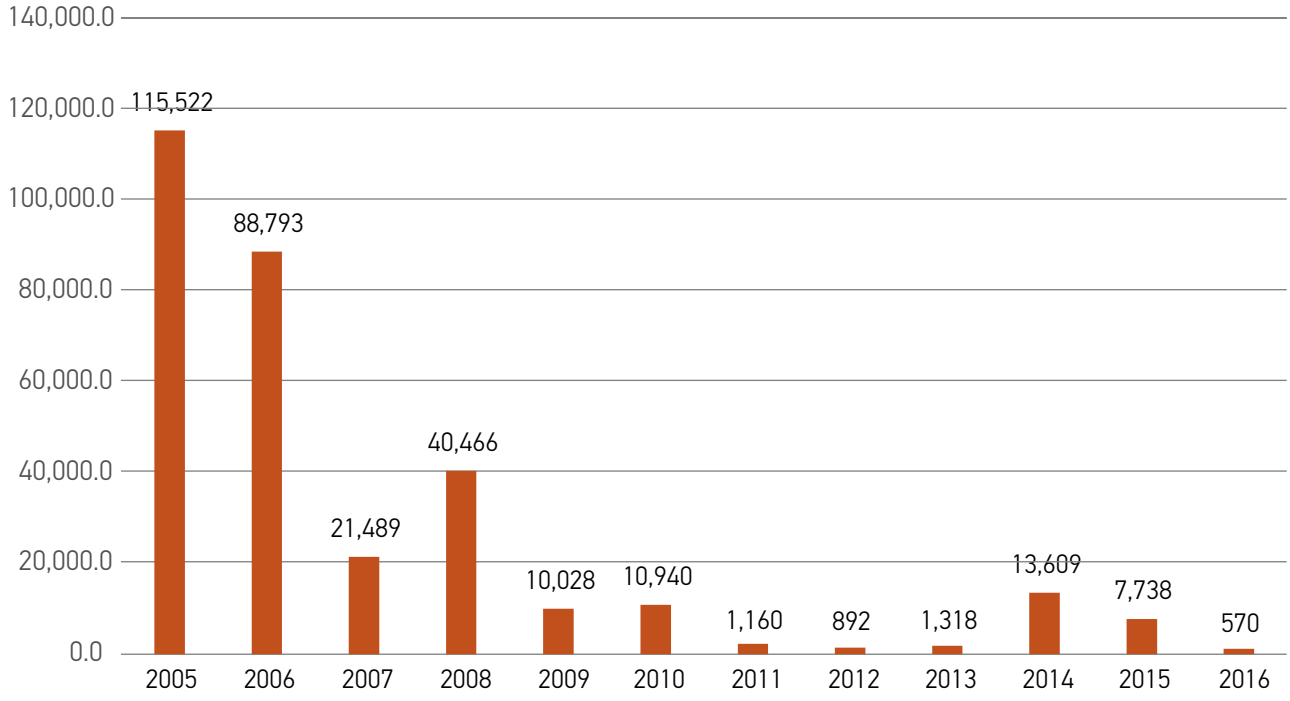


Figure 9: Year-wise forest land use change for approved River Valley Projects from 2005-2016 (in ha)

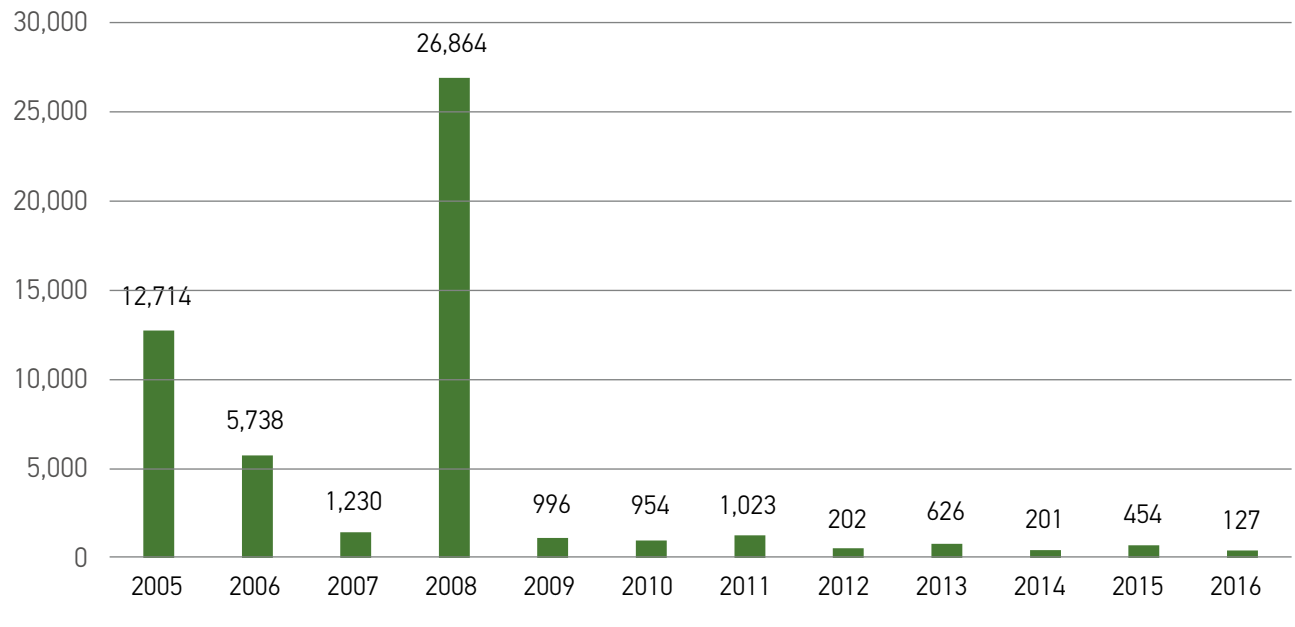
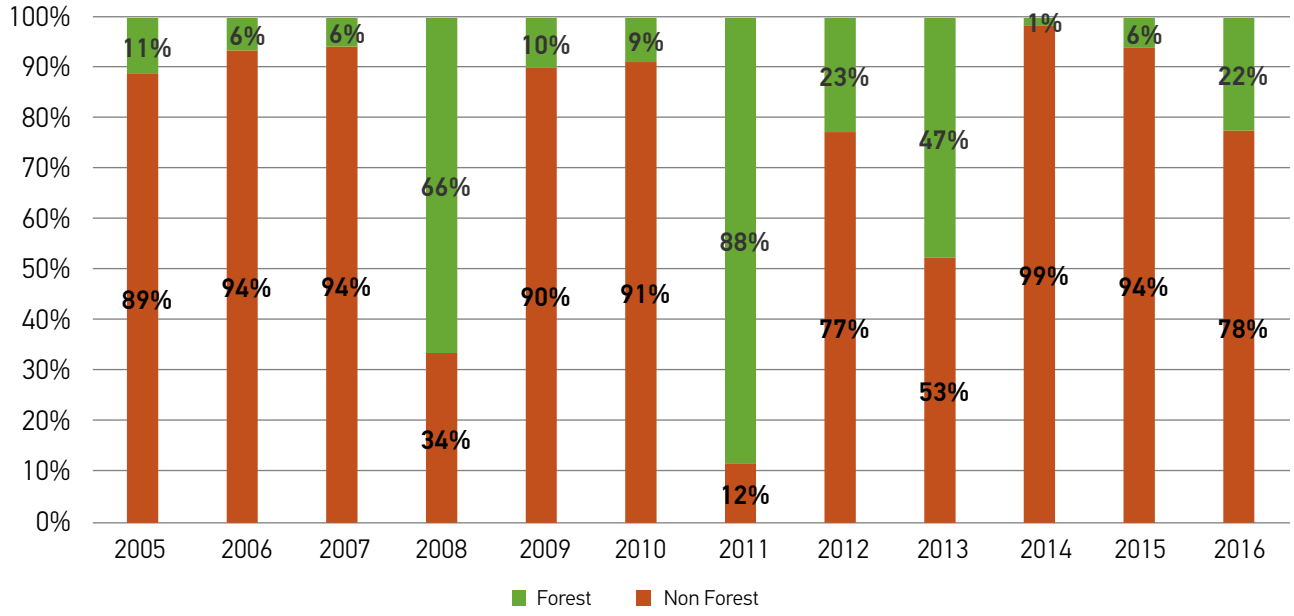


Figure 10: Land use change for approved River Valley Projects from 2005-2016



Mining (coal and non-coal mining)

From 2005-16, 7,31,787 ha of land was diverted for 1,881 mining projects. The total mining projects approved during this period were 2,523. Out of this 1,77,206 ha was forest land. Other lands include agricultural and grazing lands. States such as Chhattisgarh, Maharashtra, Madhya Pradesh, Jharkhand, Odisha and Rajasthan are where the largest amount of land use change has taken place due to mining. As is visible from the graphs, in Rajasthan (4%) and Gujarat (2%) very little forest area has been approved towards land use change. This is because the approval letters indicate that most of the lands taken up for mining are common grazing lands. In Uttarakhand, 82% of the mining is in forest land. However, this is mostly river bed sand and boulder mining, which has to go through the approval process due to change in regulations in 2015.

Figure 11: Land Use Change for approved Mining Projects across states from 2005-2016 (in ha)

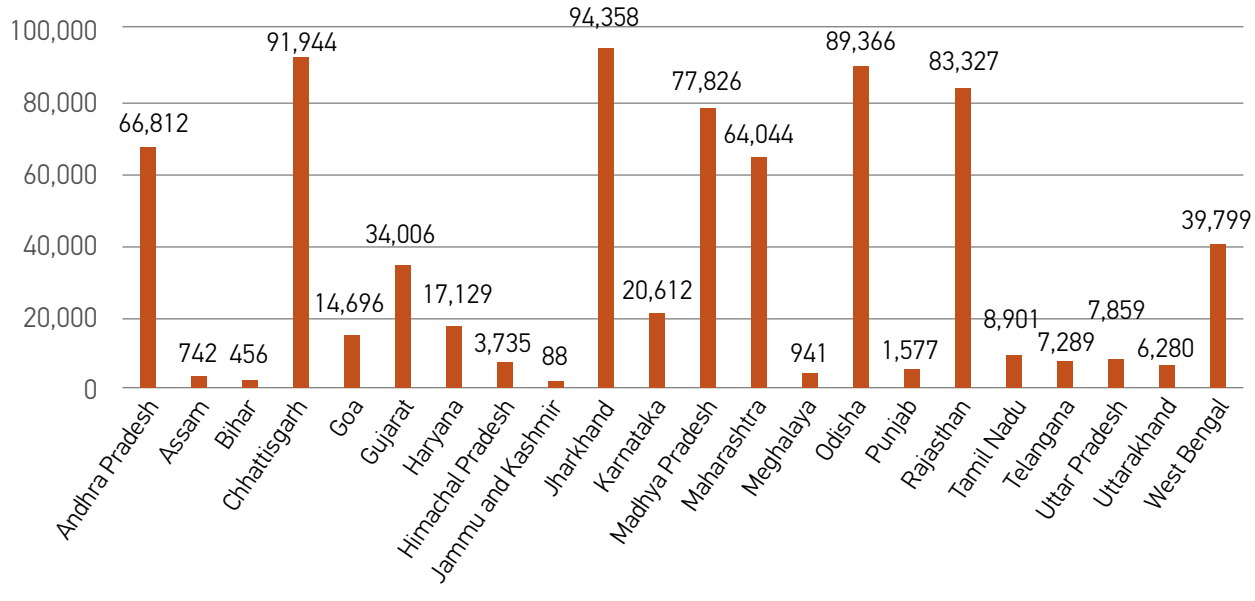


Figure 12: Extent of Forest Land Use Change for approved Mining Projects across states from 2005-2016 (in ha)

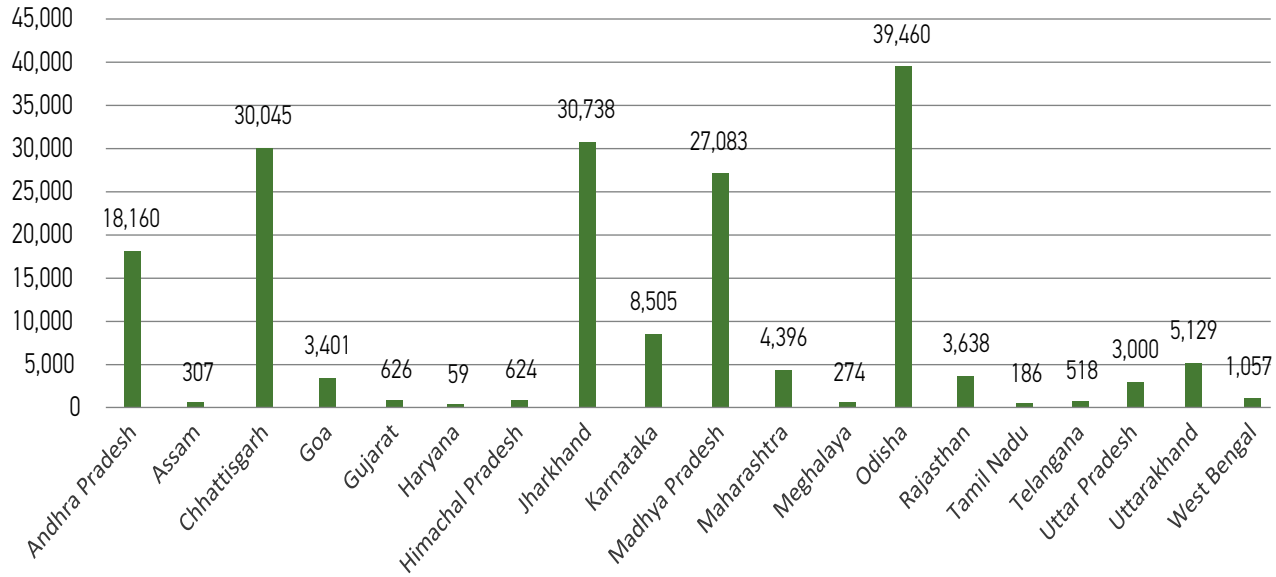
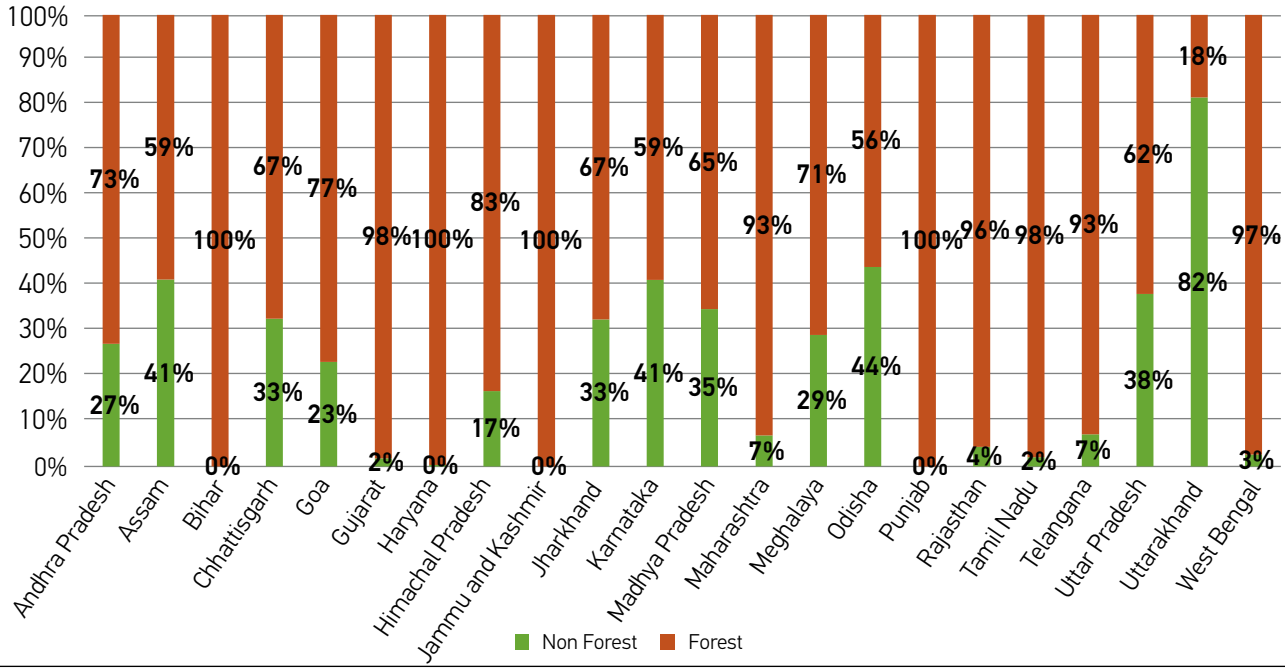


Figure 13: Total Land Use Change for approved Mining Projects across states from 2005-2016



The figures below indicate that the maximum land was approved towards mining in the years 2007-2009. In contrast, there has been a slowdown in approvals since 2011 with a spike again in 2014. The data also indicates that there is a larger percentage of non-forest land that has been approved for the mining projects. In 2007, the distribution was 22% forest land and 78% non-forest land; in 2008, it was 33% forest land and 67% non-forest land; in 2009, the distribution was 26% forest land and 74% non-forest land.

There are a few national and international level developments that could help contextualise this. The Ministry of Mines set up the M.B. Shah Commission in 2010 to probe into illegal mining in several states including

Odisha, Goa and Karnataka. While the Commission's enquiry was underway, there was a slowdown in approvals to several iron ore mining projects. The Commission is said to have submitted its final report in mid-October, just before its term ended on October 16, 2013, as the term was not extended to be able to cover all states where illegal mining was reportedly underway (Counterview, 2013).

Another reason for this could be the overall slowdown in the iron ore demand. In 2012, there was a global drop in demand for iron ore (Cookson and Blas, 2012), thereby reducing the number of investors who would have pursued new projects and environmental approvals. Indian firms engaged in iron ore mining faced a big setback during this period and are yet to fully recover. (Ananthnarayanan, 2012).

The Coalgate case and judgment also had a bearing on approvals to coal mining projects. On September 24, 2014, the much-awaited decision of the Supreme Court on the allocation of coal blocks was delivered. This direction followed an earlier judgment of August 25, 2014, rendering all coal mine blocks allocated through the government steering committee process since 1993, as illegal and arbitrary. The process of granting approvals saw a substantial slow down till the The Coal Mines (Special Provisions) Act, 2015 came into place, and the process of auctioning coal blocks was put into place. It is only late 2016 onwards that coal mining blocks that were re-auctioned began to seek fresh or transfer of environmental approvals.

2013 and 2014 saw a spike in approvals when minor mineral projects (even under 5 hectares) were made to go through the approval process following the orders of the Supreme Court and National Green Tribunal. 166 minor mineral projects were approved in Punjab. However, related documents for these approvals have not been uploaded on the ministry's website.

Figure 14: Year-wise land use change for approved Mining Projects from 2005-2016 (in ha)

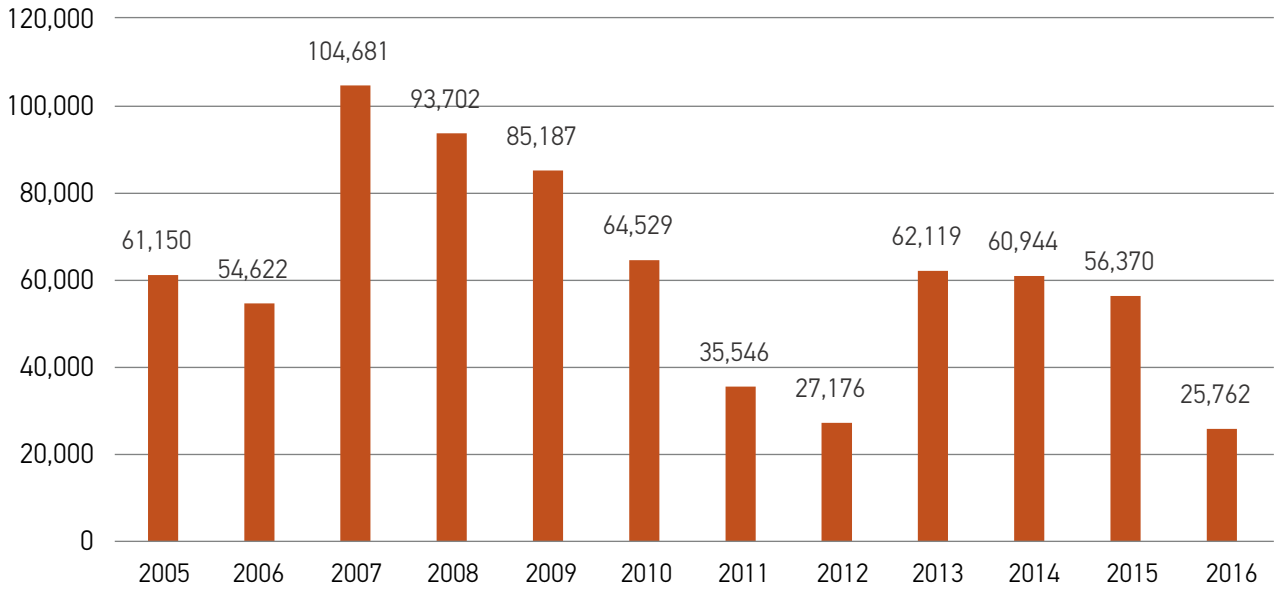


Figure 15: Year-wise forest land use change for approved Mining Projects from 2005-2016 (in ha)

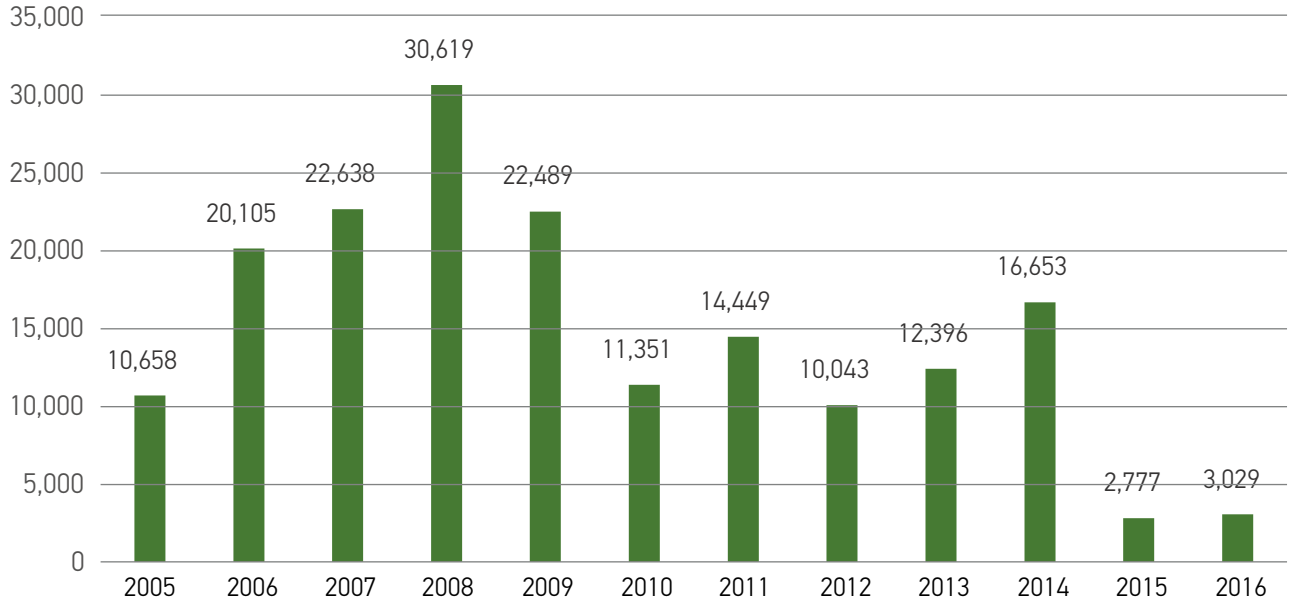
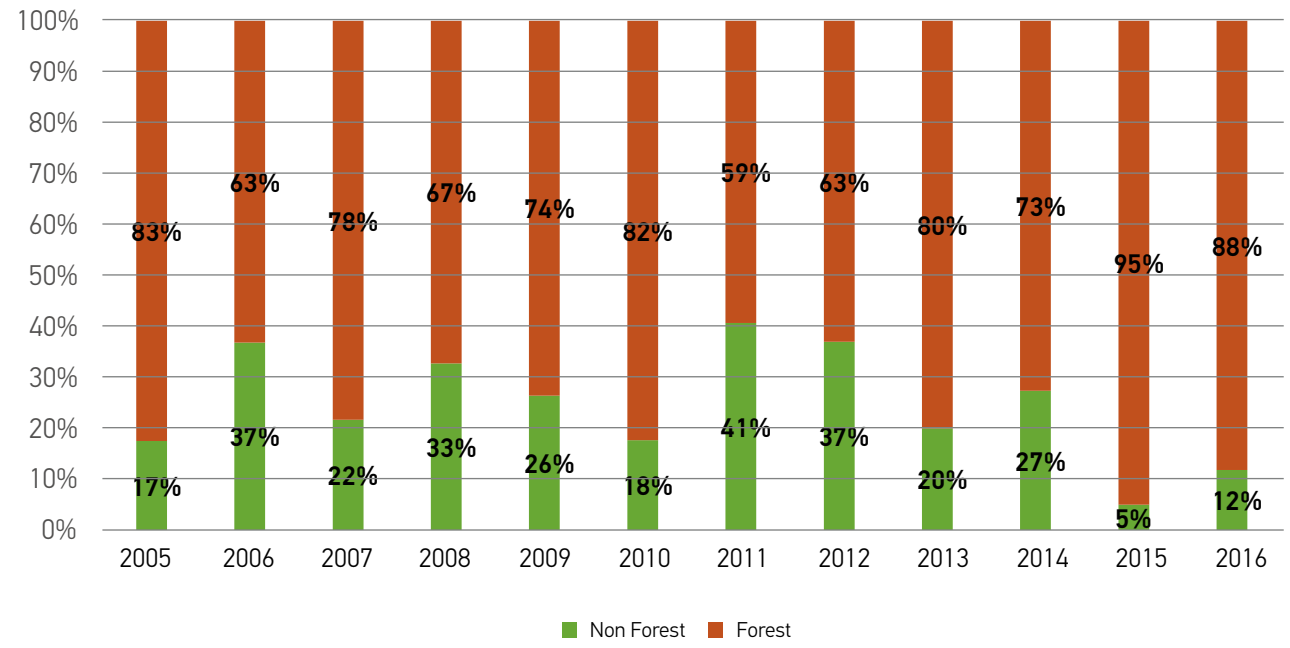


Figure 16: Land use change for approved Mining Projects from 2005-2016



Infrastructure and CRZ projects

The Environment Ministry's Expert Appraisal Committee (EAC) for infrastructure and CRZ projects primarily looks at projects such as highways, pipelines, ports and SEZs. It also appraises real estate and construction projects. The projects under CRZ are all those projects which require approval under the Coastal Regulation Zone (CRZ) notification. These could be power plants, tourism projects and sand mining projects in addition to the categories mentioned earlier.

From 2005-16, more than 1,21,797 ha of land was diverted for 694 infrastructure and CRZ projects with most of the land use change in non-forest areas. The total projects approved during this period were 1,325. However, information was not available for several projects, especially linear projects like pipelines and highways where the total land area or its break up is not disclosed on the ministry's website.

Out of this 6,402 ha was forest land. In Mizoram, all the land use change was in the forest area because of the construction of one road project, which involved the use of 197 ha of forest land. The use of forest land for infrastructure projects is visible in states and union territories such as Uttarakhand, Jammu and Kashmir, Jharkhand, Uttar Pradesh, Chandigarh, Himachal Pradesh. The use of forest land in Uttarakhand is essentially for three ropeway projects while in Uttar Pradesh it is for nine highway projects (both new constructions as well as upgradation). In J&K it is for two ropeway projects and one highway project.

Other lands for this sector include agricultural and grazing lands. On the coast, several fishing areas are revenue commons or held by government departments such as fisheries or ports. This could be one of the reasons that for the states, which have a coastline, the forest land diversions are minimal.

Figure 17: Land Use Change for approved Infrastructure and CRZ projects across states from 2005-2016 (in ha)

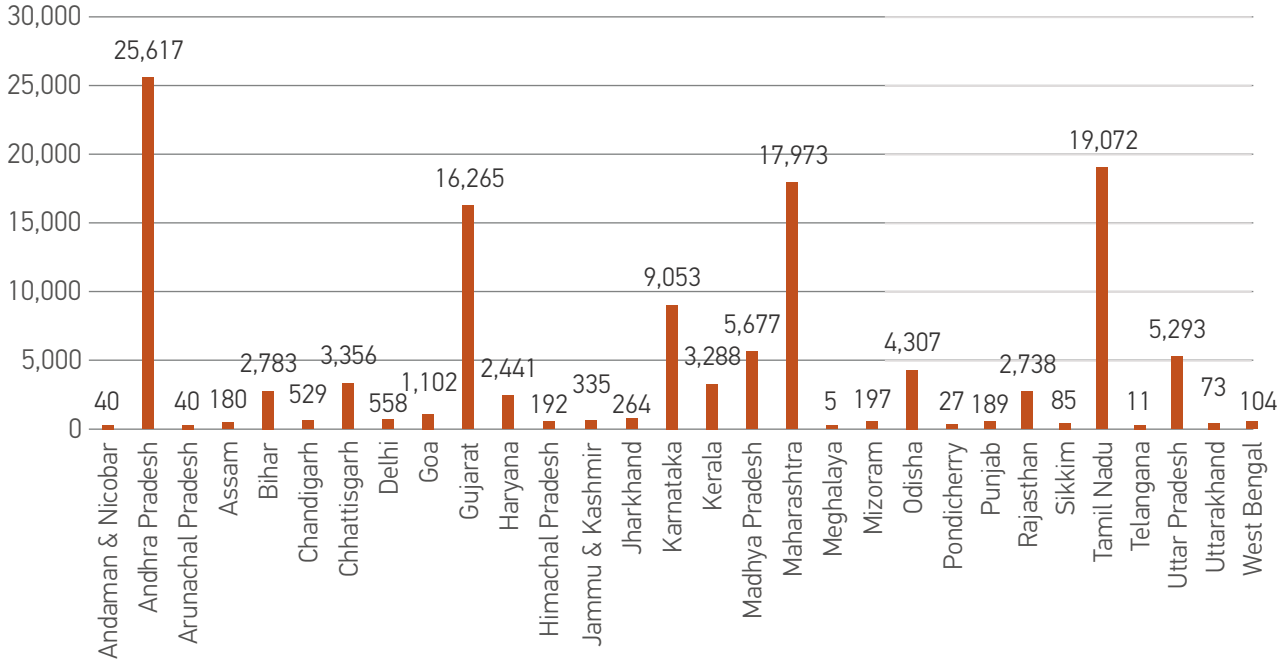


Figure 18: Extent of Forest Land Use Change for approved Infrastructure and CRZ projects across states from 2005-2016 (in ha)

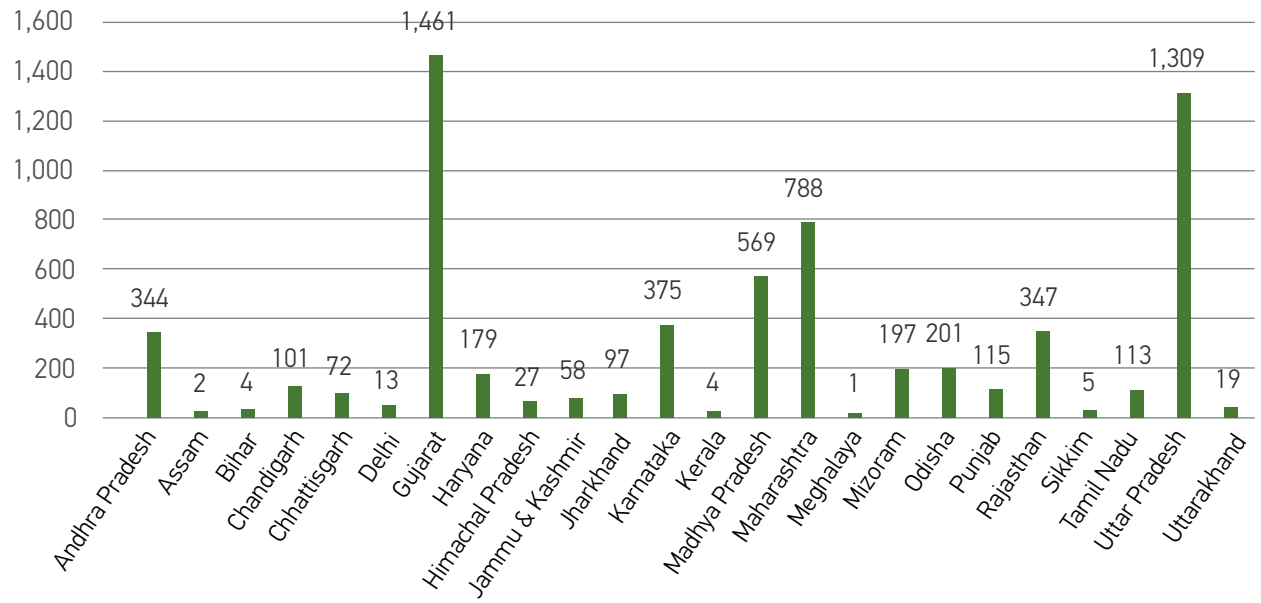
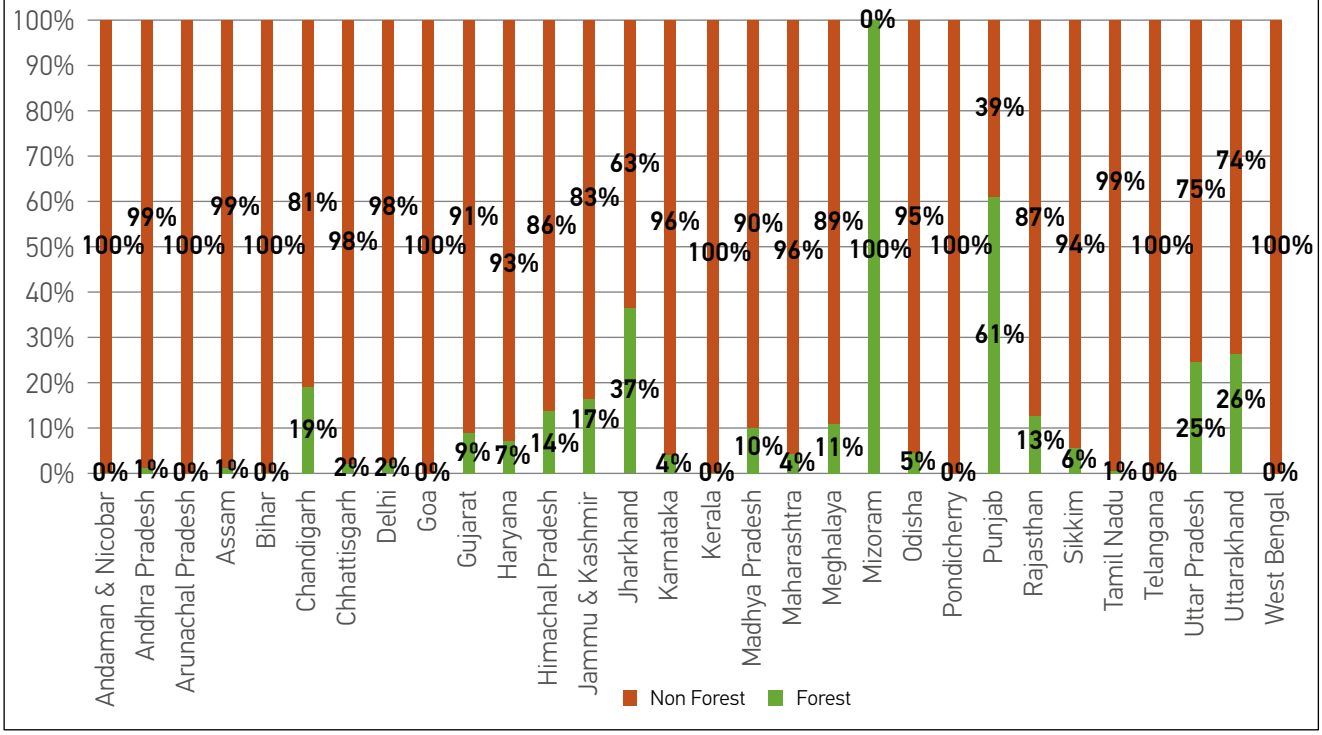


Figure 19: Total Land Use Change for approved Infrastructure and CRZ projects across states from 2005-2016



The same data can also be analysed to understand the year-wise land use change for both forest and non-forest land from 2005-2016 for 116 (out of 163) infrastructure and CRZ projects approved during that period. The maximum non-forest land was diverted during 2007 and 2014. This amounted to a total of 32,103 ha only for these two years. It is difficult to ascertain the exact reasons for the same. However, the 2007 peak is because of the inclusion of building and construction projects in the new EIA notification, 2006, which were to be appraised by newly established state level institutions. In the interim, the MoEFCC approved these projects. When it comes to forestland, the big peak is in 2012, 2013 and 2016 (See figure 21). The reasons for the same are unclear.

Figure 20: Year-wise land use change for approved Infrastrucature and CRZ Projects from 2005-2016 (in ha)

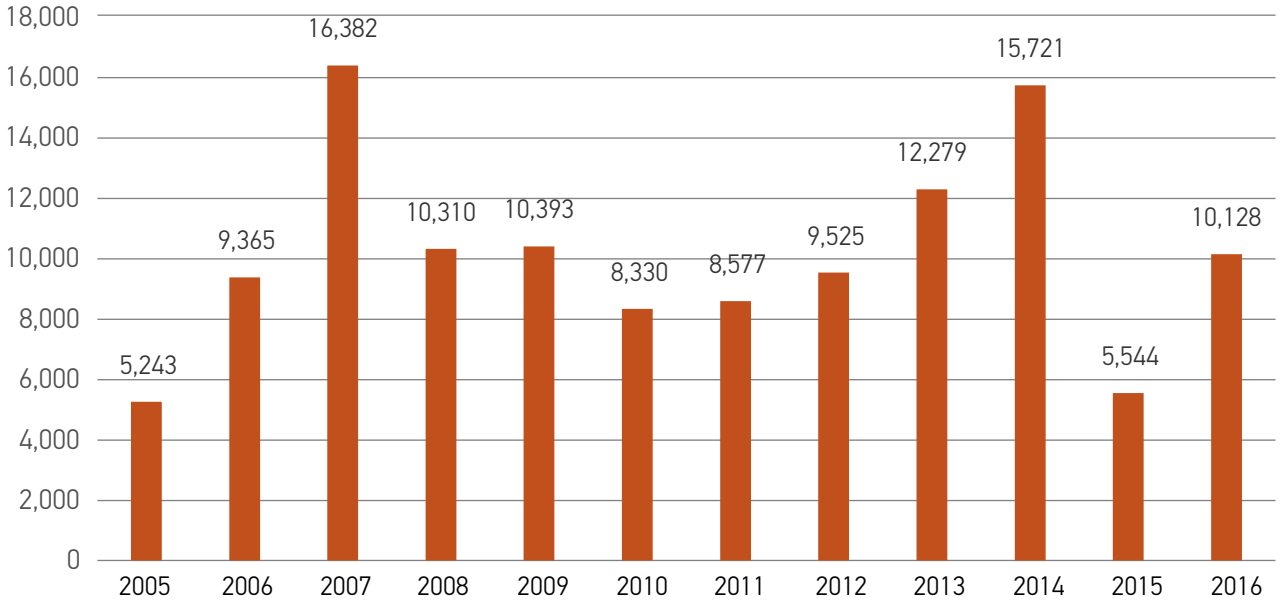


Figure 21: Year-wise forest land use change for approved Infrastructure and CRZ Projects from 2005-2016 (in ha)

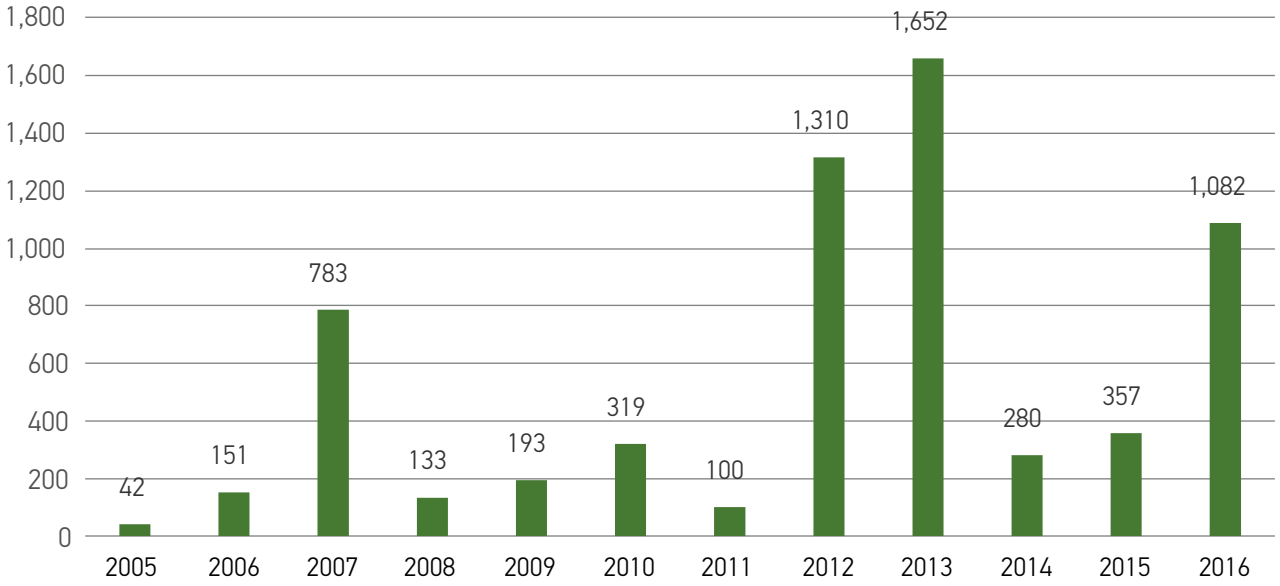
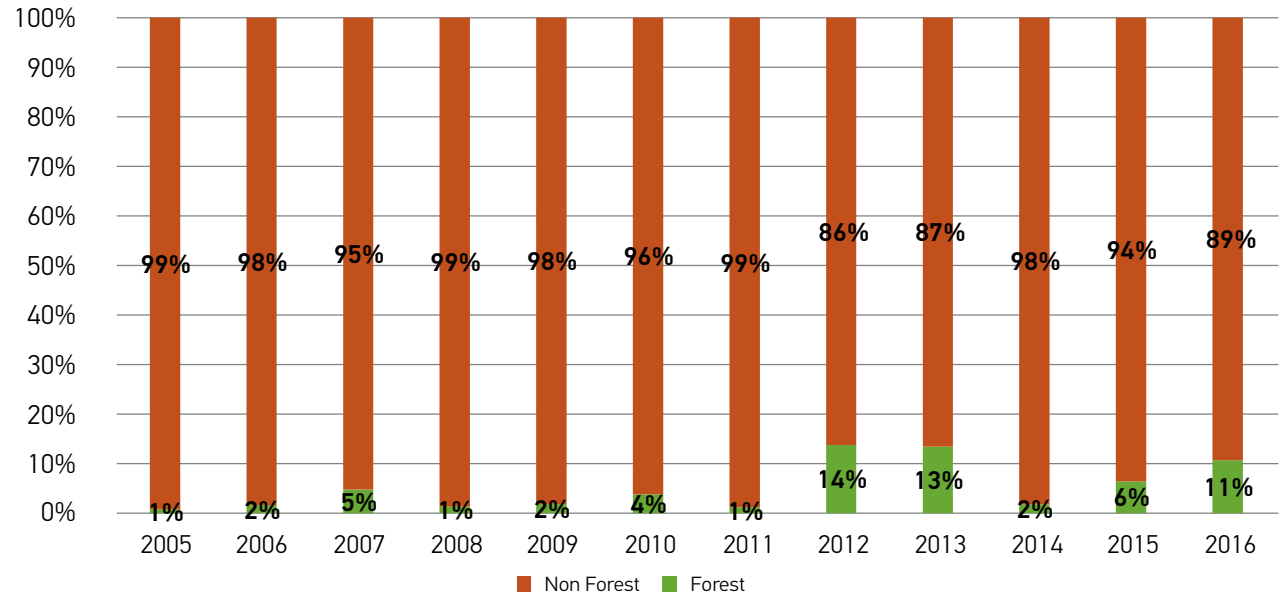


Figure 22: Land use change for approved Infrastructure and CRZ Projects from 2005-2016



Thermal Power

From 2005-2016, more than 78,428 ha of land was diverted for 271 thermal power projects. This was both new as well as expansion projects. The total projects approved during this period were 552. However, information was not available for several projects, primarily because the website of the ministry either did not have documents uploaded or the environment clearance letters did not mention the land area required for the project. The maximum amount of non-forest land was approved for thermal projects in the states of Madhya Pradesh, Maharashtra, Andhra Pradesh and Tamil Nadu and Uttar Pradesh. Some of these were extremely high profile projects where conflicts were reported, like the 4x300 MW Jaigad TPP in Ratnagiri, Maharashtra and 2x660 MW IL&FS TPP at Cuddalore, Tamil Nadu (Jathar, 2010; Press Trust of India, 2012).

Figure 23: Land Use Change for approved Thermal Power Projects across states from 2005-2016 (in ha)

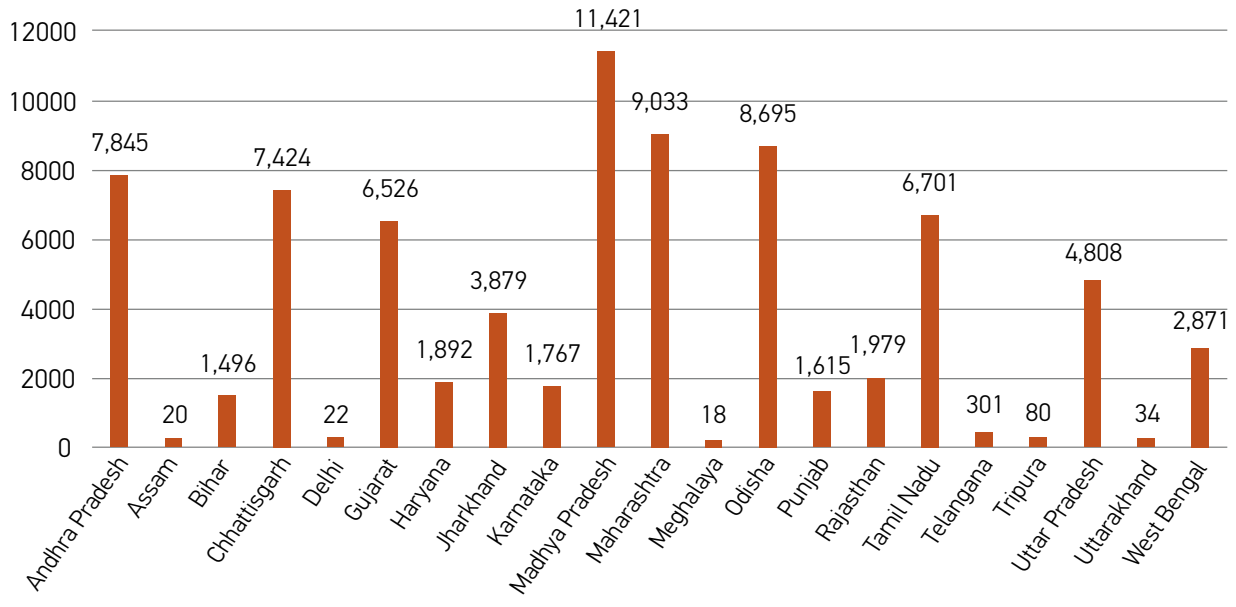


Figure 24: Extent of Forest Land Use Change for approved Thermal Power Projects across states from 2005-2016 (in ha)

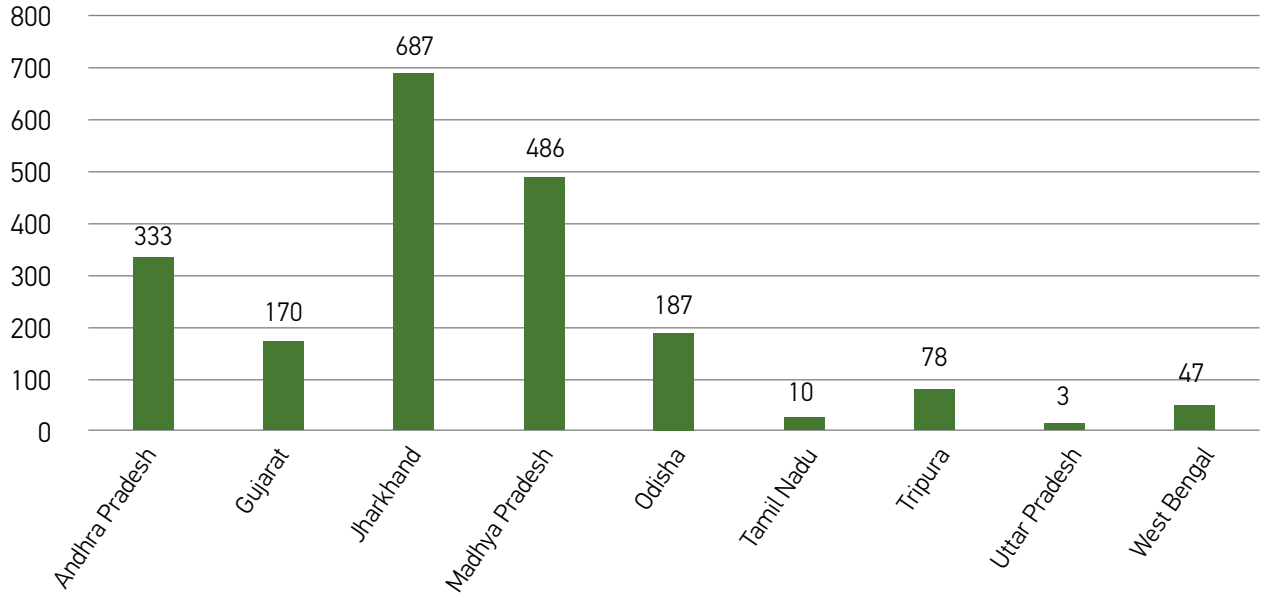
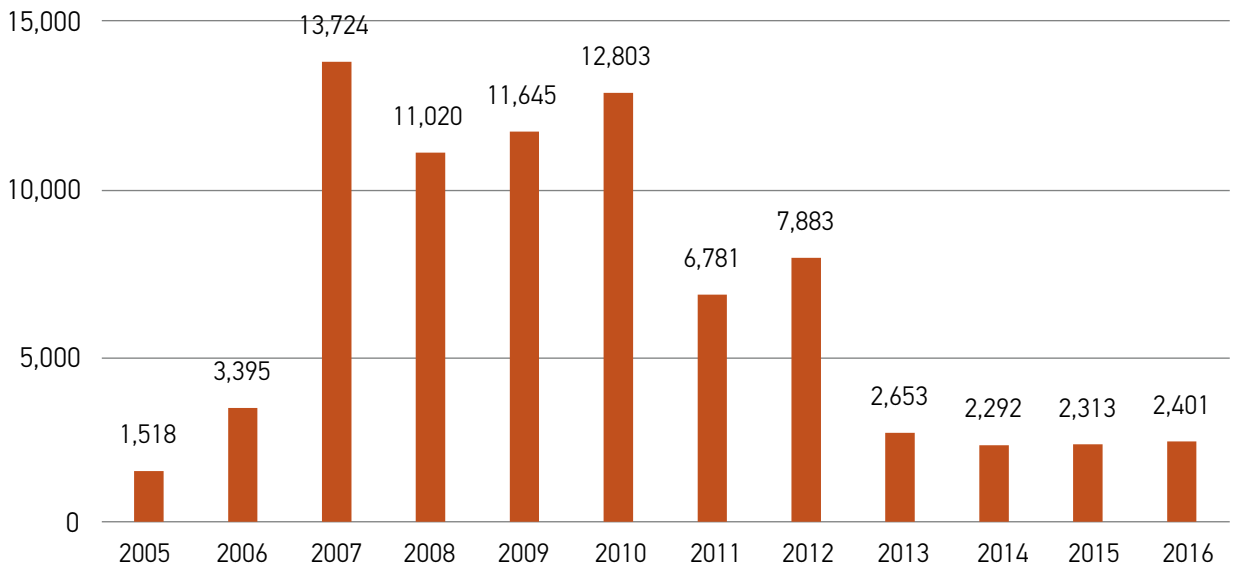


Figure 25: Year-wise land use change for approved Thermal Power Projects from 2005-2016 (in ha)



2,000 ha was forest land for the 25 of the total approved projects for which approval letters specified the breakup of land. Chhattisgarh, Jharkhand and Madhya Pradesh saw maximum amount of forest land diverted during this period accounting to 1506 ha. Some of these projects include 4000 MW Tilaiya Ultra Mega Power Project in Jharkhand (621.59 ha) and 2x660 MW Coal Based Thermal Power Plant at village Salka, in Premnagar, Chhattisgarh (135.7 ha).

The maximum amount of land appears to have been approved during the years 2007-2010. One reason for this is the increased investment of the private sector in thermal power generation. A record 52 projects were allocated to the private sector during 2007-2009, which included Ultra Mega Power Projects (UMPPs) of groups such as Tata Power and Reliance Power. The other prominent actors were the Adani, Jaypee and Lanco. Following their allocation, several of these projects were granted environment clearance by the environment ministry (Jai, 2015).

Figure 26: Year-wise forest land use change for approved Thermal Power Projects from 2005-2016 (in ha)

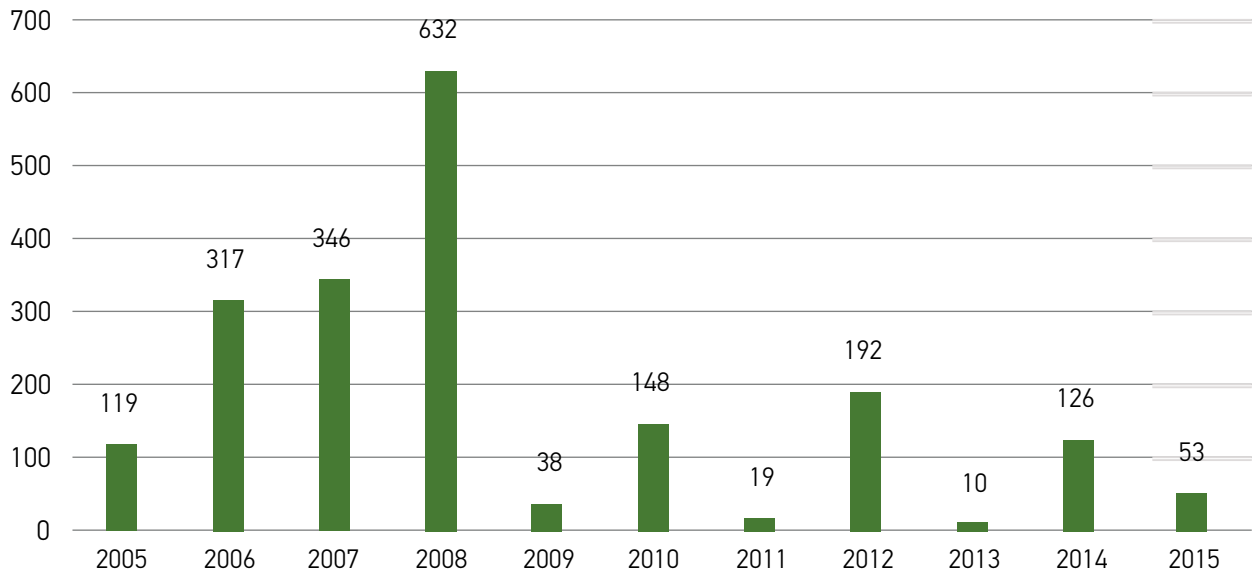
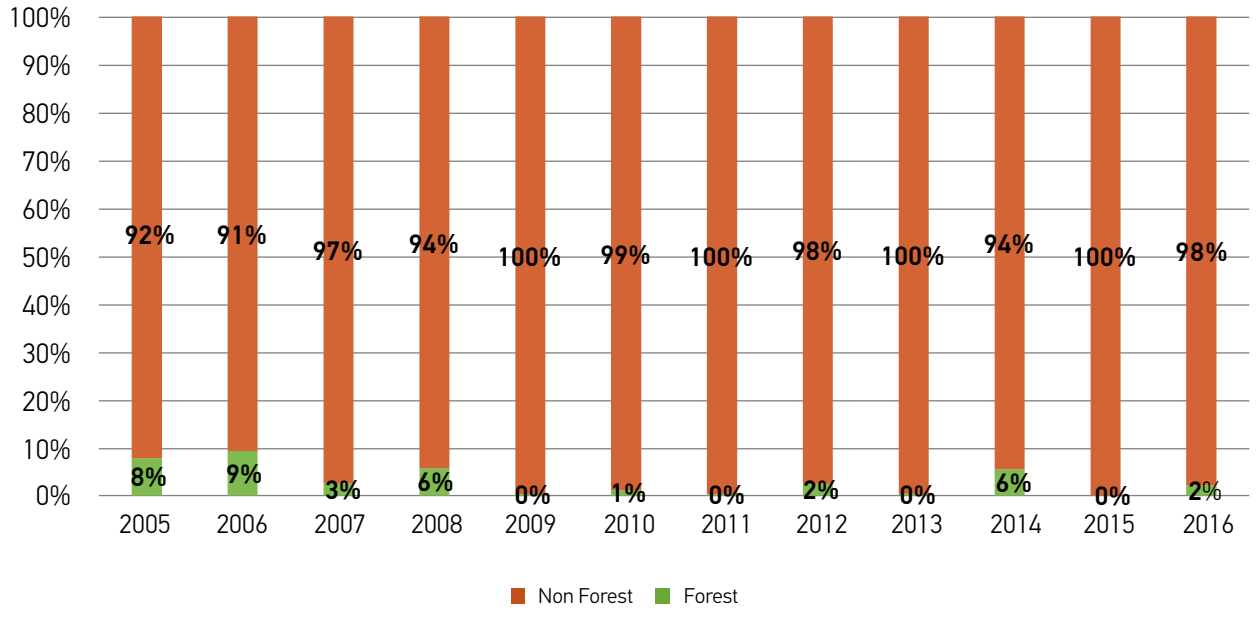
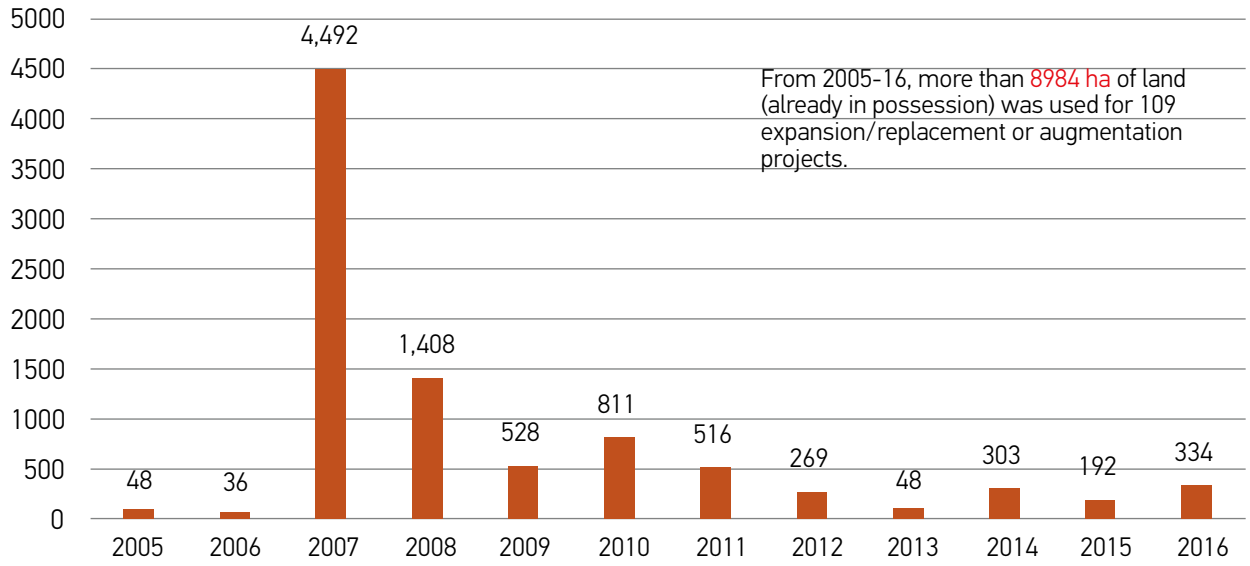


Figure 27: Total Land Use Change for approved Thermal Power Projects across states from 2005-2016



Unlike other sectors, several projects granted environment clearance from 2005-2016 were approved indicating that they would be built on approximately 8984 ha of land that was already in possession of the respective project proponents. This was the case with 109 expansion/replacement or augmentation projects. This includes Rihand Super Thermal Power Project Stage-III (2x500 MW) in Uttar Pradesh, which sought to utilise 295.42 ha that was already with the project proponent. The amount of land to be utilised for these projects ranged from 0.068 ha to 450 ha.

Figure 28: Environment Clearance for expansion or augmentation projects where land is already in possession of the project proponent - 2005-2016 (in ha)



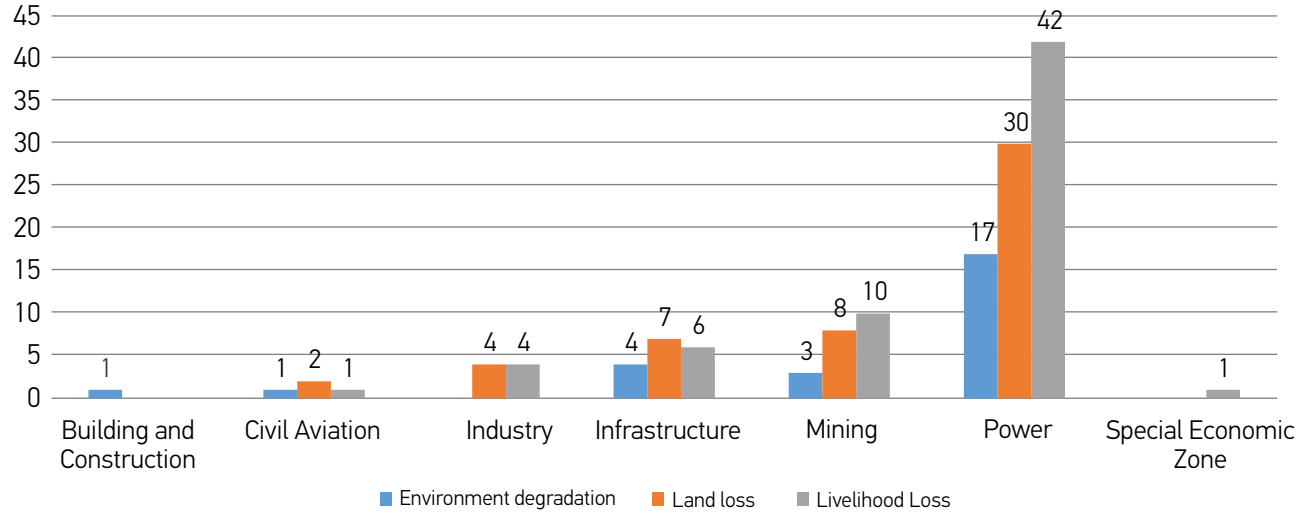
5 Impacts

There is enough evidence available that the above-mentioned transformation of rural landscapes for industry, infrastructure or wildlife and biodiversity conservation measures is accompanied by social and ecological impacts for land-dependent people. These impacts can be broadly classified into the following:

- The first is direct displacement and dispossession where individuals or communities lose their homes in exchange for none or very meagre compensations, and are expected to relocate to areas identified as rehabilitation sites or migrate to new areas on their own.
- The second relates to losing out or giving up access to parts or entire areas on which livelihoods are dependent. This could include agricultural lands, fishing harbours, forest areas and grazing lands. This may occur separately or in addition to physical displacement, causing an incalculable impact on both livelihoods and quality of life.
- The third is where land use change for a project causes pollution or degradation leading to decline in fish catch, agricultural productivity, groundwater contamination, and other related impacts. These have lasting effects on the health, economy and social lives of individuals and communities as a whole.

Out of the 75 cases analysed as part of this study, in 64 cases multiple impacts were reported. This included a combination of Land Loss and Livelihood Loss in 43 projects; Livelihood Loss + Environment Degradation in 17 projects; Environment Degradation + Land Loss in 3; and Livelihood Loss + Land Loss + Environment Degradation in 1 project.

Figure 29: Impact Across Sectos



Out of 75 cases, 64 cases reported multiple impacts such as:

- Land Loss + Livelihood Loss =**43**
- L ivelihood Loss + Environment Degradation =**17**
- E nv ironment Degradation + Land Loss =**3**
- L ivelihood Loss + Land Loss + Environment Degradation =**1**

Displacement and dispossession

The history of the development of India has gone hand in hand with the profound experience of social displacement and dispossession. There are varied statistics about the number of displaced people due to developmental projects in India. It broadly ranges between 10 million to over 40 million (Iyer 2007). One estimate is that

from 1951 to 1990 around 26 million people were ousted from their own land in India (Sainath 1996). A study by the Indian Institute of Technology, Rourkee, estimates that 50 million people have been displaced due to "development projects" over 50 years in India. The study states that of the 50 million people, 16.4 million were displaced by dams, 2.55 million by mines, 1.25 million by industrial development and 0.6 million by wildlife sanctuaries and national parks (Negi and Ganguly 2011).

One of the biggest drivers of displacement is considered to be dams. India has the distinction of being one of the biggest dam builders in the world. For rapid irrigation and hydroelectricity production, India has built over 3000 dams that have caused large scale displacement due to the creation of reservoirs. As discussed in the previous section, 116 hydro power or irrigation dams have been accorded environment clearance from 2005 to 2016, involving land use change of 312,524 ha of land.

The construction of hydro power also results in serious livelihood losses, which are often not accounted for. Singh (2003), in his essay on social and environmental impacts of hydro power projects, indicates that the loss of common property resources is rarely recorded and compensated for. Most displaced populations, he says, "rely on free access to water, grasslands, forests, wetlands, riverbed lands, fish, etc. They derive their income and subsistence from a host of natural resources, many of which may be unavailable at the rehabilitation site."

The Maheshwar project, approved back in the 1980s, involves the total or partial submergence of 21 villages. Another 40 villages would see their entire agricultural land submerged. The farmers from the region cultivate 3 crops a year that include different sorts of grain, soya, pulses, peanuts, chillies, spices, bananas, guavas, citrus fruits, sugar cane, cotton and many different vegetables. One of the largest dam-induced displacement projects in the recent decades has been the Polavaram Multipurpose irrigation project, that involves a submergence of 42,000 ha of land (largely common use Poromboke[24] and forest land) across the 3 states of Andhra Pradesh, Chhattisgarh and Odisha. The largest proportion of the land- 37,743 ha is in Andhra Pradesh followed by 2,786 ha in Odisha and 1,618 ha in Chhattisgarh. The estimated number of families facing displacement is 30,607 families or 1,28,913 people, (as per the 1991 Census,) across 292 villages, according to the 1980 project design. This estimate went through a small reduction to 276 villages and 1,17,034 people, (as per the 2001 Census). All the displacement is in the state of Andhra Pradesh (Rama Mohan, 2006).

As demonstrated in the previous section on land use change, displacement and dispossession related impacts have also been caused by several other sectors that rely on large land transformations through acquisitions, purchases or diversion in different parts of the country. For instance, the Kovvada Nuclear Power Plant Project in Andhra Pradesh reportedly displaced almost 8000 people from their land (Suchitra, 2017). The land movement in Bhangar (West Bengal) and the agitations against the Koodankulam Nuclear Power Plant (Tamil Nadu) are similar stories.

Tribal populations have been most vulnerable to displacement. Studies including those of Government of India point out that a major impact of direct displacement due to land use change has been on tribal communities. The first draft of India's Rehabilitation policy, prepared in 1985 by a committee

Conservation induced displacement?

In India, several indigenous communities have faced displacement and dispossession in the name of conservation as well. Shahabuddin and Bhamidipati (2014) point out that the expansion of the Protected Area (PA) network in India has led to conservation-induced displacement in the process of creating inviolate spaces. According to Lascorgeix and Kothari (2009), from 1970 to 2008, there have been approximately 100,000 people who have been displaced by the creation of PAs.[25] Shahabuddin and Bhamidipati (2014) also add that displacement will be intensified in the decade of 2010-2020 with the Government of India's efforts to further expand the PA network as well as relocate villages to protect charismatic wildlife species.

[24] Poramboke lands are government lands, use of which is regulated by village panchayats. Court Judgments have defined these lands as: *"Poramboke i.e. "natham poramboke" which means "poram" is outside; "boke" is revenue record. Thus the word "poramboke lands" means the lands which are not assessed to revenue records and are outside the revenue accounts."* (Judgment in Manickam vs Chinnammal on February 24, 2017, before the Madurai bench of Madras High Court)

[25] The Wild Life Protection Act, which allows for the creation of national parks and wildlife sanctuaries by either extinguishment or settlement of rights of forest dependent communities, was promulgated in 1972.

appointed by the Department of Tribal Welfare, states that around 40% of the project-affected and displaced people from 1951 to 1980 belonged to tribal communities (Fernandes, 2004). Recent research and writings in this area also highlight that the impacts of contemporary land use change are only strengthening this trend. Saxena (2006, as quoted in Rao et al., 2006) argues that tribal communities constitute at least 55% of the people displaced due to irrigation, mining, industry and other such projects termed as development projects.

Loss of Livelihoods

Existing occupations dependent on land and water have to compete with land use changes from agriculture to industry or forests to mining or wetlands to a residential colony. For a country like India, this means that all those people dependent on the land, irrespective of ownership, would be impacted directly or indirectly. It is for this purpose that India's 2013 land acquisition law has added a specific section on assessing livelihood loss through social impact assessments and ascertaining compensations for the same. The definition of affected families was detailed out to include farm labourers, fishers, share croppers, forest rights holders, gatherers of forest produce and so on.

Affected Families as defined in the RFCTLARR, 2013

(i) a family whose land or other immovable property has been acquired;

(ii) a family which does not own any land but a member or members of such family may be agricultural labourers, tenants including any form of tenancy or holding of usufruct right, share-croppers or artisans or who may be working in the affected area for three years prior to the acquisition of the land, whose primary source of livelihood stands affected by the acquisition of land;

(iii) the Scheduled Tribes and other traditional forest dwellers who have lost any of their forest rights recognised under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 due to acquisition of land;

(iv) a family whose primary source of livelihood for three years prior to the acquisition of the land is dependent on forests or water bodies and includes gatherers of forest produce, hunters, fisher folk and boatmen and such livelihood is affected due to acquisition of land;

(v) a member of the family who has been assigned land by the State Government or the Central Government under any of its schemes and such land is under acquisition;

(vi) a family residing on any land in the urban areas for preceding three years or more prior to the acquisition of the land or whose primary source of livelihood for three years prior to the acquisition of the land is affected by the acquisition of such land;

Neither government studies nor non-governmental assessments of livelihoods comprehensively record the extent of livelihood dependence on land, and therefore it is not possible to ascertain the overall impact of land use change on livelihoods either geographically or temporally. However, there are several accounts of the different manner in which livelihoods are affected due to land use change.

For instance, Hannu Rao, the former Sarpanch of Kakarapalli and the President of Jagannatha Cooperative Society, says that the Bhavanapadu-Kakarapalli power plant is not only a threat to the fragile ecosystem but is also the survival of thousands of fishermen families. The construction of the power plant will impact 3,600 acres of the Kakarapalli swamp which is a part of the well-known Naupada Swamp in Andhra Pradesh. It is a unique wetland ecosystem that has a rich biodiversity. In an interview carried out as part of this study, Hannu Rao said, *"Fishing is our traditional livelihood. We have been taking the swamp area on lease for fishing for ages. How can the authorities not see the fact that so much of our survival is based on this wetland region?"*[26]

The Parsa East Kete Besan coal mine in Chhattisgarh involves a land use change of 2,711.034 ha. According to the environment clearance accorded to this project in 2011, of the total project area, 1,898.328 ha is forestland,

[26]Interview conducted with Hannu Rao from Vaddithandra village on July 22, 2017.

702.163 ha is agricultural land, and 110.543 ha is government wasteland. The mine is located in the Hasdeo Arand region, which is home to a large population of tribal and other traditional forest dwellers. At the time this study was being written, only the first phase of mining was operational, and people had lost access to forest areas, that were under common use. They have been actively complaining about the contamination of a perennial water stream by the mining operations. Another instance of livelihood impact is the coal based thermal power project in Kutch district of Gujarat. Located in Mundra block, the Coastal Gujarat Power Limited (CGPL) is a 4000 MW supercritical technology plant. The operations of this plant have impacted two important fishing harbours in the region. According to the complaint made by members of the affected community to the International Financial Corporation, an investor in the project, "the Navinal/Kutadi Bander (harbour) has an annual fish catch of 646 MT with the value of INR 37.9 million while Tragadi Bander (harbour) has an annual fish catch of 2010 MT with the value of INR 96.5 million. These are the two major harbours covered by the entire project area." The intertidal pagadia (on foot) fishing is a major traditional occupation in the area. In its complaints to both the IFC and the Asian Development Bank (ADB),[27] the fishing community has pointed to three kinds of impacts: reduction in fish catch, impacts of coal ash on fish drying activities particularly carried out by women and constrained access to the fishing harbour.

Environmental degradation and pollution

Land use change due to industrial and infrastructure projects also poses huge environmental impacts, and puts several communities' lives at risk. This might occur even if there has not been direct displacement or livelihood loss. The impacts arise out of water sources, access roads or the air being affected due to land use change. A sector like mining could be considered to be one of the major drivers of environmental harm causing land degradation, water contamination and air pollution. In some instances, there is a direct connection between these impacts and people's livelihoods. In other instances where livelihoods remain secure, it could lead to restriction of movement and health impacts.

Large-scale mining and associated activities have resulted in severe damage to the land resources especially in forest regions where tribal communities live. The forests and agricultural lands belonging to the local communities have been laid waste because of intensive mining processes (Singh 2015). Underground operations, especially coal mining, have created unsafe surface conditions in many areas warranting diversion of roads, railway lines, etc., and have also resulted in the shifting of a number of townships. Impacts of water pollution, dust pollution as well as road hazards are realities for people living in villages and towns surrounded by mining areas. (Vasundhara 2008; CPR-Namati EJ Program, 2016).

Around 49 areas have been declared unsafe for human habitation in the Raniganj coalfield area of West Bengal alone (ibid: 432).[28] According to B.P. Baliga (1994, as quoted in Singh, 2015), in the 1980s itself, the coal mining industry had got identified as a major cause of damage to the environment, with more than 75 sq km of land being destroyed every year.

Such mining operations have also adversely affected the ground water table with the result that the yield of water from the wells of adjoining areas has drastically reduced (Singh 2015). "Further, effluents discharged from mine sites have seriously polluted the streams and underground waters of the area. Acid mine drainage, liquid effluents from coal handling plants, colliery workshops and mine sites, as well as suspended solids from coal washeries, have all caused serious water pollution, adversely affecting fish and aquatic life." (ibid).

As pointed out by Singh, J. (1985), the Damodar River, the major source of water in the regions West Bengal and Jharkhand, is perhaps the most polluted river in India. It receives wastes from the many industries situated on its banks. The Subarnarekha River that flows through Jharkhand, West Bengal and Odisha, shows another form of pollution, even more hazardous than this. "Metallic and dissolved toxic wastes from Tata Iron and Steel Company (TISCO), Jamshedpur and HCL, Ghatsila; radioactive wastes from the uranium mill and tailing ponds of

[27]Complaint letter by 4 fishing community representatives from Vandi, Luni and Bhadreshwar villages to Vice President Meg Taylor, Compliance Advisor/Ombudsman dated June 11, 2011.

[28]Raniganj Coalfield is primarily located in the Asansol and Durgapur subdivisions of Paschim Bardhaman district in the Indian state of West Bengal.

the Uranium Corporation of India Limited (UCIL) at Jaduguda flow into Subarnarekha and its tributaries" (Singh, 2015). Millions of people living along the banks of these rivers are forced to use this water, which contains both radioactive and chemically contaminated wastes, for drinking and cooking purposes.

"In Odisha, the River Brahmani (its tributaries) receives about 98,000 crore litres of polluted water that is discharged from the mine (MCL) every year (and on an average 10,000 litres from the Jagannath colliery alone)" (Singh 2015). The presence of heavy metals in this water is higher than that in the water from industrial wastewater and exceeds the limits prescribed by the State Pollution Control Board (ibid). In areas such as Singrauli, spread over the states of Uttar Pradesh and Madhya Pradesh, which is considered to be the energy hub of India, land use change had begun back in the 1960-1970s for industrial development. The social, ecological and health impacts of these changes are visible till date. People continue to live next to mine over dumps, pipelines discharging contaminated water and fly ash dumps (CSE 2012; Pillai 2011).

The impacts of land use change are not limited only to water contamination but severely impact air too. Studies have indicated that open cast quarries, coal washeries, thermal power plants, coke-oven plants, cement factories and fertiliser plants add to air pollution (Areeparampali, 1996). One of the cases analysed as part of this study is from the Korba district of the central Indian state Chhattisgarh, which is also considered to be one of the power hubs of India. The district is located 200 km from the state capital Raipur. It has seen rapid industrial growth in the past 15-20 years due to coal mining. Currently, there are 7 coalmines, 12 thermal power plants and other industries operating within 25 km of the district (Ranjan Nath, 2016). Korba Coalfield covers an area of about 530 sq km (Pardhi, et al, 2014).

Gevra coal mine under operation

Restriction to access Gevra coal mine area following displacement of a village

During an interview, Dilkunwar, a housewife who resides in the Chainpur resettlement colony, spoke about the coal dust she and the people of the area are exposed to on a daily basis due to the operations of the Gevra opencast mines. She said that because of the operations of one of Asia's largest coal mines, "The floor of our house is always covered with the grey layer of dust. We don't even have proper road connectivity to our houses. My children go to school through these dusty mud roads which are not even constructed properly and are used for the coal carrying trucks."[29]

News reports also indicate that trucks carrying iron and manganese ore from mining areas in Odisha claimed over 1,000 lives and injured another 3,000 people during the years 2008-2011 (Pattanayak 2011). Many of these mines were directed to seize operations in early 2014 due to the recommendations of the M. B. Shah Commission[30] set up by the Ministry of Mines due to unprecedented illegalities, including those related to environmental approvals.More recently, the apex court has ordered that the mines can start operations following the payment of hefty fines (Dash, 2017).

[29]Interview conducted 1,000 with Dilkunwar Bai on June 2, 2018.

[30]Details of Shah Commission available at https://www.mines.gov.in/ViewData/index?mid=1333 accessed on 20th June 2018.

Farm land contaminated due to iron ore mining waste in Keonjhar, Odisha

Dam building in India has also led to environmental damage that has a direct bearing on the lives of people. The construction of large dams alters the relationship of water and land, destroying the existing ecosystem balance. Nearly 300 dams are proposed or under construction in the deeply cut valleys of India's mountainous north (Qui Jane, 2012). Most of these projects are highly contested due to fear of impacts and faulty assessments.

Dams cause erosion of soil and land. Due to the construction of dams, sediments that flow with the river water are held back. This causes the downstream water, devoid of sediments, to flow much stronger and erode or "scour" its channels and banks. This destabilising of the riverbed and banks is a threat to the survival of the river vegetation and wildlife. Dams are also known to increase salinity in nearby areas due to water logging. One of the reasons why dams have been proposed across the Himalayas is to prevent flooding. However, floodplains are adapted to the ebb and flow of rivers, and many animal species depend on the floods. Annual floods also deposit silt rich in nutrients and replenish wetlands (Singh 2003, Menon et al, 2000, Vagholikar, 2011).

A report submitted to the Ministry of Environment and Forests emphasises the hazards caused due to blasting and tunneling operations in dam construction. These have been recorded in technical and scientific journals as leading to landslides, underground fractures or fissures or the disruption of water flows in the river.[31]

As fisheries have emerged as an increasingly important source of food supply, more attention is being paid to the harmful effects of dams on many fish and marine mammal populations. The vast majority of large dams does not include proper bypass systems for fish, interfering with their lifecycles and sometimes even forcing species to extinction.[32]

Construction of ports and harbours also results in land use change. Such projects create negative impacts on sensitive coastal eco-systems. Their construction affects hydrology, surface water quality, fisheries, coral reefs and mangroves to varying degrees (Ahana Lakshmi et al 2012).

[31]Report of the Expert Body constituted on the directions issued by the Hon'ble Supreme Court vide judgment dated 13.08.2013 in the case of Alaknanda Hydro Power Co. Ltd. versus Anuj Joshi & others arising out of Civil Appeal no. 6736 of 2013 (SLP (C) no. 362) of 2012), with appeal no. 6746-6747 of 2013 arising out of SLP (C) no. 5849-5850 of 2012 and TC (C) no. 55-57 of 2013. Part 1: Main report titled Assessment of Environmental Degradation and Impact of Hydroelectric projects during the June 2013 Disaster in Uttarakhand, April 2014.

[32]Ibid.

Muck dumping in the Teesta River due to construction of a hydropower dam

Infrastructural projects such as the construction and expansion of roads and railway lines also cause changes in land use and this often generates numerous environmental issues. Air and water pollution and soil erosion are the two main issues that occur when large areas on landscapes get changed for the construction of roads and railway lines. In the Uttara Kannada district of Karnataka, a stone crusher and blasting unit associated with the construction of the National Highway 66 has created several problems for the villagers. Around 60 to 75 households were affected over 2 years. The stone crusher and blasting unit have been functioning in the village for the past 2 years.[33] The villagers point out that the entire region is covered with stone dust after the stone crusher and blasting unit started functioning in Mallari. The water sources in the village are getting contaminated by the stone dust and the chemicals used for blasting purposes.[34] Bhatkal, the region where the stone crusher is located and the highway is being constructed is known for its jasmine flower cultivation and trade. Several villagers of Mavinakatte are also involved in this occupation. During the interviews in this village in September 2017, the villagers reported that they have been facing a huge loss in their business as the cultivation gets affected by the water scarcity and the stone dust.

[33]Interview conducted with Praveen Kumar from Mavinakatte on September 19, 2017.

[34]Interview conducted with Anjali Naik from Mavinakatte on September 19, 2017.

6 Conflicts Arising out of Land Use Change

In this study we have tried to understand conflicts caused due to land use change. Land transformations are brought about by planned government intervention or policies for growth and development. These are undertaken without prior informed consent and/or due compensations, and are therefore seen as an imposition. They lead to anticipated or unanticipated environment and social impacts. They are exacerbated by the failure of administrative or judicial remedies. This results in prolonged conflicts over land use change.

There are several recent studies that have enumerated land conflicts. Even though these do not define land use conflicts as we have, they recognise similar causes of land use conflicts as have been described in the earlier section. A study conducted by Rights and Resources Initiative (RRI), Washington, along with Society for Promotion of Wasteland Development (SPWD), indicates that more than 250 conflicts have arisen over land acquisition cases alone between 2013 and 2014 in 165 of India's 664 districts (Sethi, 2017). The study also states that many of these conflicts have taken place due to government takeover of lands, often on behalf of private investors (ibid),. On the one hand there are reported instances of rising social conflicts due to land use change in newly industrialising areas and on the other, many ongoing impacts in already industrialised landscapes continue to demand remedial attention.

Another study conducted by RRI and Tata Institute of Social Sciences that analysed 289 ongoing land-related conflicts in the country, states that these conflicts altogether affect close to 3.2 million people and span close to 1.2 million hectares of land in India. Infrastructure projects account for almost half of the land related conflicts documented by the study.[35] In many of these instances, affected people are left to devise their own mechanisms to deal with problems and impacts caused due to displacement, livelihood loss and degradation of land/waterscapes. As a result, the last three decades have seen the growth of full-scale land conflicts.

Land Conflict Watch[36] is an initiative that maps land conflicts in India and has been crowdsourcing data since 2016. It defines conflict as "as any situation in which public opposes change in the current use or ownership of land by government agencies or private parties." This includes industrial and infrastructure projects, notification of protected areas as well as afforestation-related conflicts. As of January 2017, the website had recorded 563 conflicts affecting 7,512,572. The land area "on which the use and ownership is contested" is 2,172,708 hectares.

As part of this study, we attempted to look at conflicts that are actively driven by official policies such as setting up Special Economic Zones, declaring areas as coal bearing, or earmarking entire stretches of the coast for port led development (Ministry of Shipping, 2016). They are also directly linked with the failure of the rule of law, which requires the governments to regulate the operations of projects and project proponents to follow due approval procedure prior to land use change. It also includes ensuring that safeguards for mitigating, or managing the impacts of land use change are addressed.

Nature of land use conflicts

As part of this research study, a quantitative analysis of 75 cases of conflict over land use change was carried out to understand these conflicts better. These were selected from the full list of projects granted environment clearance (14,498 projects) till October 2017. For the purpose of creating this database, Conflict is understood as the first known collective action against an existing or an upcoming project. This action could be about resisting the project or seeking certain demands from the state/project owners in lieu of the project or demanding

[35] http://rightsandresources.org/en/analyzing-land-conflict-investment-risks-india-release-studies-land-conflicts-stalled-investment/#sthash.9G8vt7P0.dpbs; accessed on April 28, 2017.

[36] Land Conflict Watch is a *"research-based data journalism project that maps, collects, and analyses ongoing land conflicts in the country. It not only presents a macro picture at the national level but also zooms in to give details of each conflict at the micro level."*

certain changes to the process and/or timeline of approval and/or setting up of a project or project design or location. The details related to the date when the conflict erupted, actors involved, nature of strategies adopted or remedies sought have been drawn from media reports, NGO studies, and court documents that are publicly available. The project team has been cognizant of the limitation that the media may pick up only "flash point" events in the life of a conflict, such as flooding due to dam burst, public hearings for expansions, effluent discharge or accidents in the project site, court decisions or international advocacy related to projects or sectors.

Through these 75 conflict cases, approximately 728,673 ha land was officially transferred through the environment clearance process towards a range of sectors including mining, power generation, industry, and port development. While the details of these conflicts are discussed further in this study, a sectoral break up presented indicates the ownership of these projects and also the distribution of land use change.

Figure 30: Impact Across Sectos

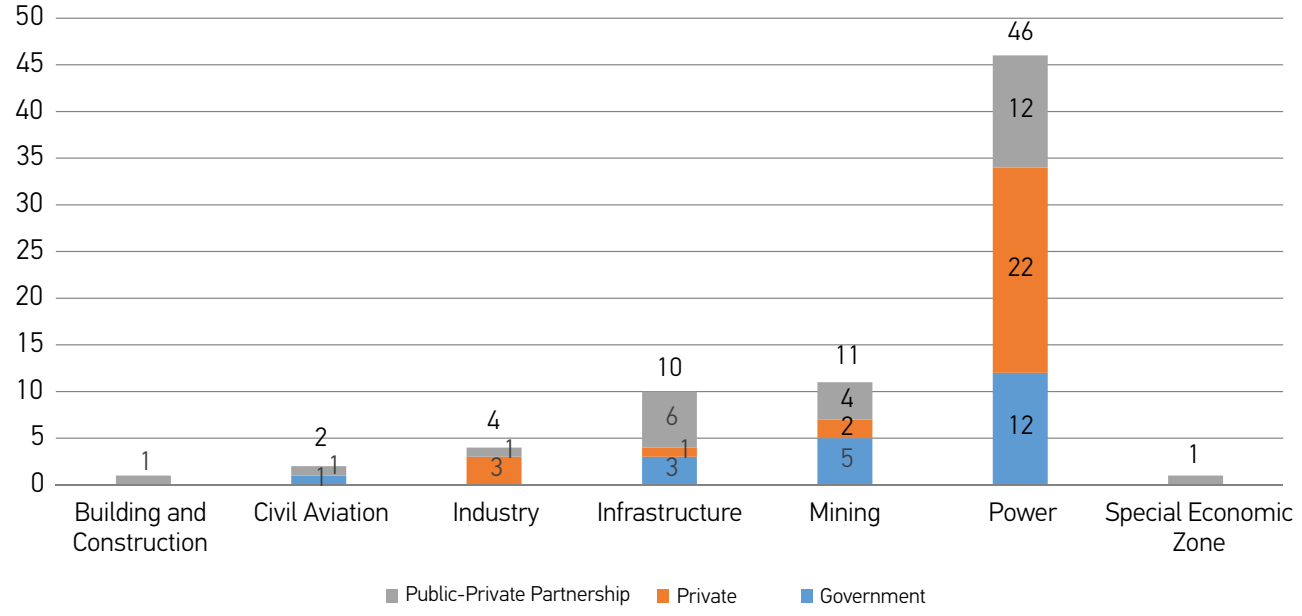
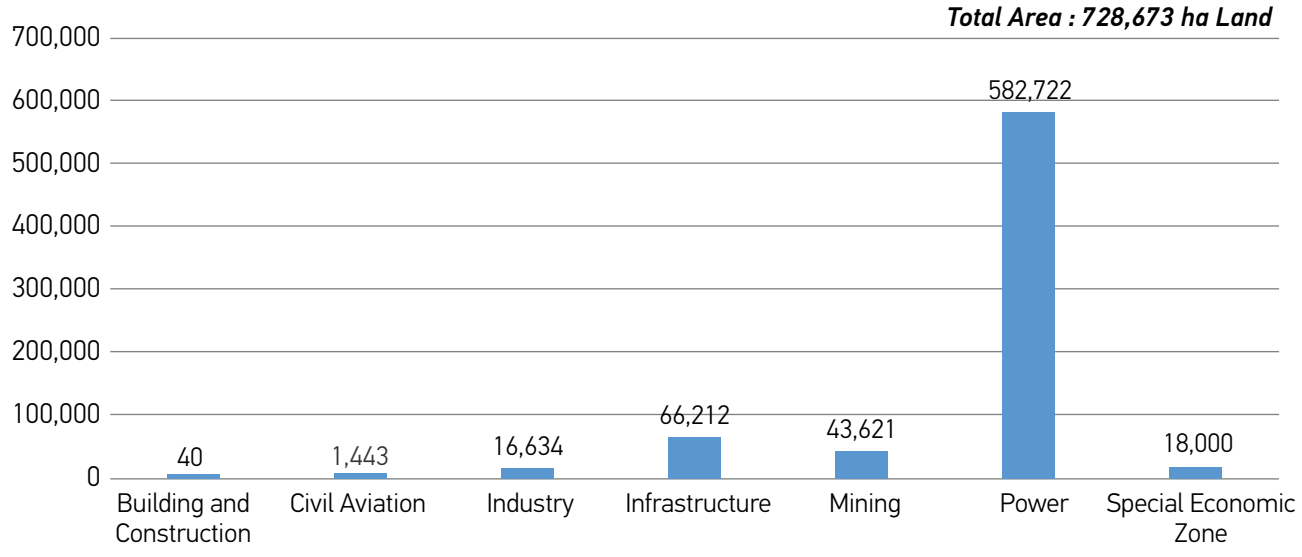


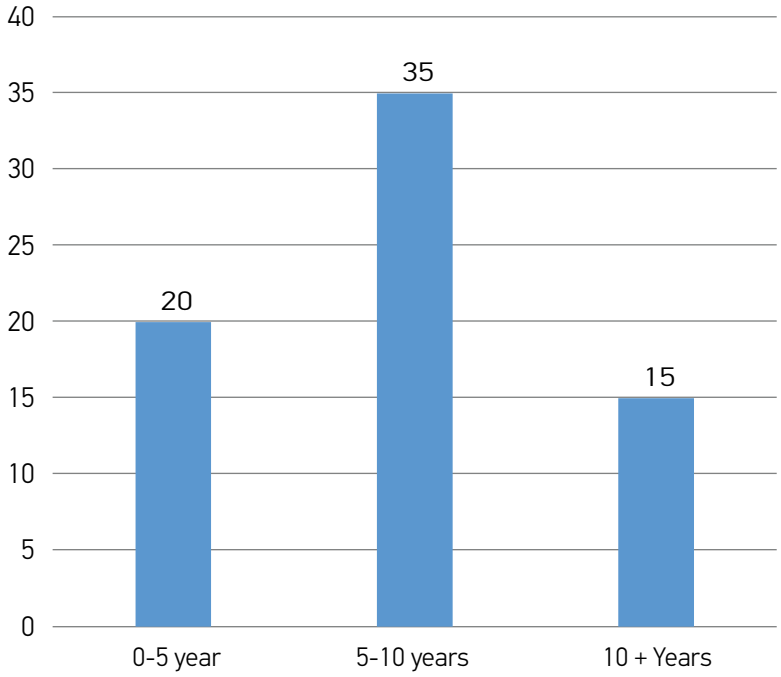
Figure 31: Sector-wise land use change for 75 cases of conflict



These two graphs (Figure 30 & 31) indicate that 46 thermal power plants that are contested have been allocated 5,82,722 hectares of land. 22 of these power plants were owned by the private sector. 43,621 hectares land use was approved for 11 mining projects with almost an equal distribution of both government and private sector ownership.

In 70 of the 75 cases where conflicts are ongoing, we see that the conflict persisted for a period of 7 years or average age of 8.4 years as the time period during which the conflict had persisted. The longest ongoing conflict among the 75 cases is on the Tehri Hydropower Plant in Uttarakhand, going on for more than 45 years, while the most recent conflict is Nyamjang Chhu Hydroelectric Project in Arunachal Pradesh, which started 1.7 years back.

Figure 32: Age of the Conflict



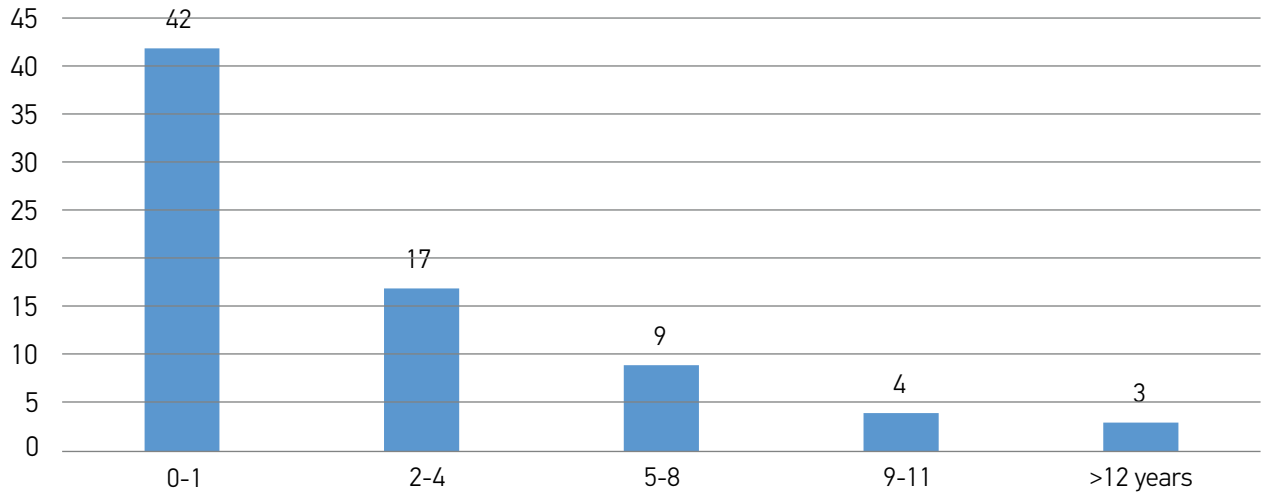
The 70 ongoing conflicts that we have analysed have median age of 7 years or average age of 8.4 years.

The longest ongoing conflict in our list is **Tehri Hydropower Plant in Uttarakhand**, going on for more than 45 years, while the youngest conflict is **Nyamjang Chhu Hydroelectric Project in Arunanchal Pradesh** which started 1.7 years back.

The database also indicates that while in some cases the conflict had persisted even before a project was granted environment clearance, in some others, it seems to have appeared only after construction activity had begun. However, this information is largely based on publicly available information through news reports and publications. Out of 75 cases, in 36 cases the environment approval was given to the project after the conflict began, and in 39 cases the conflict arose after the project got an environmental approval.

The impacts discussed in the previous sections often lead to the affected communities coming into direct conflict with project authorities, contractors, as well as government officials. There are a few studies that have attempted to understand the manifestation of these conflicts in different contexts. For instance, a compendium of 12 case studies related to land alienation and land acquisition in India brings out different factors related to acquisition of land and land use change that result in conflict. This includes the demand for better compensation and withholding against acquisition, and demanding that legal requirements for consent be met (Rawat, 2016).

Figure 33: Time Gap between the Project Approval and the Conflict (All 75 Cases)



Out of 75 cases, in 36 cases the project approval was given post the conflict began, and in 39 cases the conflict arose after the project got approval.

* In Tadadi Port the conflict had been ongoing for more than 16 years, when the project approval was given.

* At Indore-Dewas Section of NH-3, the conflict arose 19 years after the project was approved.

Figure 34: Time Gap for Conflicts before the Project Approval

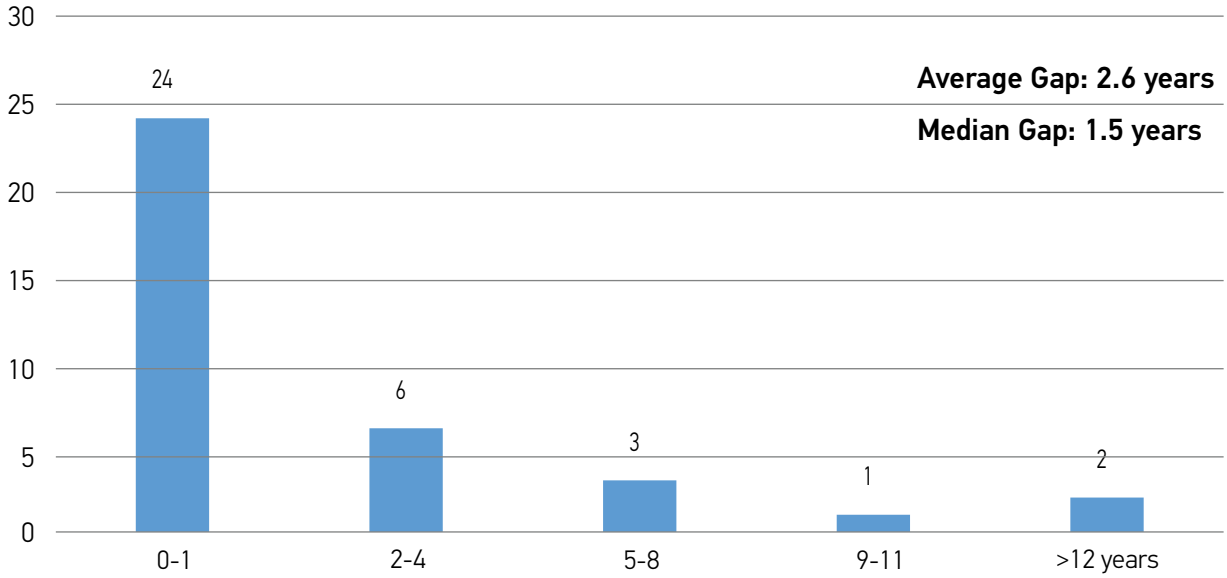
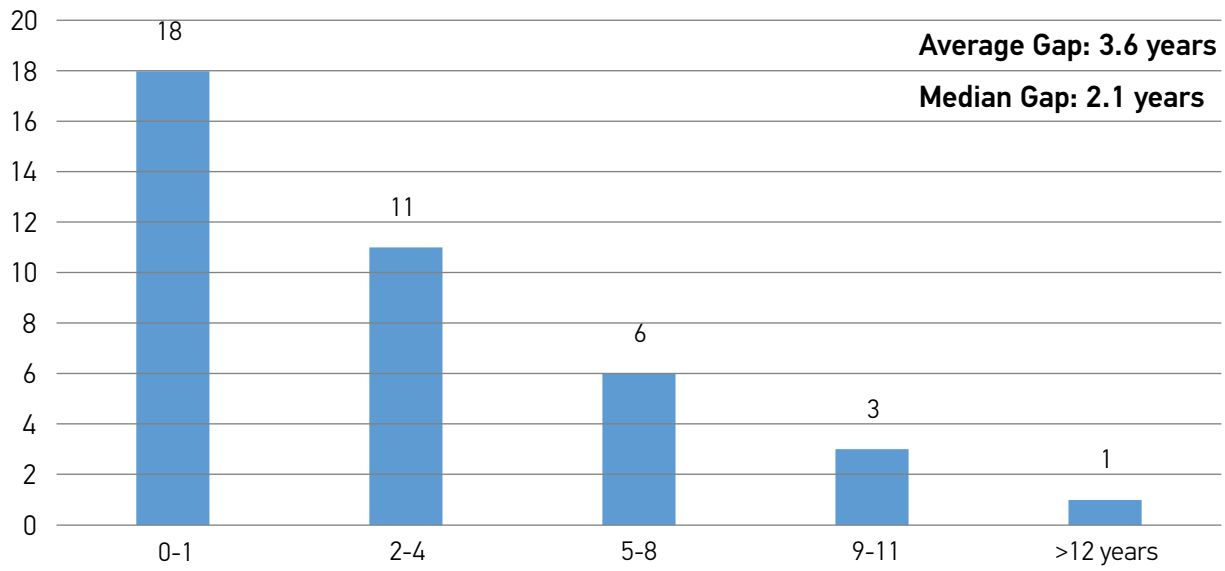


Figure 35: Time Gap for Conflicts After the Project Approval



There are broadly 3 causes of conflicts, that come into play in areas where land use change related to industrial, infrastructure and extractive projects has occurred:

- ***Non-fulfilment of assurances related to compensations and jobs:*** When land is acquired and purchased from individual families, it is in lieu of compensations and jobs. Whether or not people have objected to the land use change, the demand for promised jobs and compensation has been central to several conflicts in the country. In some instances, like in Gevra mines in Korba district, this is because the mining proponents have chosen to use specific policy options for compensation, that deliberately deprive people of jobs (more in the case details appended). Having lost access to land and livelihoods, occupational and financial support is an ongoing bone of contention between projects and people. Similarly, the people living around the two thermal power plants in Singrauli region at the border of the Uttar Pradesh and Madhya Pradesh were promised contractual jobs. During an interview conducted with one of the residents on May 24, 2011, at Dibulganj village, it was revealed that while there were 20,000 people in the village, only 234 were given jobs. He said, "Companies have assured us in writing that they will give us employment by May 30 at the rate of 300 people every month. If they don't respond like previous times, we will sit on a huge agitation. How do we believe that the new projects will give us jobs when the previous projects have just not responded?"
- ***Continued resistance against land use change:*** A recent news report quoted Satyajit Chavan, president, Jan Hakka Seva Samiti, an umbrella organisation for groups fighting against the Jaitapur nuclear power project in Ratnagiri district of Maharashtra. He said, "We have been consistently opposing the project for more than eight years now. Though we have stayed away from politics, this year we will try to create political pressure as the Zila Parishad and Panchayat Samiti polls are scheduled for February." (Deshpande, 2017). There are several instances where, despite approvals, affected people have been in conflict with the very purpose of land use change. Once a project construction is underway, land use is restricted as it has already been built over or access is restricted. The use of this land for any prior use or access to water sources could be restricted by either fencing or full or partial construction activity. The case of Jaitapur power plant, discussed above, is where the land area had been "secured" by the project authorities. The ongoing resistance to land use change in Jagatsinghpur district in Odisha is an 11-year conflict, which started when the MoU was signed with the state government, and is continuing till date. The conflicting party's argument was not investor specific but questioning the land use change itself. Over the years, interest in the area has moved

Protest against the POSCO project in Jagatsinghpur, Odisha

from a South Korean company, POSCO, to the state government's industrial development corporation, for the creation of a land bank (Anon, 2018; Das, 2017).

- ***Air and Water contamination and depletion:*** Conflicts around depletion and contamination of water, even as project operations are carried out, are especially acute in places which have seen a decade or more of land use change. Some of these can be avoided if the safeguard measures enlisted in environmental approval letters are adhered to. Conditions such as maintaining zero discharge policies, utilisation of waste, no encroachments, maintaining schedules for blasting, and siting specifications are part of the approval conditions and are not adhered to (Kohli and Menon, 2009; CPR-Namati Environmental Justice Program, 2016). In many cases, such conditions are also impossible to comply with as they are in direct contradiction with project operations. Such legal non-compliance and related impacts on the ground could lead to serious altercations between project authorities and affected people. The affected people also feel disgruntled and frustrated when their actions to get regulatory attention result in no response from both the government and project authorities.

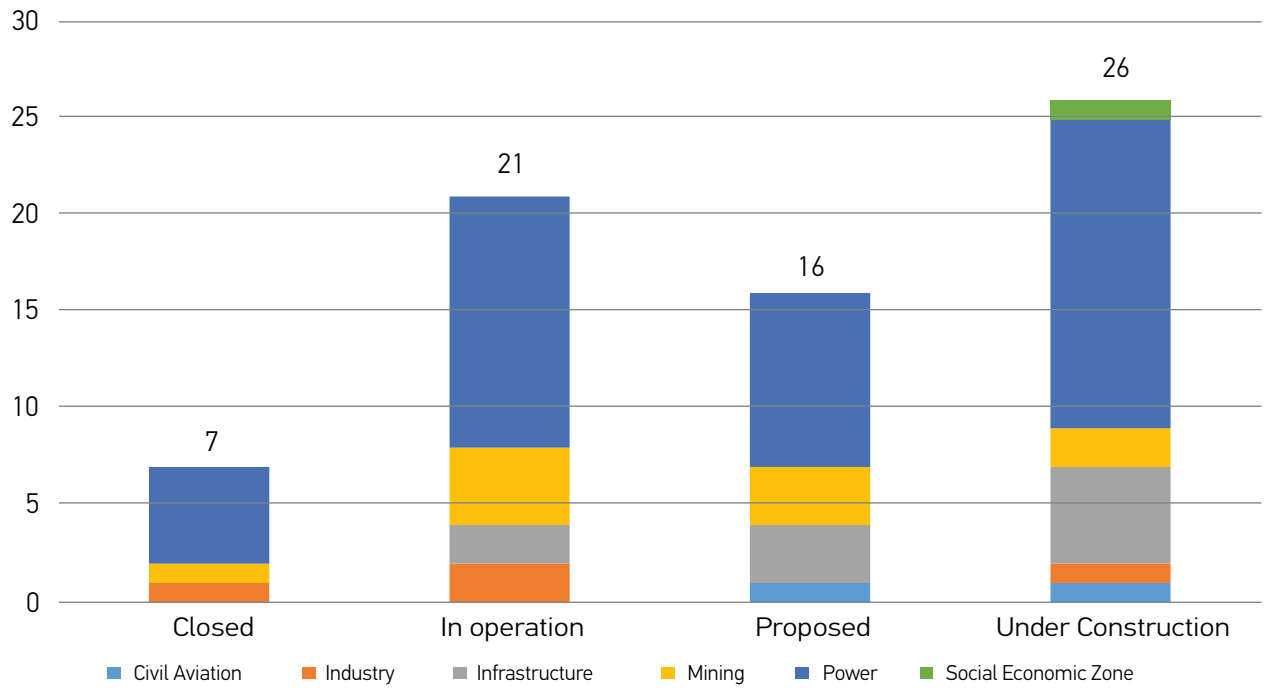
A community-led ground-truthing exercise carried out in Mundra block of Kutch district of Gujarat highlights the impacts of land use change carried out in violation of conditions of environmental approvals. People affected in the region analysed the compliance of approval conditions of one large infrastructure project including several multi-utility ports, a railway line, and related facilities. They pointed to impacts of mangrove and sand dune destruction that had led to salinity increase, loss of fish catch and restriction on mobility in the area. (Mundra Hitrakshak Manch et al. 2013). This exercise shows the need for greater scrutiny of land use change and its impacts even if there is no direct displacement by projects. The Women's group, Ujjas Mahila Sanghathan, which is based in Mundra, is studying the impacts of the decade of industrialisation on women. This study is likely to highlight several nuanced issues on what land use change does to the health, mobility, and physical security of women. (Rabari, 2014).[37]

[37]Pers comm dated August 31, 2014. Reena Rabari is the Coordinator of the Ujjas Mahila Sangathan and is based in Mundra, Kutch, Gujarat. This information was shared by her during a meeting with Kanchi Kohli on August 31, 2014. An interview questionnaire being administered as part of the study was also discussed and preliminary findings were shared.

As per the 75 cases that were analysed in detail as part of this study, 70 cases have ongoing conflicts to date. In 5 cases the conflicts have been resolved as per publicly available information, and in 2 cases the conflicts are unresolved but closed. These 2 projects are the Commonwealth Games Village in New Delhi and Sompeta Super Critical Coal Based Thermal Power Plant in Andhra Pradesh (PPP). In both these cases, the affected people have not received the desired remedy. However, in both cases, the conflicts are no longer persisting. In the case of the Commonwealth Games Village, the construction activity has been completed, and there is no public information of an ongoing conflict. In the case of Sompeta, the environment clearance for the project is suspended,[38] and the land allotment has been cancelled. In the 2 other projects, which are closed, the conflicts are still persisting.

The analysis is presented in the graphs below.

Figure 36: Status of Projects with Ongoing Conflict



Conflicts Resolved? Below are the details of the 3 cases where the conflict has reportedly been resolved.

S.No.	Name of the Project	Remedy Sought	Strategies	Status of the Approved Project	Remedy Received	Policy Outcomes
1	Establishment of 400,000 tps copper smelter and 250,000 MT pa Phosphoric Acid Plant, Tuticorin	NA	Protest	Closed	Temporary Closure	New Legislation
2	Chamalapura Thermal Power Pland	Fair compensation	Protest, Litigation and Administrative Complaints	Closed	Temporary Closure and Compensation	New Legislation
3	M/s Alfa Infraprop Private Limited	Cancellation of project	Litigation, Administrative Complaints	Closed	Suspension of Approval	EC Appraisal Directions

The sections below discuss some of these strategies and remedies in greater detail.

[38]For more details see: https://www.thermalwatch.org.in/content/sompeta-thermal-power-plant; accessed on April 11, 2018.

7 Strategies and Remedies

People affected by the impacts of land use change engage in a variety of strategies keeping in mind the remedies they seek. The strategies could range from a single one time action for a single remedy to engaging with multiple strategies for one or different remedies. For instance, an affected community may choose to go to court to seek directions for increasing compensations or addressing pollution harms. Another group of affected people may approach one government agency for addressing water contamination or take to the streets to resist additional acquisition of land or engage the media to create awareness about the loss of livelihoods.

A range of factors influences the choice of strategies and the nature of remedies that are being sought. These factors emerge in our database of 75 projects and the case studies put together for this study. They are:

- Knowledge of an authority or agency that could deliver a remedy, e.g. the district collector has the power to intervene in cases of land encroachments, or the pollution control board authorities have the power to take emergency action.
- Geographical accessibility of an institution or forum that could facilitate the process of the required remedy, e.g. state and national courts or international forums might not be the first option unless there is a facilitating medium like a pro-bono lawyer or organising association.
- Strength of their negotiating position perceived by the community or support groups to demand action for addressing harms or contesting acquisition processes, e.g. accepting suggested compensations without any contestation or the lack of ability to demand restoration of a contaminated site or supply of water source.
- Strong external actors working with affected communities in determining both strategies and remedies. This is especially the case when the affected communities approach ombudsman processes of International Financial Institutions (IFIs) or other such forums holding corporations accountable.

Other than these factors, the extent of unity or collective mobilisation of the affected community also plays an important role. For instance, in some cases, landowners might dominate the perusal of remedies; in other cases, livelihoods of communities like the fishing communities that have no legal rights to the sea may influence the choice of strategies remedies.

In order to understand the different kinds of strategies the affected people use in varying situations of conflict, the study carried out detailed case studies as well as a quantitative assessment of 75 projects (across sectors) from the list of environmental clearances of 14,498 projects uploaded on the Environment Ministry's website as of October 2017.This analysis is presented below.

STRATEGIES

According to the analysis of 75 cases across a range of sectors and geographies, affected people use multiple strategies to seek a range of remedies. For instance, as the table below indicates, in maximum number of conflicts, affected people used multiple strategies for immediate redress or long-term remediation measures. For instance, in the case of the Sasan Ultra Mega Power project, Singrauli, Madhya Pradesh, the affected people used a combination of strategies such as protests, litigation and approaching an international financial institution, in this case, the World Bank. The conflict, in this case, was due to a combination of loss of land and impacts on livelihoods due to the land use change of over 4000 hectares for the purposes of a coal based thermal power plant.

Based on the quantitative data of the 75 cases analysed as part of this study and the case studies and other documentation of conflicts, the strategies or collective actions adopted by affected communities are the following:

Combination of strategies used to address conflicts in 75 cases

2 Single Strategies | 26 Double Strategies | 45 Triple Multiple Strategies | 1 Quadruple Strategies

Strategies	Various Combinations of Strategies																						#Popular Strategies
Protests			■		■			■		■	■	■	■	■	■	■			■	■	■	■	61
Administrative Complaints		■	■	■		■	■			■	■	■					■	■	■				59
Litigation				■	■				■	■			■	■	■	■		■	■		■		■	47
Media Reporting								■	■						■				■			■	■	13
International Redressal						■						■		■				■				■		8
Reclaiming land													■				■							3
Political advocacy																■							■	2
Approached company							■													■				2
Campaign																					■			1
Total	1	1	11	8	3	1	1	1	1	24	6	3	2	2	2	1	1	1	1	1	1	1	1	

Protests and Direct Action

As the above table indicates, in 61 out of 75 cases, protests by affected people were one of the most common strategies used to either seek government attention or highlight inaction. This was along with litigation, administrative complaints, reporting in the media and others. In none of the 75 cases no stand alone strategy was used. It was always in combination with one or multiple strategies.

Protests and direct actions have been an important tool that communities affected by land use have used to resolve conflicts and seek remedies. The scale of these protests has differed based on the strength of their political agency and/or the alliances they have been able to build with national and international groups. For instance, in the case of the Bhavnapadu Thermal Power plant in Andhra Pradesh or the operation of the Parsa East Ketan Besan coal mine in Chhattisgarh, the affected people adopted multiple strategies simultaneously, including timed protests, directed litigation on matters such as forest rights and media campaigns (Gupta and Choudhury, 2017).

In some instances, the demands are clearly articulated, and in other cases they are broad, primarily to draw the government's or corporations' attention to their grievance. In August 2011, about 5000 fisherfolk, salt pan workers, pastoralists and farmers of the Mundra coast embarked on a *padayatra*, called *Save the sea, Save the land, Save the environment*. The march, which started from Bhadreshwar village, reached the district headquarters in Bhuj on the following day. The representatives from the collective presented a 31-point memorandum to the District Collector. The padayatra was an attempt to draw attention to the dependence of the fisherfolk of Mundra on their traditional trade. The yatris emphasised that the power plants create massive intake and outtake channels that have severely curtailed their access to the sea. Additionally, the discharge from the plants into the sea is of much higher temperatures than the sea, and leads to dramatic impacts on the ecosystem on which plankton and other sea life are dependent (Kohli, 2014).

Protests have also been part of collective action strategies to bring to attention a policy or legislative matter rather than specific project-related grievances. The proposed amendments to the new 2013 Land Acquisition Act in December 2014 led to a nationwide farmers' protest in India (Chakravorty, 2015). Thousands of farmers

Villagers protest at a public hearing in Chhattisgarh

took to the streets between January and May 2015, in particular, in Bihar and Uttar Pradesh, and in New Delhi. There were various protests led by members of opposition political parties as well (Kaysser, 2015). In August 2015, in light of protests and ahead of the Bihar state elections, the government of India held back the proposed amendments (Roche and Anuja, 2015) and referred the matter to a Joint Parliamentary Committee (JPC) (Kohli and Gupta, 2017).

Protests are a medium of mass politicisation about land rights, democratic values and government and corporate accountability. They require immense skills of mobilisation, discussion and negotiation to build solidarity among affected people and arrive at demands for remedies to their problems. Protesting communities and activists also face a risk from the state and project proponents as they are seen as obstructing project activities or development. There are several cases of counter actions by the government or companies, such as physical violence against protestors, charging them with false cases and other kinds of harassment to stifle protests.

Judicial and Appellate Mechanisms

The judicial system of India has courts at 3 levels - district, state and national, and they have adjudicated on a variety of environment and land-related matters. In addition, since 2011, grievances related to both environmental approvals and forest diversions have been heard before a specialised forum called the National Green Tribunal (NGT). The forum was set up after observations made in several judgments[39] and recommendations of the Law Commission of India's 186th report (2003) on the need for specialised environmental courts. It was in keeping with this that the National Green Tribunal (NGT) Act, 2010, was passed, replacing the National Environment Tribunal Act, 1995 and the National Environmental Appellate Authority (NEAA) Act, 1997 that preceded it. Both the 1995 and 1997 Acts had failed in their efforts to provide a specialised forum to deal with environmental cases (Rosencranz, Sahu and Raghuvanshi, 2009).

The judiciary has been a mechanism for both localised movements as well as national struggles for decades. It is often used as one amongst a pool of strategies that affected people and social movements have used. As

[39]M.C. Mehta v. Union of India (1986) (2) SCC 176; Indian Council for Environmental-Legal Action v. Union of India (1996)1996 (3) SCC 212; and AP Pollution Control Board v. Professor M. V. Nayadu (1999) 1999 (2) SCC 718.

is visible in the analysis of the 75 cases above, litigation is the third preferred strategy. It has been used in 41 cases along with at least one more option, most often with administrative complaints and protests. In these 75 cases, litigation did not appear to be the sole strategy adopted to address a conflict or seek a remedy.

In a recent instance, following a process of joint research related to then non-compliance of environmental safeguards of Kulda open cast coalmine in Sundargarh district of Odisha, the representative group called the Hemgiri Adivasi Ekta Manch preferred approaching the NGT rather than pursuing administrative remedies. The response of the concerned authorities while participating in the public hearing for the expansion of this coal mine did not render any confidence that the grievances would be heard. The community representatives were keen on taking the matter to court, which was supported by a local NGO and a lawyer practicing in the NGT as a preferred strategy of the people affected by the land use change.

Kulda Mines in Sundargarh, Odisha

In states like Gujarat, where organised farmers have had access to lawyers, they have regularly chosen to litigate on grievances arising out of land use change. In Mundra district in Kutch, Gujarat, separate appeals have been filed before the High Courts and the Supreme Court seeking additional compensations, clean-ups or repatriation of land.[40]

In other instances, environmentalists or proactive lawyers have taken matters before a judicial forum without consulting the affected communities. The judgments in such cases have had serious and long-term implications. The Parsa East Ketan Besan (PEKB) coal mine (in the database of 75 cases) is one such case that was filed before the NGT and a judgment suspending the forest diversion approval was given. This was challenged by the operating company before the Supreme Court, where the court allowed mining to continue even as the environment ministry was to review its recommendation. The matter has been subjudice since 2014.

In other instances, environmentalists and lawyers have also taken matters to court to address a procedural injustice to highlight that legal procedures have deliberately not been followed in one or several instances. Here, the attempt has been to highlight the substantive questions related to regulatory failure or large-scale impact. One example of this is the case filed before the National Green Tribunal (NGT) to regulate sand mining and

[40]Some cases include: GAJUBHA (GAJENDRASINH)BHIMAJI JADEJA & 3 vs. UNION OF INDIA THRO JOINT SECRETARY & 20 (WRIT PETITION (PIL) NO.21 of 2013); Kheti Virasat Seva Trust vs. State of Gujarat and Ors (Writ Petition No. 12 of 2011 in High Court of Gujarat)

seek the implementation of the orders of the Supreme Court. The NGT banned sand mining operations across the country until environmental approvals were sought. On the one hand, this created newer conflicts and black marketing of sand, and on the other, it pushed the environment ministry to amend the EIA notification, 2006, to specify a clear procedure through which sand mining will be regulated (Times News Network, 2013; Banerjee, 2016).

Some landmark cases affecting decision-making related to land use change

Protection of Commons: The Supreme Court, in its judgment on the case Jagpal Singh and Ors vs. State of Punjab and Ors (2011),[41] stated that illegal occupants of Gram Sabha/Gram Panchayat/Poramboke/Shamlat land must be evicted as per the schemes prepared by the state governments. It further stated that such violations must not be regularised, given that Gram Sabha land ought to be for "common use of villagers of the village", and that such land, restored to the Gram Sabha/Gram Panchayat, must be for this use.

Strengthening public participation: The Delhi High Court's judgement in Utkarsh Mandal vs. Union of India (2009),[42] gave directions to strengthen the conduct of public hearings. It stated that the Executive Summary of the EIA report should be made available at least 30 days prior to the public hearing. It was also specified that on any given date, at a particular venue, and at a particular time, the public hearing for no more than one project could take place.

Greater authority to Gram Sabhas: The MoEF had cancelled the stage 2 environmental clearances granted to the Niyamgiri Bauxite Mining Project. The Orissa Mining Corporation challenged this cancellation. The Supreme Court, in its judgment in Odisha Mining Corporation vs. Ministry of Environment and Forests (MoEF) and Ors, directed the Gram Sabhas of Rayagada and Kalahandi to settle community, individual as well as cultural and religious claims. It directed the MoEF to take a decision only after concurrence from the Gram Sabhas.[43]

Compliance with conditions: The judgment in the Utkarsh Mandal vs. Union of India (2009) case drew attention to the fact that there exists a "general poor level of enforcement". It highlighted that the MoEF ought to assess its practice of giving "conditional" clearances without specifying which conditions must compulsorily be complied with *before* mining (with respect to the case under consideration) could commence. It was also acknowledged that if allowed to operate without a mandatory requirement of compliance, irreversible damage could occur by the time (one year in its example) non-compliance is discovered.

Optimisation of land: In a case related to the Pohang Steel Company (POSCO) India's plant in Odisha [Prafulla Samantaray vs. Union of India (2012)],[44] the NGT in its judgment restricted extra acquisition of land than what was immediately required for the project.

Repatriation of grazing land: The Gujarat High Court, in an oral order in Fakir Mamad Suleman Sameja and Ors vs. State of Gujarat and Ors (2014),[45] gave directions pertaining to repatriation to the Gram Panchayats, of grazing land that had been acquired for a Special Economic Zone (SEZ). Communities in Mundra, Kutch, had filed Public Interest Litigations (PILs) when they were affected due to loss of their livelihoods.

However, resolution to certain kinds of matters through the judiciary could take long. A study by Wahi et al. (2016) points out that 78% of 1269 cases related to land acquisition in the Supreme Court were decided in the last two and a half decades. The same study highlights *"average time period between the notification of acquisition and the High Court judgment was almost 15 years. The average time period between the High Court and Supreme Court judgments was 6 years, and the time taken on average, between the initiation of land acquisition proceedings and the Supreme Court judgment was as long as 20 years."* What is interesting, however, is that although the average time taken is long, in several instances where higher compensation has been sought, the appeals have been successful *(see section on compensation further in this study).*

[41]CIVIL APPEAL NO.1132 /2011 @ SLP(C) No.3109/2011.

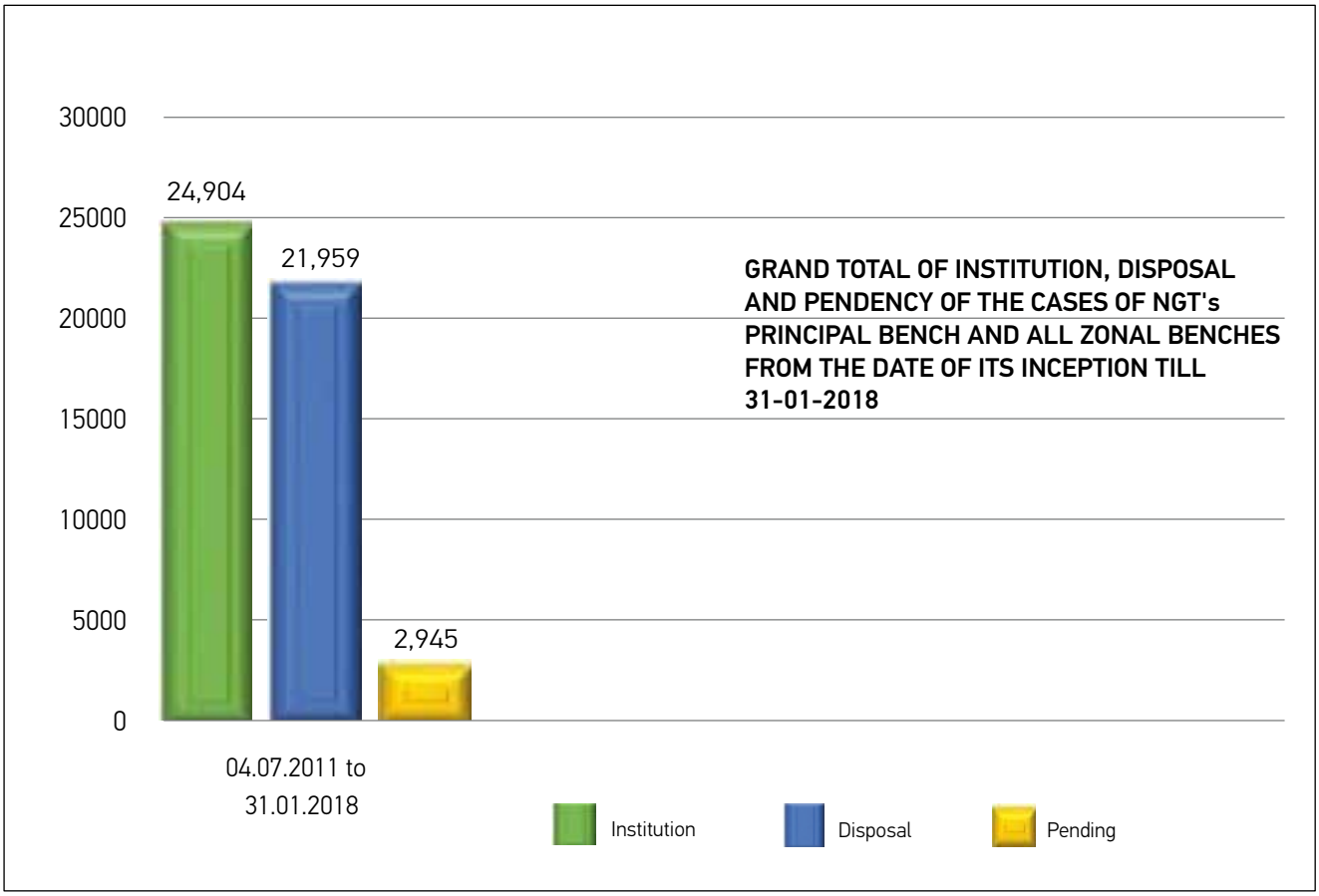
[42]WRIT PETITION (Civil) No. 9340/2009 & CM APPL Nos. 7127/09, 12496/2009.

[43]WRIT PETITION (CIVIL) NO. 180 OF 2011.

[44]Appeal No.8 of 2011.

[45]WRIT PETITION (PIL) NO. 17 of 2011.

The matters before the NGT related to challenging environmental approvals, grievances against pollution related show cause notices or compliance of legal safeguards have been decided upon faster.The time taken by the courts is no indication of whether the appellant's plea was satisfactorily addressed, but the statistics available on the website of the NGT (http://www.greentribunal.gov.in/) as on March 27, 2018, indicate that the tribunal dismissed 21959 in six and half years.



Administrative Complaints [Regulatory and Enforcement Agencies (for forests and environment); District Magistrates and Panchayats (Local Self Governments)]

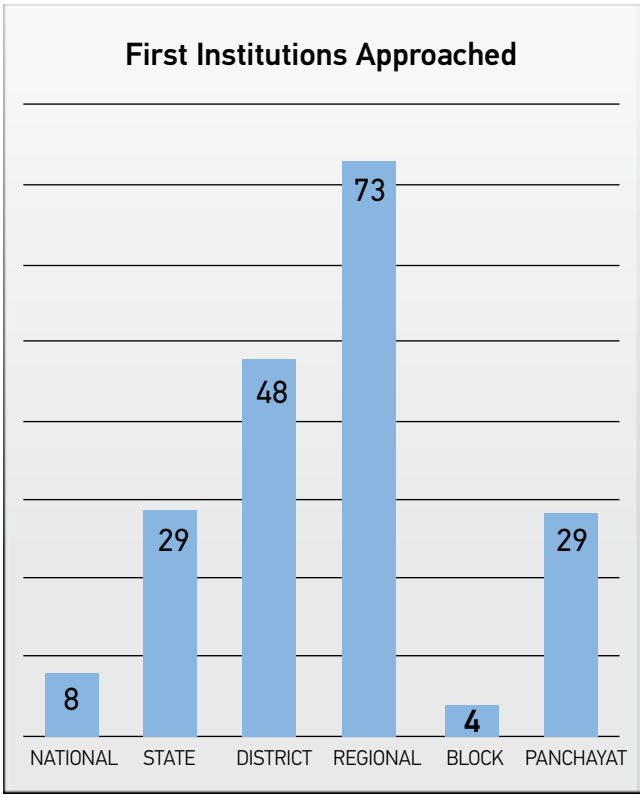
People affected by impacts of land use change approach government institutions with complaints regarding water contamination, compensations against accidents and seeking intervention for addressing the problem of encroachment of land. This is especially the case when it comes to the administrative office of the District Collector. Local offices of the Panchayat and the District Collector are most preferred by affected people due to issues of better accessibility, familiarity due to contact for other purposes like obtaining government schemes or documentation and geographical proximity. In most cases, these are the first offices approached by the communities when they face impacts. They escalate their complaints or efforts to higher offices only when there is no response from these offices or when they face prejudice or opposition from the officials.

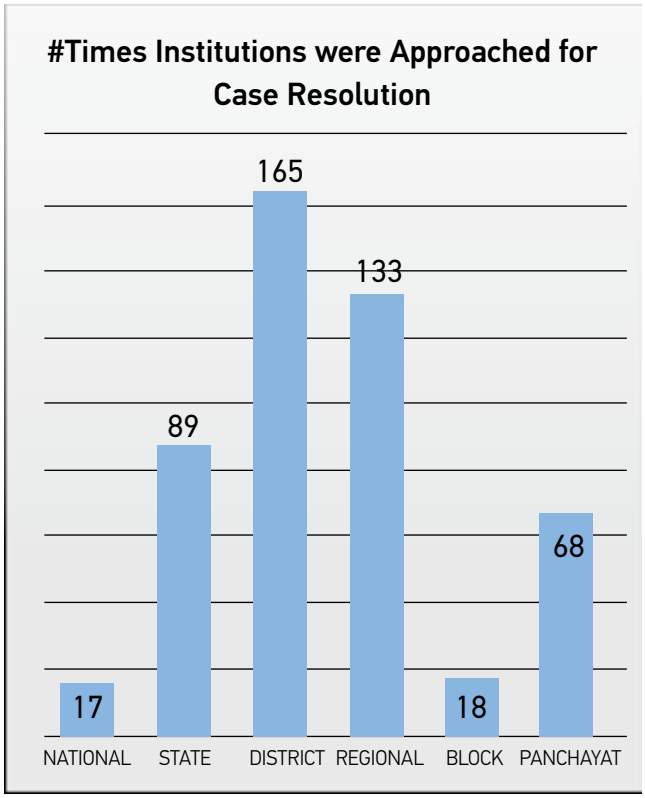
An analysis of the 75 cases for this study indicates that administrative complaints are the second most preferred strategy used by people affected by land use change. It is mostly used as part of a pool of strategies along with litigation, protests or even media and political advocacy. It was only in one instance that the administrative complaint was used as the only strategy to seek remedies. This was in the case of the proposal to construct the Tadadi port in Uttara Kannada district of Karnataka. In this case, local villagers and environmentalists primarily engaged with the District Collector and the regulatory institutions to influence the decision on whether the port should be granted approval. Although the environment ministry's expert committee recommended approval in December 2016, the project had not been issued a formal clearance letter and had not initiated construction activity at the time this study was being written.

As part of a community-based action research project of the Centre for Policy Research-Namati environmental justice program, attempts have been made to understand whether remedies could be sought with the single strategy related to administrative complaints. As part of this research, 15 paralegals carried out work of project-impacted cases in four states. An analysis of 195 cases handled by paralegals and community partners showed that in 86 cases, the relevant administrative department responded positively to address the conflict. Several kinds of issues were taken before administrative authorities as well as specialised regulatory institutions. For the 195 cases, the paralegals and affected communities have used as many as 13-15 laws to approach specific authorities for administrative remedies. The mainstay of these cases is the legal empowerment of the affected communities so that they understand the law and how it can be used in their case, the careful collection, documentation and presentation of evidence of impacts and illegality in clearly drafted complaints, and repeated and regular follow up with the local offices till they respond or indicate their inability to take action on the case. The complaint with the detailed documentation of the case is then moved up the administrative hierarchy until a response is received. The graphs below show the number of institutions and the level of governments approached by affected people in these cases. This methodology builds on the understanding that affected people make efforts to approach the administration. It adds to their process, the relevant legal knowledge and systematic procedure for follow up.

Experience with approaching government institutions

On an average, Enviro Legal Coordinators and Community Partners approach around ***2-3 relevant Govt Institutions*** for each case. For most of the cases, Institutions situated at the ***Regional Level*** are capable of providing the desired outcome.





Engaging International Financial Institutions

Another strategy that the affected people have adopted is approaching IFIs or banks that finance the industrial and infrastructure projects responsible for land use change. In most of these cases, the people affected by land use change-related conflicts are able to do this with the facilitation of specialist NGOs that understand redressal mechanisms of specific investors. The purpose of this strategy is two-fold: to highlight the nature and extent of impact and destabilising the financing for the project. The attempt is also to shame both the investor as well as the project developer for operating a project that has created conflict.

One forum that has been approached by the affected people is the ombudsman mechanism of the International Finance Corporation (IFC). The people impacted by the Coastal Power Gujarat Limited (CGPL) in the western Indian state of Gujarat engaged the IFC to address the project impacts. In June 2011, the Machimar Adhikar Sangharsh Sangathan (MASS), a fisher people's union, complained to the International Finance Corporation (IFC), a private sector lending arm of the World Bank group. The complaint pointed at a series of violations of the IFC's due diligence process and criteria for continuing financial support to projects.[46]

In 2015 the the Compliance Advisor Ombudsman (CAO) of World Bank Group's International Finance Corporation (IFC) concluded that IFC had failed to address the findings of CAO in the case of Tata Mundra (Coastal Gujarat Power Ltd). The monitoring report released on January 21, 2015, acknowledged lapses but chose not to withdraw funding from the project. Instead, it suggested a *"rapid, participatory and expressly remedial approach to assessing and addressing project impacts raised by the complainants."* The report added that *"Such measures are not well developed in IFC's reporting which focuses on the commissioning of technical studies as well as corporate social responsibility measures implemented by the client."* (CAO, 2015). Members of MASS continued to demand that the IFC withdraw the funding from the project (MASS, 2015) and are presently pursuing a case in the United States Supreme Court questioning the impunity of the World Bank group with the help of an international group EarthRights International.[47]

Villagers interact with CAO representatives during their visit.

Campaigns and Media Advocacy

This has been an important strategy for affected people, especially when they are working with national and international NGOs and researchers. Two prominent examples of this are visible in the strategies used to address conflicts in the Vedanta bauxite mine in Niyamgiri, Odisha and the actions against setting up of the coal mine in Mahan, Madhya Pradesh. Local struggles were supported by national and international media reporting and

[46]Complaint by Aminaben Arun Gadh, Hanifiaben Juma Reliya, Jaffar Allaiya Manjaliya, Harun Salemamad. *Kara fisher members of the Machimar Adhikar Sangharsh Sangathan to Vice President Meg Taylor, Compliance Advisor/Ombudsman, International Finance Corporation dated h June 11, 2011.*

[47]Note on the challenge in the US Supreme Court. https://earthrights.org/tata-mundra-coal-power-plant/; accessed on February 7, 2018.

public campaigns seeking support against setting up of these projects (Greenpeace India, undated; Pillai, 2015, Press Trust of India, 2013; Survival International, undated[48]). In both these cases, the effort was to highlight the livelihood dependence and ecological fragility of the area to ensure that these projects are cancelled, and the land use change is held back.

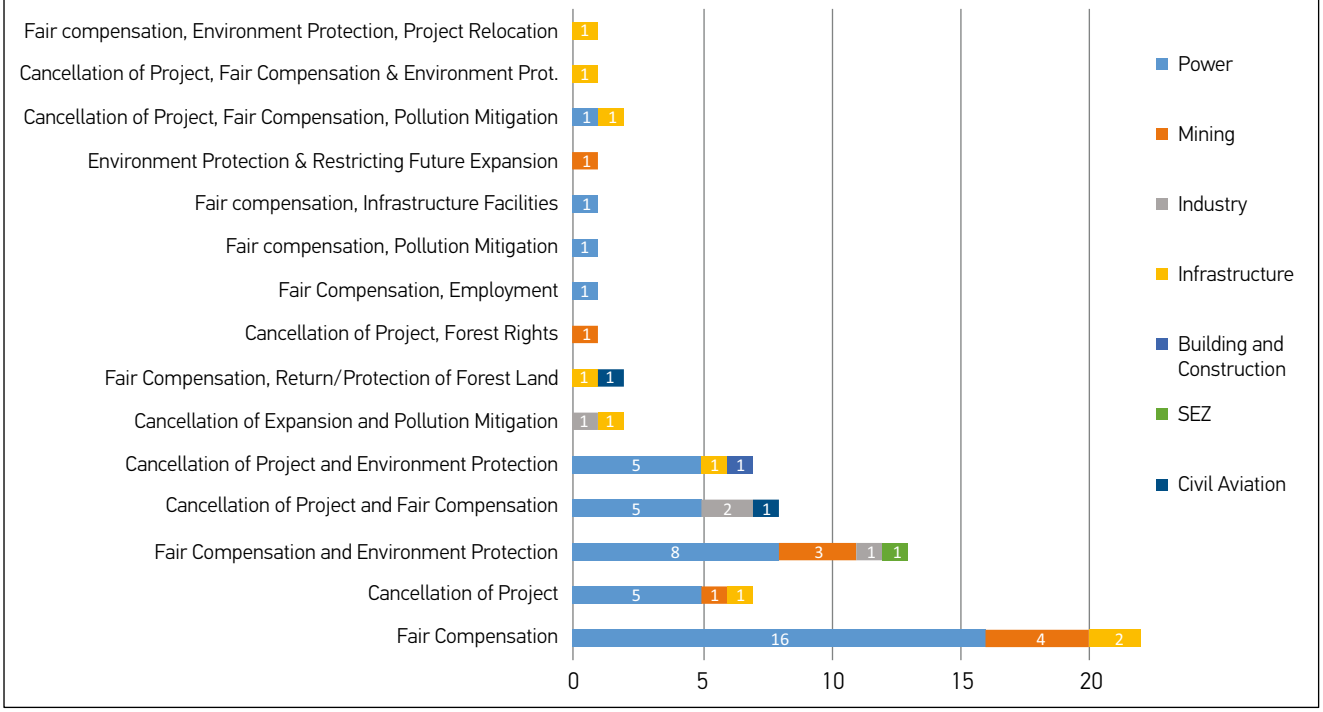
At other times efforts have been made to highlight the lived impacts or the human rights abuses of people impacted by land use change. Amnesty International's report, showcasing the impacts of coal mining in central India, has been one such study (Amnesty International, 2016) that was followed by a media interaction in the national capital along with the affected people, activists and lawyers).

REMEDIES

People affected by land use change seek a variety of remedies for the impacts they face. While some of these are towards short-term relief and compensations, others are to establish long-term measures for economic security, health and social well-being. These remedies can also be understood by analysing at which stage of the conflict the remedy has been sought or which forums have been approached for the remedies. For instance, it is possible that affected people could start by asking for a project to be shut down or for its approval to be cancelled, and move on to negotiate better compensations when the same project is up and running. The actors involved in determining remedies would have a bearing on understanding why certain remedies were sought. It is also possible that the affected people start using specific strategies like administrative complaints or litigation once they come to interact with external NGOs or lawyers who work with representatives of the affected people. These forums are limited to what their jurisdiction is or what is asked for by the aggrieved.

In the shortlist of 75 cases analysed as part of this study, the following analysis emerges from the remedies:

Figure 37: Remedies Sought Across Sectors



[48]Details of Survival International's campaign against Niyamgiri mining available at https://www.survivalinternational.org/tribes/dongria; accessed on February 26, 2018.

Remedies Received

Out of 75 cases, in 51 cases few remedies were achieved, resolving the conflict in 3 cases. In 55% cases the compensations were given, while compensation plus restoration of land or temporary closure were the second most popular remedies across the cases.

Figure 38: Percentage distribution of remedies received in 75 cases of conlict

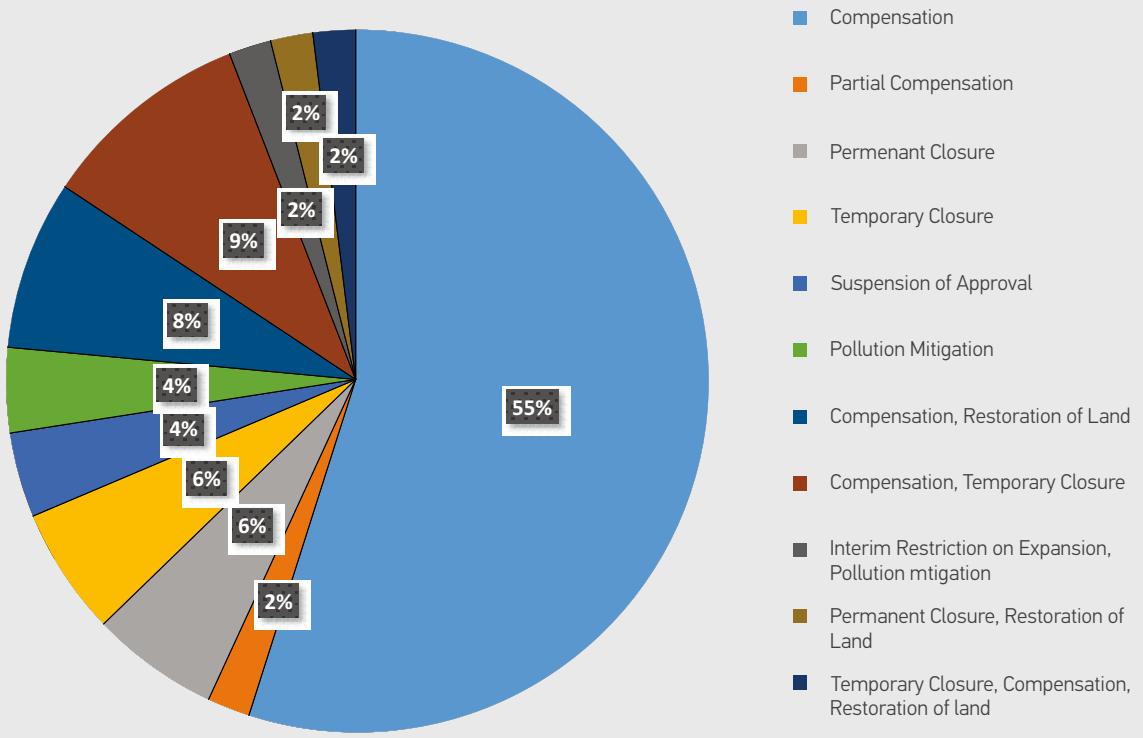
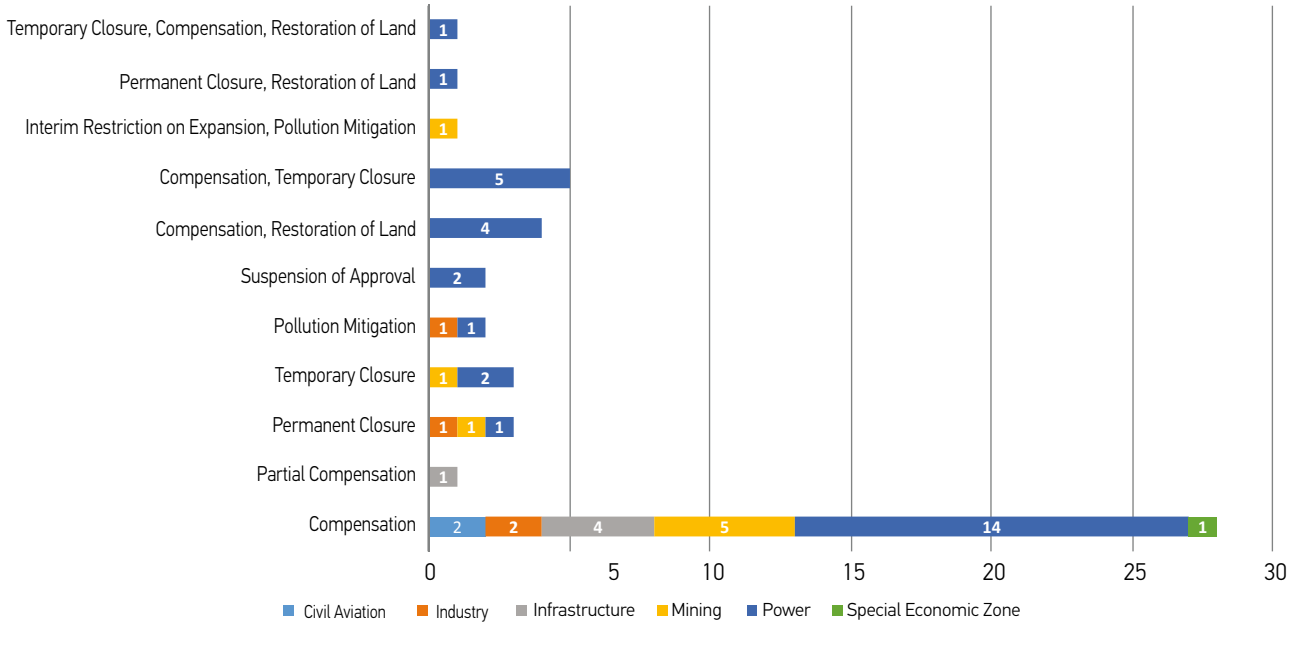


Figure 39: Number of cases where specific remedies were received in 75 cases of conflict



Each of these remedies has its own strengths and challenges. Some of these are discussed further.

Compensations

Compensations are important remedies that several affected people regularly seek from both the project authorities and governments for damages or in lieu of the impacts they face due to land use change. As discussed in the figure 39 above, in 51 cases of conflict analysed as part of this study (where remedies were achieved), there were 34 cases where the affected communities had sought compensations in addition to other remedies. While it is unclear whether these compensations were satisfactory, they were received in some form or the other. In the 17 cases where compensations were received, other remedies were sought, like cancellation of the project, return of forest land, and employment opportunities; implementation of environmental safeguards remained pending.

Compensations are sought by the affected people in return for the land acquired, and/or livelihood lost, as a one-time payment prior to the setting up of the project. They are also sought when project operations directly or accidentally damage water resources and/or farms or reportedly cause health impacts.

Researchers have pointed out that compensations are a large part of the litigation against land acquisitions. Singh (2012) concludes that most of the litigation on land acquisition in the Punjab and Haryana courts relates to compensations. His study concludes that in 86% of the cases, the compensation awarded by the district courts was greater than the compensation given by the government. In 63% of the cases before the Punjab and Haryana High Courts, the claimants had received higher compensations.

Wahi et al. in their 2017 study, highlight that "63.4% of the total 805 land acquisition related cases in the Supreme Court of India involved "claims by land losers seeking enhanced compensation under the Land Acquisition Act or applicable land acquisition statute."

The experience of seeking compensations for environmental damage or livelihood loss from a range of actors and forums leads us to inquire whether there are any standards followed while calculating the amount of compensation. A set of 20 cases, where compensation was imposed for violations of environmental laws in the past 10 years (2007-2016), was selected for closer analysis. The attempt was to understand whether there have been any trends in the way compensation is defined, calculated and structured.[49]

The analysis revealed that there is no general standard that has been stated or that can be observed for calculating the amount of compensation in the selected cases. However, in some cases, the courts have actually given the criterion that they have used for calculating the compensation. In Ramdas Janardan Koli & Ors vs. Secy, MoEF (Application No. 19/2013, Decided On: 27.02.2015, NGT Western Bench), the main issue was that of loss of livelihood of 1630 families of traditional fishermen due to the construction and expansion of a port (by Jawaharlal Nehru Port Trust) as well as developmental activities of CIDCO and laying of an underground pipeline by ONGC. The compensation, in this case, was calculated by taking two-thirds of the estimated annual income of one family by means of fishing. It was assumed that three years is a realistic time to assume to switch over to some other livelihood, and therefore the loss for three years was accounted for. The compensation was imposed on all the three entities.

In some instances, the courts have also been unable to calculate the compensation amount and how it is to be distributed. It is not clear through the judgments whether they have been able to ascertain all the affected parties and the range of impacts. In many cases, this has led to the constitution of a committee that would calculate this amount. One such instance is the case of Janardhan Kundalikrao Pharande & Ors vs. MoEF & Ors (Application No. 07(THC)/2014(WZ), 16.05.2014, NGT Western Bench), where the petitioners claimed that their fundamental right to good quality water for human and animal consumption, and agricultural use was being violated due to the pollution that was being caused by Jubilant Industries. The court found that Jubilant Industries has caused contamination of the water of the Nira River, which has further caused deterioration of the groundwater quality in the nearby area and that the agricultural lands have been damaged due to the pollution of the river water.

[49]This section draws from a note prepared by Krithika Dinesh analysing the judgments of the National Green Tribunal directing fines and compensations.

The challenge arises when the affected people seek compensations from either the administration or the company. In the Uttara Kannada district of Karnataka, the construction of a National Highway is presently underway. Following a series of complaints and meetings with the Pollution Control authorities, the company operating a stone crusher for the project in Bogribail village, paid an amount of INR 7,30,000 to 37 affected farmer families in December, 2016. However, communities in the Bogribail village complained that some more families had not received compensation. The company again gave compensation to fourteen families calculating the number of coconut (INR 90), cashew (INR 300) and mango trees (INR 300). The affected people felt that this was far from adequate and it also did not restrict the dust from the stone crusher unit to continue to damage their farm lands.[50]

Farmers seeking compensation against crop damage by the Bogribail stone crusher in Uttara Kannada, Karnataka.

In several areas heavily affected by mining, companies also give the affected people a meagre monthly payment. This ranged from INR 1000 to 4000 depending on the company, and an amount the local community is able to negotiate. There is no basis for calculating this, but it is only a mechanism by mining companies to keep conflicts at bay. According to Sudha Bhardwaj, a lawyer and trade unionist in Chhattisgarh, in such cases, "Everything is measured in 'dust-bhatta'- compensation for dust."[51]

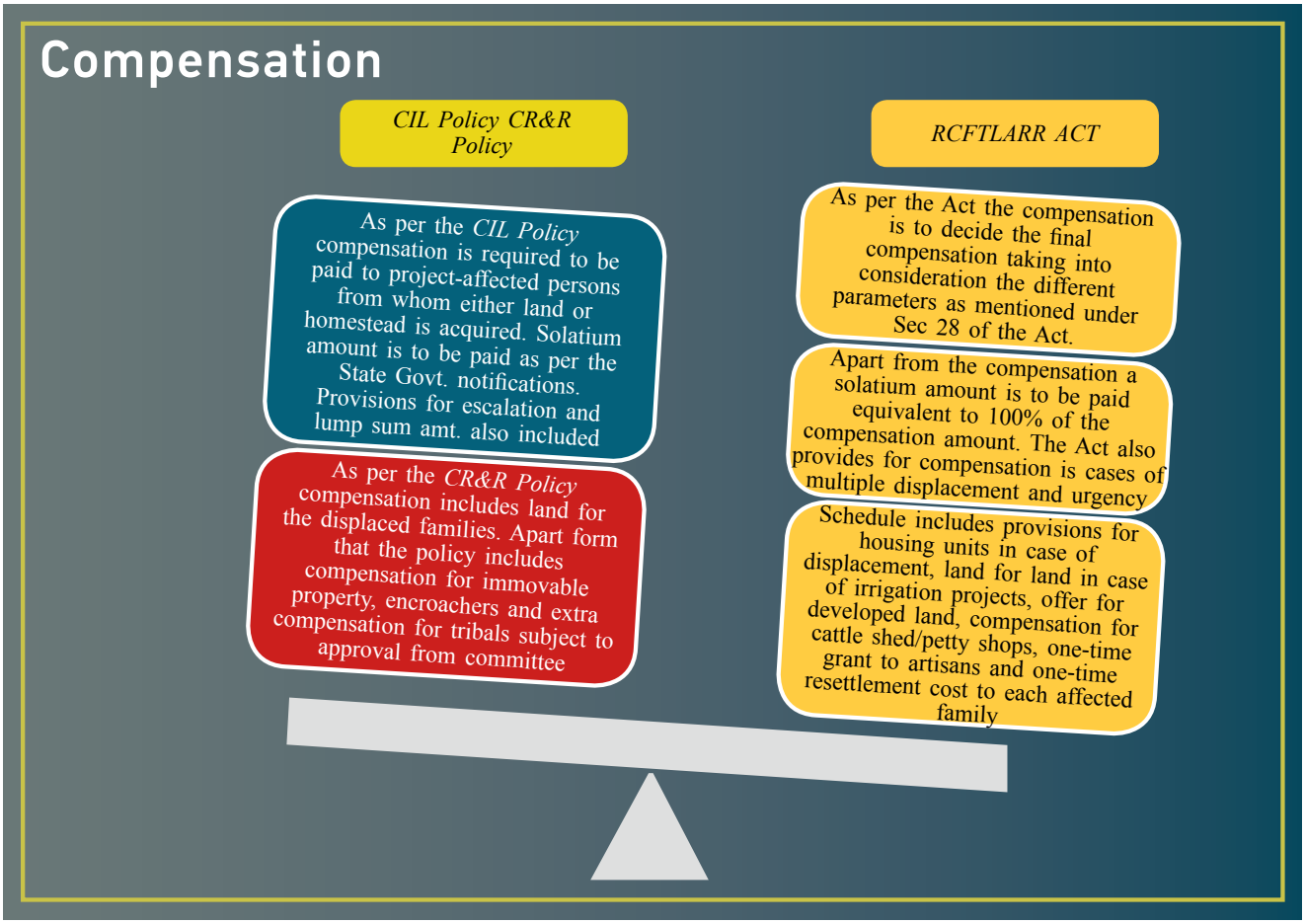
Finally, the discussion on compensation also leads us to understand whether the choice of a legal framework to determine compensations could itself lead to conflict. A closer look at three R&R law/policies for the land losers/affected people in the Gevra region of Chhattisgarh brings out this complexity.[52] These are the RFCTLARR, 2013, Rehabilitation and Resettlement policy of Coal India Limited, 2012 (CIL Policy), and Chhattisgarh Rehabilitation and Resettlement Policy, 2007 (CR&R Policy).

[50]Mahabaleshwar Hegde, pers comm (add date of field visit). Copies of community paralegal case forms related to the Bogribail stone crusher case pursued as part of the Center for Policy Research-Namati Environment Justice Program.

[51]Interview with Sudha Bhardwaj, March 11, 2014.

[52]This analysis is based on a short assignment by Kush Tanvani, a student from Nirma Law University, Gujarat.

When it comes to compensation, the RFCTLARR Act, 2013 takes into consideration a wide range of parameters to decide the final amount. The CR&R policy provides for compensation in terms of land for land but only to a displaced person. The compensation under the CIL Policy depends on different state policies and other regulations, which make it ambiguous. The RFCTLARR Act addresses the compensation claims of a 'person interested' which include all persons claiming an interest in compensation to be made on account of the acquisition of land under the Act, Scheduled Tribes and Other Traditional Forest Dwellers, who have lost any of their recognized rights, a person interested in easement affecting the land, a person having tenancy rights and any person whose primary source of livelihood is likely to be affected. In contrast, the CR&R policy addresses the compensation issue only in respect of displaced persons. The CIL Policy addresses the issue of monetary compensation only for those people whose land or homestead is acquired. Recognizing more people as eligible for compensation is the only reason that the RFCTLARR Act has the edge over the other two policies, i.e. CIL and CR&R policy.



In Gevra, the conflict between people affected by land use change and the proponent CIL is ongoing. The company is favouring the use of the CIL policy that according to the affected people is the least favourable when it comes to both compensation, whether it is land, money or employment benefits. There is a demand to implement the provisions of the 2013 central law or the state government's R&R requirements depending on what is more beneficial to the affected people, and there continued to be a stalemate at the time this study was being written.

Demand for Project Closure

People affected by land use change also approach different institutions or use a variety of strategies that are clearly directed towards closing down the construction or operations of an existing project. This is often the case in two instances: first, when a project has recently initiated construction activity, and there appear to be possibilities of holding back land use change; and second, when several attempts at seeking compensations, employment or restoration of damage *(discussed further)* have failed. In the first instance, the assessment of the

Bhavanapadu power plant, Andhra Prdesh

possibility of restricting project activity also depends on the collective agency or strength of the group leading the process as well as the alliances they were able to build with NGOs, lawyers or political representatives.

As per the analysis of the 75 cases, the demands for project closure were in the bundle of remedies that people sought in 19 cases. In 7 other cases, this was the only remedy they sought. The analysis reveals that in 8 cases, where the communities have demanded the cancellation of projects, they have achieved remedies such as temporary or permanent closure, or suspension of approval. These are high profile projects such as Bhavanapadu Thermal Power Project, M/s Alfa Infraprop Private Limited, Sompeta Super Critical Coal Based Thermal Power Plant and M/s Nagarjuna Construction Company Limited (Sompeta) in Andhra Pradesh, Athirapally Hydro Electric Project in Kerala, Lower Demwe Hydro Electric Project in Arunachal Pradesh, Posco Steel Plant in Odisha, Mahan Coal Ltd in Madhya Pradesh and Welspun Energy in UP.

One of the landmark cases where few villages affected by the proposed land use change by a steel plant and port consistently demanded that the project's construction activity not be initiated was the POSCO steel plant and port in Jagatsinghpur, Odisha. The two dominant strategies used by the villagers were protest and litigation. Every time the project authorities would initiate activities, there would be strong local protests and barricading disallowing the construction activity (Dash, 2008; Mishra, 2008). Challenging the project approvals in court with the help of national NGOs and lawyers was the other strategy so as to hold back land use change (Anon, 2012; PTI, 2014). This effort has continued even after the company has withdrawn and the state government is seeking to build a wall around the land to protect it from "encroachments". The villagers have not approached the court to restrain this. They are separately demanding that the land be restored to all the forest dwellers whose rights are yet to be recognised under the FRA, 2006. The conflict was still ongoing at the time this study was being finalised.

In several of these cases, the remedy sought the closure of the project, which is not always accepted. Where it is accepted, the closure is often temporary in nature. In one interesting case related to the operations of a copper smelter by Sterlite Industries Ltd in Tuticorin, Tamil Nadu, in March 2013, the State Pollution Control

Board, cut the power supply of the plant and ordered a shutdown following an "unsatisfactory response" to a closure notice (Mayilvaganan, 2013). The notice was issued in response to complaints filed by villagers raising concerns following a gas leak. While the plant claimed that its emissions were under check, the villagers wanted the project to be shut down so as to avoid risks. The company took this matter before the National Green Tribunal (NGT) where neither the PCB's action nor the villagers' complaint was upheld. The court allowed the plant to start operating under the monitoring of a committee with members of central and state pollution control authorities and scientists from IIT, Chennai. However, the observations of the NGT were critical of both the villagers and the PCB. A news report quotes the NGT bench to say, "A mere apprehension would not be sufficient for passing such drastic orders," and it also said that the PCB provided no scientific evidence. The tribunal had also reportedly observed that the complaint that the operations were endangering human lives was filed by villagers living 8 km away from the plant (PTI, 2013). The conflict between the villagers and Sterlite Tuticorin is ongoing as the villagers claim both the water and air are severely polluted. In February 2018, 250 people demanding closure were arrested (PTI, 2018).

The demand for closure of a plant is often a big challenge for the affected people who are directly dependent on the plant for livelihoods. Either they themselves or a family member is either a permanent or a contractual employee. In such cases the remedies sought do not include closing down a unit, but making sure that the operations do minimum damage, and where there is an impact, it is compensated for. As part of the action research carried out by the Centre for Policy Research-Namati Environment Justice program in four states, this aspect has repeatedly been a discussion point for community paralegals working with communities living around industries, mines and ports where their community partners have family members working with the very project that is causing the conflict.

Repatriation and Restoration (of land and water)

Vapi is an industrial town of South Gujarat situated in Valsad district. The industrial belt that begins from Vapi extends till the Mehsana district in Northern Gujarat. This approximately 28 km stretch of industries is the longest chemical industrial corridor in Asia. However, today Vapi is better known for its high intensity pollution. There are two rivers, Kolak and Damanganga, flowing through the northern and southern ends of the city. Both these rivers have been subjected to heavy pollution due to the dumping of industrial effluents from the industries.

Ramesh Chandra Tandel, a fisherman from Kolak village and one of the persons who actively works on the environmental issues in Vapi, says, "The survival of the fishing communities of Vapi who are depended on Kolak and Damanganga is uncertain as the rivers are getting polluted day by day and the river ecosystems are being deteriorated."[53] During an interview with him in October 2017, he recollected that there used to be more than 60 fishing boats 10-15 years ago in Kolak village and now there are only 6 boats that go for fishing. The only solution to this problem is the clean up and restoration of the river, alongside prohibiting any effluent discharge. According to Ramesh Tandel, there are several unauthorised pipelines that dump the industrial effluents in to the river. He suggests conscious monitoring to avoid such instances. He has been working with community paralegals of the Centre for Policy Research-Namati Environmental Justice program for the last four years to find a solution to this problem. They have invoked environmental laws and civil procedure codes to get administrative remedies. Ramesh and others have been seeking redress since the time industrial activity had begun damaging the two rivers in the mid-late 1990s. However, the only solution that is being offered is the construction of a deep-sea pipeline so that the "treated" waste from the industries is not dumped into the river but into the sea. There has so far been no buy-in from the government for restoring the river, so as to address the concerns of diminishing fish catch and loss of livelihoods.

When it comes to land, there are two distinct remedies that are sought depending on the problem or impact faced by people. The first is addressing the damage to land in case of dumping of waste or extraction due to mining operations. For instance, in several parts of the country where sand mining has led to erosion or salinity

[53]Interview conducted with Ramesh Chandra Tandel from Kolak on October 1, 2017.

Contamination of the Damanganga estuary in Vapi, Gujarat

ingress, people have sought that the activity be stopped and the area be restored. An analysis by the South Asia Network on Dams, Rivers and People (SANDRP) has analysed several judicial interventions to show that while there have been important directions to restrict or rein in sand mining, they have failed to restore the damage already caused (Rawat, 2018). This is despite it being sought as a remedy by the petitioners.

The second set of remedies is that of repatriation of land. This is a demand when a project has withdrawn from an area, and the affected people would like the unused land back to restore livelihoods, e.g. POSCO in Jagatsinghpur (Kohli, 2017). More recently, the demand for this remedy has also been fuelled by the existence of a new legal clause as part of the 2013 Land Acquisition Law.

A group of farmers from Jamnagar in the Saurashtra coast of Gujarat had been holding off against the acquisition of land by Reliance SEZ for about a decade. When the 2013 law was enacted, they approached the High Court seeking applicability of Section 24 (2) of the Act in their case. This applies to instances where land has been acquired under the 1894 law, but no compensation has been paid and possession is still with the original landowners for five years (or more) after acquisition. In such cases, the proceedings are considered to have lapsed. If the government desires, it can reinitiate the process under the new law including requirements of consent and social impacts assessments. The High Court did not rule in favour of the repatriation. The legal interpretation has gone in favour of the company. It claimed that it was only 5% of the farmers who had refused to receive compensation and were seeking repatriation. The company said that it was not at fault as it had received the required consent from the Government of Gujarat and also deposited the required amount with the government.[54] The matter is now pending before the Supreme Court.

It can be stated without doubt that this has been one of the most difficult remedies to achieve for affected people whether it comes to clean up and restore the damage or repatriate acquired property.

[54]Judgment dated November 22, 2017 in SPECIAL CIVIL APPLICATION NO. 20362 of 2015.

Financial and Stakeholder inclusion

A more recent set of remedies that has been sought by the affected people is that of financial inclusion into the ongoing industrial or mining operations. This is both, at the specific project level, as well as the entire sector for an entire sector. In this section we discuss two such initiatives that are still critical experiments seeking both government and industry buy-in.

The first relates to the initiative undertaken by villagers in Tamnar block of Raigarh district of Chhattisgarh who have registered their own firm called "Gare Tap Upkram Producer Company". The idea behind establishing the firm was to mine the coal themselves rather than surrendering their land to industrialists. More than 500 villagers from 12 adjoining villages of Gare had pledged nearly 700 acres of land to the producer company. As they deliberated further on the issue of mining, the villagers decided against mining altogether and instead proposed setting up of production of alternate energy so that the land is not devastated by mining. The Gare Tap Upkram Producer Company has subsequently approached the Environics Trust, a national NGO, and requested it to conduct a study on the feasibility and willingness of the inhabitants of Gare in adopting alternate sources of energy, predominantly in solar and bio-gas energy. A final assessment of this is underway.

Another initiative is the Korba Bhuvistapit Company Limited. In the Korba coal mining region in Chhattisgarh, over 2400 families who have been displaced but have not been provided jobs have come together to form this producer company. The main objective of the company is to demonstrate that communities can undertake activities including transportation, plantation and renewable energy and to maintain moral pressure on South Eastern Coalfields Limited (SECL) to provide opportunities for ancillary activities to the displaced members. The company has also started a dialogue with a Bengaluru based company to initiate an innovative building materials production unit, which can also utilise fly ash. These developments are in an early stage and capacity building for management of large activities is currently the focus.[55]

Podi Village, displaced by the Gevra mine expansion (Korba) in 2014

[55]The discussion on Gare Tap Upkram Producer Company and Korba Bhuvistapit Company Limited is based on a detailed note by Sreedhar Ramamurthy, Environics Trust; received on March 8, 2018.

The Goenchi Mati movement in Goa, goes with the following slogan - "We do not inherit the Earth from our ancestors; we borrow it from our children." The movement has emerged from the experience that finding a state-wide solution to mining-related damage in the state has been extremely divisive. While there have been initiatives and orders that have led to a total ban on mining in the state, Goa has also seen protests from labour unions that have raised an important issue of livelihood loss. It has also been extremely difficult to restore the damage caused by mining and check the widespread conflict arising out of land use change.

The Goenchi Mati movement proposes the idea of a universal basic income from mining for all citizens of the state. While regulation on mining activity is upfront in the movement's manifesto, it also proposes the idea of setting up the Goenchi Mati Permanent Fund. It proposes that all money from mining in the state should be put into this fund and redistributed through a Citizen's fund mechanism. This money will be distributed to all people of Goa "from the after-inflation income of the Permanent Fund. The first Citizen's Dividend will be given when it can amount to at least INR 100 per person, and thereafter annually or more frequently."

There still needs to be the government and citizens' participation in this process. However, it presents an interesting remedy, which is being sought with an understanding that if mining needs to continue, the income should be evenly distributed, as the resource is a common heritage and not any single company's private property.

These are the four key remedies that have been used by the people affected by land use change to address the conflict. However, there are a few questions, which require inquiry. First, do specific strategies enhance or reduce the chances of any of the above remedies? Second, does a combination of strategies work better to receive one-off remedies or a combination of remedies? It is difficult to conclude one way or the other, given the large number of projects in India, all of which result in land use change. However, there are some patterns, which emerge in the 75 cases, which were assessed across various parameters as part of this study.[56]

Out of 75 cases, in 51 cases partial remedies were achieved (See Figure 38), but the conflict was resolved in three cases. In 55% cases, the compensation was given, while compensation plus restoration of land or temporary closure was the second most popular remedy across these cases.

The next point to understand is whether the remedies finally received by the affected people were those that they had sought. In 34 cases, where communities had sought compensation along with other remedies, they definitely received compensation. Out of these, only in 6 cases, affected communities received remedies beyond compensation. These include temporary closure and restoration of land. In 9 cases, where the communities have demanded cancellation of projects, they have achieved remedies such as temporary closure, permanent closure or suspension of approval.

An attempt was also made to understand whether the strategies used had any bearing on remedies received. In 51 of the 75 cases, some form of remedy was received, while in others, the conflict remains completely unresolved or closed. Across 51 cases where remedies were achieved, we found that protests, administrative complaints, and litigation were the popular strategies that were tried out by the communities to resolve the conflict.

[56]Note: The limitation of this analysis is that it is based entirely on secondary information like news reports, NGO studies, public statements and government orders related to these projects.

8 Conclusion

Land use change is a wicked problem for an aspirational economy like India. In the last three decades, the government has expanded the network of domestic companies and invited international players to invest in industrial and infrastructure projects. This has created a vast footprint of social and environmental impacts that are yet to be remedied. Policy ideas such as environmental impact assessments, public hearings, Free Prior Informed Consent (FPIC), and compensatory measures like afforestation have been experimented with to ensure that economic growth can be pursued with least environmental damage and through inclusive decision-making. However, if the rising levels of conflicts, as discussed in the study, are anything to go by, then these mechanisms have fallen short of achieving what they set out to do.

As of October 2017, 14,498 industrial, mining, power and infrastructure- related projects have been granted environmental approvals from the central government. This number would be much more if sectors such as railways and approvals by state-level impact assessment agencies were to be taken into account. Ironically, no ministry or department in the government maintains a consolidated record of how much land use change has been affected due to these approvals. Any assessment of what the numbers could be is only estimation.

In order to understand what could be the scale of land use change in India, we attempted to assess a total of 4,553 projects that were granted environment clearance between 2005 and 2016. These were from four sectors: mining, thermal power, river valley projects, as well as infrastructure and CRZ, based on how the MoEFCC has categorized the approval-granting committees. However, data on land use change was not readily available for these. It required a primary analysis of approval letters available on the ministry's website to determine the scale of land use change.

Based on the information, in 2,962 environment clearance letters for these four sectors, a total land use change of 12,44,736 hectares was officially approved over ten years. This averages to a minimum of 1,24,473 hectares per year for four sectors only. What this data also shows is that a large percentage of land use change that is being approved is on non-forest land, which includes designated revenue grazing land, agricultural land or common use areas such as fishing harbours or river beds. During 2013-2016, 205,195 hectares of land was approved for 1,881 mining projects. 80% of this is non-forest land.

The focus of several environmental groups has been on calculating the forestland diverted for industrial, energy and mining uses. At the same time, land acquisition struggles have concentrated on advocating against the policy-driven grab of private agricultural land. What is left out of the calculation are common use areas, which are in seasonal use like fishing, or grazing where ownership might be the least clarified.

It can be argued that not all these projects have initiated construction activity or started operations. This could be due to a variety of factors including financing, delay in land transfers, or on-ground resistance to land use change. But once a project is approved, a project proponent more often than not seeks to secure the land as its property. This is either through acquisition, forest diversion or purchase. Irrespective of a project taking off, the intent towards land use change is in the official records. So, farmers might continue to grow crops for a decade, only to be issued a notice for eviction indicating that the land use is no longer legally valid, or the property rights have lapsed in the light of land acquisition. The same is valid for fishing communities using common grounds for berthing, drying, and sale of fish catch, or for pastoral communities whose migratory routes might be blocked due to fencing.

Land use change results in a range of conflict which can amplify into conflicts. These impacts relate to displacement and dispossession, livelihood loss and environmental pollution. Affected communities, social movements, and civil society actors have, together or individually, engaged in a variety of strategies to resist land use change or manage the conflicts arising out of land use change. The quantitative assessment of 75 instances of conflicts and the narratives in the four case studies clearly point out that groups have almost always used a combination of strategies to secure the remedies. This includes compensations, restoration,

mitigating pollution or cancellation of an upcoming project. The point at which a conflict comes to a head also determines these strategies. At a time when land use change is proposed, communities either negotiate the cancellation of a project or higher compensations. Post-approval, the strategies could shift to either on-ground resistance to delay possession or a continued demand for unfulfilled promises such as jobs, welfare services or rehabilitation.

India has many places that have seen industrial or mining activity for decades. Desired remedies in such places require governments and corporations to address decades of social injustices and harms. Conflicts are an everyday reality. People take to carving out economic opportunities, negotiating solutions or engage in direct action demanding accountability and redress. Experiments such as registering companies or cooperatives to official contracts, or securing mining leases are innovative methods through which a few affected people are addressing the conflicts. The success or failure of these strategies is yet to be seen, but they are creative forms of engaging both the state and the project authorities.

Given the demand, the push for land use change is unlikely to reduce in the coming decades. The Indian government has launched flagship schemes inviting both international and domestic companies to invest in real estate, port development, mining, rail, and roadways. Even as this study comes to a close, thousands of farmers are protesting against the acquisition of agricultural land for the purpose of the flagship Mumbai-Ahmedabad bullet train project or staking claim on land by customary practices like *Pathalgadhi* (Anon, 2018 , Sundar, 2018). At the same time, several rights-based clauses and safeguards within the existing legal system are being reorganised to create space for such investments (Kohli and Gupta, 2017; Sinha, Neha, 2017).

The government has not been able to restrict ongoing impacts, restore rights and remedy past environmental damage. Affected people are using innovative strategies and time-tested techniques to mediate solutions and demand accountability. However, they have not been able to conclusively reverse the trend of conflict, or restrain the pace of land use change, as yet. As a result, in many places across the country, conflicts associated with land use change have become the new normal.

References

Agrawal, A., Britt, C., Kanel, K. (1999). *Decentralization in Nepal: A comparative analysis*. Oakland, CA: Institute for Contemporary Studies Press.

Lakshmi, Ahana, Schiavina, Aurofilio, Banerjee Probir, Reddy, Ajit, Mandeen, Sunaina, Rodriguez , Sudarshan and Apte, Deepak. October 2012. *The Challenged Coast of India*. A report prepared by PondyCAN in collaboration with BNHS and TISS.

Amnesty International. 2016. *When land is lost, do we eat coal?: coal mining and violations of Adivasi rights in India*, Amnesty International, Bengaluru, India.

Ananthnarayanan, Ravi. July 10, 2012. *Outlook for iron ore stocks remains down in the dumps*. The Mint.

Anon. January 20, 2018. *Idco stops boundary wall construction*. New Indian Express, and Das, Subrat. June 2, 2017. *JSW eyes Posco land for steel project*. The Telegraph.

Anon. March 30, 2012. *Green Tribunal suspends environmental nod to Posco*. The Hindu.

Anon. May 25, 2018. Land acquisition for Bullet train: Activists write to JICA, Vadodara farmers protest. The Indian Express.

Anon. May 26, 2017, *Decision on 89 villages to boost Delhi's land pooling policy*. Outlook News Scroll. https://www.outlookindia.com/newsscroll/decision-on-89-villages-to-boost-delhis-land-pooling-policy/1060652; accessed on February 25, 2018.

Bakore, M. (2007). *Urban Land Ceiling Act: Appeal to repeal*. CCS Series on NURM Reforms, 5. New Delhi: Parth J. Shah on behalf of Centre for Civil Society.

Banerjee, Shrestha. January 28, 2016. *EIA notification amended to bring small-scale mining under its ambit*. Down to Earth.

Bhutani, Shalini and Kohli, Kanchi. 2016. *The case for the commons: lessons from implementation of the landmark judgment of the supreme court of India (a policy brief)*. Foundation for Ecological Security, Anand, India.

Buchy, Marlene. 1996. *Teak and Arecanut: Colonial state, Forest and People in Western Ghats- 1800-1947*. Institut Francias De Pondichery, Pondicherry.

Centre for Policy Research (CPR)-Namati Environmental Justice Program (2016). *How effective are environmental regulations to address impacts of industrial and infrastructure projects in India.* India: CPR-Namati Environmental Justice Program.

CSE (Centre for Science and Environment), October, 2012. *Mercury Pollution in Sonbhadra District of Uttar Pradesh and its Health Impacts*. CSE, New Delhi.

Chakravorty, Sanjoy. March 17, 2015. *Why is India facing growing conflict over land?*. British Broadcasting Corporation. . http://www.bbc.com/news/world-asia-india-31705131; accessed on April 28, 2017.

Chari, Mridula. August 12, 2015. *Land pooling strategy for the new Andhra capital could become a model for India's Smart Cities*, Scroll.in. Chopra, Kanchan.2001. Wastelands and Common property land resources Seminar. http://www.india-seminar.com/2001/499/499%20kanchan%20chopra.htm; accessed on February 3, 2018.

Comptroller and Auditor General (CAG) of India. 2013. *Report No.: 21 of 2013 on Compensatory Afforestation in India, Government of India*, New Delhi.

Cookson, Robert and Blas, Javier. August 22, 2012. *Iron prices near three year low*. The Financial Times.

Counterview. October 11, 2013. *Extend term of MB Shah Commission inquiring into illegal mining or face agitation: civil rights groups*, www.counterview.net; https://www.counterview.net/2013/10/extend-term-of-mb-shah-commission.html; accessed on February 26, 2018.

Das, S. 2012. *Pressure for Conversion of Forest Land to Non-forest uses in India*, in Anonymous (ed), Deeper Roots for Historical Injustice, pp.159-234. Washington DC, Rights and Resources Institute.

Dash, Jatinder. September 2, 2008. *Thousands protest against POSCO steel plant in India*, www.reuters.com,. https://www.reuters.com/article/india-protests-posco/thousands-protest-against-posco-steel-plant-in-india-idUSSIN10900020080902;

Dash, Jayajit. August 2, 2017. *SC Imposes 100% Penalty on Odisha's Illegal Mining*. The Wire.

Datta, Ashirbani. 2008. *Development-induced Displacement and Human Rights*. Deep & Deep Publications, New Delhi.

Department of Land Resources. 2013. *National Land Utilisation Policy*, Government of India, New Delhi

Deshpande, Alok. January 2, 2017. *Jaitapur to witness anti-nuclear plant protest again*. The Hindu.

Dua, Divya. August 11, 2017. *Can Amaravati set land pooling example for a city built from scratch?* Citizen Matters.

ELDF and WWF India. 2009, *Protection of Forests in India - The Godavarman Story*. New Delhi.

Fernandes, Walter. 2008. *India's Forced Displacement Policy and Practice: Is Compensation up to its Functions?* IN Elena Fiddian-Qasmiyeh, Gil Loescher (Eds). The Oxford Handbook of Refugee and Forced Migration Studies, Oxford University Press.

Forest Survey of India. 2013. *State of Forest Report 2013*. Ministry of Environment and Forests, FSI-Dehradun.

GoI (1995). Report of MPs and experts to make recommendations on the Salient features of the law for extending provisions of the Constitution 73rd Amendment (1992), to Scheduled Areas, Government of India, Ministry of Rural Development, Delhi.

GoI (Government of India). 1992, THE CONSTITUTION (SEVENTY-THIRD AMENDMENT) ACT, 1992, Government of India, New Delhi.

Government of India, Ministry of Rural Development. 2003. *Annual Report 2002-2003*. New Delhi.

Greenpeace. Undated. *Save Mahan: Our Forests, Our Rights*; http://www.greenpeace.org/india/en/What-We-Do/Quit-Coal/save-mahan/ ; accessed on February 26, 2018.

Gupta, Priyanshu and Choudhury, Arnab Roy. December 2, 2017. *Harnessing Gram Sabhas to Challenge State Profligacy in Chhattisgarh*. Economic and Political Weekly, Vol LII, No.48.

Heller, Patrick. 1999. The *Labor of Development. Ithaca*. Cornell University Press, Chapters 2 and 3.

India Brand Equity Foundation. 2018, Real Estate. https://www.ibef.org/download/Real-Estate-February-2018.pdf; accessed on March 26, 2018.

Jai, Shreya. May 5, 2015. *Private sector beats government to add record capacity*. Business Standard.

Jaffrelot, Christophe (September–October 2000). *Sanskritization vs. Ethnicization in India: Changing Identities and Caste Politics before Mandal*. Asian Survey. 40 (5): 756–766.

Jathar, Reshma. July 31, 2010. *Jindal power plant risk to alphonsoes*. Down to Earth.

Johnson, Craig. 2003. *Decentralisation in India: Poverty, Politics and Panchayati Raj* (Working Paper 199). Overseas Development Institute, United Kingdom.

Kattakayam, Jibby. November 23, 2010. *Sangharsh holds dharna against displacement, land acquisition*. The Hindu.

Kaysser, Nina. September 15, 2015. *Land Conflicts in India. Armed Conflict Location & Event Data Project*. http://www.crisis.acleddata.com/land-conflicts-in-india/; accessed on April 28, 2017.

Kiran, K P Sai. November 4, 2012. *KLR Act amendment could grave situation for result fragment of estates plantation sector*. http://timesofindia.indiatimes.com; The Times of India.

Kohli, Kanchi. 2018. *After POSCO left*. Civil Society, January, 2018.

Kohli, K. 2014. *Envisioning Environmental Futures: Conversations around Socio-ecological Struggles and Industrialisation in Mundra, India* IN Socio-Economic Insecurity in Emerging Economies Edited by Khayaat Fakier and Ellen Ehmke, Routledge, United Kingdom.

Kohli, Kanchi and Gupta, Debayan. 2017. *Mapping Dilutions in a Central Law*. Occasional Paper. Centre for Policy Research, New Delhi.

Kohli, K. And Menon, M. 2011. *Banking on Forests: Assets for a Climate Cure?* Kalpavriksh and Heinrich Boll Foundation, New Delhi.

Kohli, K and Menon, M. 2009. *Calling the Bluff: Revealing the state of Monitoring and Compliance of Environmental Clearance Conditions.* Kalpavriksh. New Delhi.

Kohli, K., Menon, M., Samdariya, V., and Guptabhaya, S. 2011. *Pocketful of Forests: Legal debates on valuating and compensating forest loss in India.* Kalpavriksh & WWF-India, New Delhi.

Lascorgeix, Antoine and Kothari, Ashish. 2009. *Displacement and Relocation of Protected Areas: A Synthesis and Analysis of Case Studies*. Economic & Political Weekly XLIV: 37–47.

Lele, S. and Menon, A. 2014. *Introduction: Forest Governance Beyond Joint Forest Management, Godavarman and Tigers.* Democratizing Forest Governance in India, pp 1-24, Oxford University Press.

Machimar Adhikar Sangharsh Sangathan (MASS, 2015). January 22, 2015. *Press Statement: World Bank Panel Exposes Continued Violations at Tata Mundra UMPP*.

Mani, Rama. November 8, 2010. *Wastelands Atlas of India by National Remote Sensing Centre and Ministry of Rural Development (2010)*, India Water Portal. http://www.indiawaterportal.org/articles/wastelands-atlas-india-national-remote-sensing-centre-and-ministry-rural-development-2010; accessed on January 22, 2018.

Mayilvaganan, V. 31st March, 2013. *Pollution control board orders Sterlite plant closure in Tamil Nadu*. The Economic Times.

Menon, Manju, Vagholikar,Neeraj, Kohli, Kanchi (eds). *Large Dams in North East India: Rivers, Forests, People and Power*. The Ecologist Asia, Vol. 11, No.1, January-March 2003.

Ministry of Rural Development (MoRD) and National Remote Sensing Centre (NRSC). 2010. *Wastelands Atlas of India*, Ministry of Rural Development, New Delhi.

Ministry of Shipping. April, 2016. SAGARMALA. *Building Gateways of Growth (National Perspective Plan)*. Government of India, New Delhi.

Misra, H. N. (2014). *Land and Land Use Planning in Indian Context*. In Misra (Ed.), *Managing Natural resources: Focus on Land and Water*. PHI Learning Pvt. Ltd.

Mishra, Ashutosh. 30th April 2008. *Anti POSCO protest gathers steam*. Down to Earth.

MoEF (Ministry of Environment and Forests), 2004. HANDBOOK OF Forest (Conservation) Act, 1980 (With Amendments made in 1988), Forest (Conservation) Rules, 2003 (With Amendments made in 2004), Guidelines & Clarifications (Up to June, 2004), Government of India, New Delhi.

Mundra Hitrakshak Manch, Ujjas Mahila Sangathan, MASS, and Namati-CPR Environment Justice Program. 2013. Closing the Enforcement Gap: Findings of a Community-led Ground Truthing of Environmental Violations in Mundra, Kutch, Namati-CPR EJ Program, New Delhi.

Negi, N. S., and Ganguly, S. (2011). *Development Projects vs. Internally Displaced Populations in India: a Literature Based Appraisal*. Bielefeld: Centre on Migration, Citizenship and Development.

Office of the Compliance Advisor Ombudsman (CAO). 2015. Monitoring of IFC's Response to: CAO Audit of IFC Investment in Coastal Gujarat Power Limited, India, International Finance Corporation (IFC), Washington.

Pardhi, Om Prakash, Sahu, Bed Lal, Upadhyay, Manish, Dwivedi, Pratima Rani, Augur, M.R.,

Pandey, Rajiv Ratna and Pathak, Krishna Kumar. 2014. *An important role of coal and its calorific value on the performance of thermal power station: A case study*. Recent Research in Science and Technology 2014, 6(1): 180-182.

Pattanayak, N.C. January 22, 2011. *Death rides on Keonjhar roads*. Times of India,

http://mines.nic.in/index.aspx?level=1&lid=673&lang=1; accessed on October 25, 2014.

Pillai, Priya. February 17, 2015. *Story of Mahan needs to be heard*. Greenpeace India., http://www.greenpeace.org/india/en/Blog/Campaign_blogs/story-of-mahan-needs-to-be-heard/blog/52136/; accessed on February 26, 2018.

Pillai, P, V, Gopal, Kohli, K. 2011. *Singrauli: The Coal Curse*. Greenpeace India, Bengaluru.

Press Trust of India (PTI). January 24, 2014. *National Green Tribunal tells Posco not to cut trees until forest clearance.*

Press Trust of India (PTI). February 13, 2018. *Protesters against Sterlite Copper plant in Tuticorin arrested*. The Indian Express,

Press Trust of India (PTI). May 31, 2013. *Sterlite allowed to restart Tuticorin plant*. The Hindu.

Press Trust of India (PTI). January 21, 2013. *Action Aid accuses the govt for aiding Vedanta*, PTI.

Press Trust of India. June 5, 2012. *Tribunal rejects IL & FS' plea to allow work on Cuddalore plant*. The Economic Times.

PRS Legislative Research. 2012, In Parliament-Central laws and federal structure.

http://www.prsindia.org/media/articles-by-prs-team/in-parliament-central-laws-and-the-federal-structure-2241/; accessed on April 11, 2018.

Qiu Jane. December 5, 2012. *Flood of Protest hits Indian Dams. nature. http://www.nature.com/news/flood-of-protest-hits-indian-dams-1.11932*; accessed on June 18, 2017.

Ranjan Nath, Soumya. June 29, 2016. *Illegal and Unfair Acquisition of Mining Land in Korba*. Down To Earth. http://www.downtoearth.org.in/news/illegal-and-unfair-acquisition-of-mining-land-in-korba-54627; accessed on August 10, 2017.

Ramanathan, Usha, 2009. A WORD ON EMINENT DOMAIN, in Lyla Mehta ed., *Displaced by Development – Confronting Marginalisation and Gender Injustice* (New Delhi: Sage, 2009), p. 133.

Rama Mohan, R.V. February 18, 2006. *Major Loss, Minor Gain: Polavaram Project in AP*. Economic and Political Weekly, Vol. 41, Issue No. 07.,

Rao, S.L., Deshingkar, Priya, and Farrington, John. December 30, 2006. *Tribal Land Alienation in Andhra Pradesh*. Vol XLI No.52, , pp 5401-5407.

Rawat, Bhim Singh. 2nd January 2, 2018. *Sand Mining Review 2017- 3 – Judicial Interventions Fail To Restore Damage*. SANDRP. https://sandrp.wordpress.com/2018/01/02/sand-mining-review-2017-3-judicial-interventions-fail-to-restore-damage/; accessed on February28, 2018.

Rawat, Vidya Bhushan. 2016. *Land Acquisition and Land Alienation in India*: Select Case Studies. Social Development Foundation (Delhi) and International Land Coalition (Rome).

Roche, Elizabeth and Anuja. August 31, 2015 *Land acquisition ordinance won't be reissued: Narendra Modi*. Livemint..http://www.livemint.com/Politics/noHEydhRIEPpdkn0fAqjRN/Govt-not-to-repromulgate-land-ordinance-Narendra-Modi.html; accessed on April 28, 2017.

Rosencranz, A., Sahu, G., & Raghuvanshi, V. 2009. *Whither the National Environment Appellate Authority?* Economic and Political Weekly.44(35), 10–14.

S. Suresh Kumar. Undated. Land Accounting in India: Issues and concerns; accessed from http://unstats.un.org/unsd/envaccounting/seeaLES/egm/LandAcctIndia.pdf Retrieved on October 25, 2014.

Sainath, P. (1996). *Everybody loves a good drought: stories from India's poorest districts*. Penguin Books India. New Delhi.

Saxena, N.C. 2012. *Administrative Reforms for Better Governance*. Daanish Books, New Delhi.

Sethi, Nitin. December 31, 2014. *250 conflicts over land acquisition recorded in 2013 and 2014*. Business Standard. http://www.business-standard.com/article/economy-policy/250-conflicts-over-land-acquisition-recorded-in-2013-and-2014-114123100051_1.html; accessed on May 11, 2017.

Singh, R. (2015). *Mining and Its Impact on Tribals in India: Socio -Economic and Environmental Risks*. International Journal of Social Science and Humanities Research,3(2). 429-439. ISSN 2348-3156.

Singh, J. (1985). *Upper Damodar Valley: a study in settlement geography*. Inter-India Publications, United Kingdom.

Singh, Ram. 2012. *Inefficiency and abuse of compulsory land acquisition: An Enquiry into the way forward*., 47(19) Economic and Political Weekly 46 (2012).

Singh, Ram, 2013. *Litigation over Eminent Domain Compensation*. (Working Paper), International Growth Centre, United Kingdom.

Singh, Shekhar. 2003. *Social and Environmental Impacts of Large Dams in India*. The Ecologist Asia, Vol 11, No. 1, January-March 2003.

Singh, Subrat. 2013. *Common lands made 'Wastelands*. Making of the 'Wastelands' into Common lands. https://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/9074/SINGH_0217.doc.pdf; ., accessed on January 22, 2018.

Sinha, Neha. August 15, 2017. *Where Has India's Environmental Journey as an Independent Nation Brought Us?* The Wire.

Shahabuddin, G., & Bhamidipati, P. L., 2014. *Conservation-induced Displacement: Recent Perspectives from India*. Environmental Justice Volume 7, Number 5, 2014.

Suchitra, M. November 2, 2012, *Kovvada Nuclear Power Plant will displace about 8000 People*. Down To Earth. http://www.downtoearth.org.in/news/kovvada-nuclear-power-plant-will-displaced-about-8000-people-39514; accessed on March 13, 2017.

Sundar, Nandini. May 16, 2018. *Pathalgadi is Nothing But Constitutional Messianism So Why is the BJP Afraid of It?* The Wire.

The World Bank. 2015. *India: land governance assessment (national synthesis report)*. The World Bank, USA.

Times News Network. March 18, 2017. *Government defends move to convert land use of 'charagah*', Times of India.

Times News Network. August 11, 2013. *National Green Tribunal ban fails to stop sand mining in Meghalaya*, Times of India.

Vagholikar, Neeraj. 2011. *Are Big Dams Leaving India High And Dry?* Sanctuary Asia.http://www.sanctuaryasia.com/magazines/conservation/5289-are-big-dams-leaving-india-high-and-dry-by-neeraj-vagholikar.html; accessed on March 28, 2018.

Vasundhara (Environment and Development Team). December 2008. *Impact of mining in scheduled area of Orissa: A Case Study from Keonjhar.* Vasundhara, India

Venkatasubramanian, K. Undated. *Land reforms remain an unfinished business*.http://planningcommission.nic.in/reports/articles/venka/index.php?repts=m-land.htm#; accessed on March 24, 2018.

Wahi, Namita. (2016). *The Fundamental Right to Property in the Indian Constitution* IN Sujit Choudhry, Madhav Khosla, and Pratap Bhanu Mehta (eds). The Oxford Handbook of the Indian Constitution. Oxford University Press.

Wahi, Namita. February 2013, Land acquisition, development and the constitution, Seminar (642).

Wahi, N., Bhatia, A., Gandhi, D., Jain, S., Shukla, P., and Chauhan, U. 2017. *Land Acquisition in India: A Review of Supreme Court Cases from 1950 to 2016*. Centre for Policy Research, New Delhi.

CASE STUDY I

Bhavanapadu-Kakarapalli Thermal Power Project, Andhra Pradesh[1]

Kakarapalli is a small village in Santhabommali mandal of Srikakulam district of Andhra Pradesh. The Kakarapalli swamp, which is a part of the well-known Naupada Swamp in Andhra Pradesh, is situated in this region. It is a unique wetland ecosystem that has a rich biodiversity. This region also supports the vast number of fishing communities that are involved in traditional fishing livelihood. The Naupada swamp is also known as the salt capital of the east coast region. The Kakarapalli swamp has historical importance, as it was one of the im-portant locations where the Salt Satyagraha led by Mahatma Gandhi, started on the east coast, opposite a salt factory (Sarma, 2011). It is here that the site of 1320 Megawatt (MW) Bhavanapadu-Kakarapalli Thermal Power Project was proposed back in 2007.

Aspirations of the government of Andhra Pradesh of revenue generation through industrialisation are heavily hinged on Srikakulam district. The district, over the years, has been pitched as a power hub, nuclear power hub and a hub for pharmaceutical industries. (Haidar, 2016), (Hindu, 2014), (Manish, 2014). In an attempt to bridge the power deficit faced over the years, in 2009, the government of Andhra Pradesh announced that the state had five major thermal power plants of a joint capacity of 10,000 MW at various stages of development in Srikakulam district. Bhavanapadu Thermal Power Plant with its proposed generation capacity of 2640 MW was one of them. In fact, revival of the non-operational Bhavanapadu port to import coal to meet the needs of these thermal power plants was also planned. (Rao, 2009)

All these thermal power plants, to be located within a radius of 150 km, escalated the risks for the natural resource-dependent livelihoods such as agriculture, fisheries and salt making. (Rao R. , 2010) With over 80% of its population being rural (Andhra Pradesh State Portal, n.d.), these livelihoods are the mainstay of the district. They are reportedly already facing the negative impacts due to the existence of over 100 cashew-processing units and sand mining activity prevalent in several parts in the district. Bhavanapadu Thermal Power Plant, along with Nagarjuna Plant, was in the most advanced stage of development when the state government made the announcement that five thermal plants were in the pipeline.

Bhavanapadu-Kakarapalli Thermal Power Plant was proposed in a wetland

The Bhavanapadu-Kakarapalli Thermal Power Project, with two phases of capacity 1320 Mega Watt each, was proposed to be set up in Kakarapalli village. The project is sponsored by East Coast Energy Private Limited (ECEPL) (SARMA, 2013). Patrik Oskarsson (2014) notes in his book chapter that while it is difficult to trace who owns the ECEPL, according to news stories, T Subbarami Reddy, an industrialist and a Rajya Sabha MP for the Congress Party, supported the project (Oskarsson, 2014). He states that ECEPL is a nondescript company ostensibly created for building this thermal power plant on the coast of Andhra Pradesh. The proposed site of the ECEPL thermal power project is located in the 3600 acre expanse of the Naupada swamp, the largest wetland area in Asia. Oskarsson notes in his book chapter that in the 1970s, the site was identified by the state government as a good location for setting up various industrial projects. Initially, it was envisaged that salt pans of industrial scale would be developed there; later on, initiating a plantation was being considered, and eventually, the site was handed over to ECEPL. (Oskarsson, 2014).

[1] For the purpose of this case study, all the field interviews and field observations were compiled by Ms. Anjana John, who was a part of the project till 31st January 2018. Names and other details of interviewees are provided in the annexure.

State government's push to the Thermal Power Plant

The 3470 acres of Naupada wetland is spread (with the salt pans the area is 7418 acres) over 19 villages of which 3409 acres are spread over six villages. Kakarapalli, Akasalakkasvaram, Kotapadu, Pothinaidupeta, Antalavaram and Vadditandra of Srikakulam district. This area, along with additional land with a total area of 4309 acres, was identified by the state government to be allotted to Andhra Pradesh Industrial Infrastructure Corporation (APIIC) in 2007. In a letter (1754/07/E3/dt 31.01.2008), the collector of Srikakulam instructed the sub-collector, Tekkali to handover the possession of the land to APIIC immediately. On enquiry about the status of the land, the Tehsildar, Santabommali reported to the collector in a letter Rc.NO. 182/07/A/dt.8.5.2008, that the land was classified as "Kakarapalli Swamp". The land was "seasonally water-logged" and was "adversely affecting surrounding paddy fields and agriculture crops by inundation during the rainy season (Rahmani & Rajvanshi, 2009). The advance possession of 3333 acres of this area was completed within a month.

On the request of ECEPL, Andhra Pradesh's special chief secretary (environment, forests, science and technology) submitted a CRZ (coastal regulation zone)[2] demarcation report in February 2009. The report ignored the ecological fragility of the wetland and the presence of the bird sanctuary (Tata, 2010).

Sensitivity and livelihood dependence underplayed in official documents

The Planning of the Bhavanapadu Thermal power plant had begun prior to 2007. It was in this year however, that the Terms of Reference (ToR) to prepare an Environment Impact Assessment (EIA) for the project was issued by the Ministry of Environment & Forests (MoEF). Subsequently, the EIA report submitted by ECEPL termed the site as 'barren, low lying and belonging to the Government of Andhra Pradesh'. It also claimed that there were no resettlement and rehabilitation issues, as the land was not inhabited (ECEPL). It stated that the site had been strategically chosen keeping the sensitive coastal area and command area of the Vamsadhara River irrigation canal out of it.

However, research has pointed out that swamps of the region are "rich in fish, crustaceans and other nutrients that are essential for the breeding and survival of the visiting pelicans and storks" (Environmental Resource and Response Centre, 2009). This has enabled a large number of fishing families to make a living out of the swamps. A large part of the swamp is also used for salt pans. 'About 20,000 people do salt farming on it, 5000 fish in its ponds and another 5000 do farming.' Mahapatra (2011) claims that three villages with 1000 families in total have traditional fishing rights in the area, with another 4000 families depending on the salt pans (Mahapatra, 2011) (Sarma E., 2011).

A letter from the local Revenue Department, dated August 1, 2005, to the District Collector, also discussed in detail the existence of fishing livelihoods (Revenue Divisional officer, Tekkali. Ref No. 1552 of 2005 dt 01.08.2005). The Fisheries Department, in a letter to the district collector, dated October 28, 2007, had confirmed that 539 fishing families registered with an Inland fishermen cooperative society have the lease of fishing rights granted to them (Deputy Director of Fisheries Srikakulam. Letter to the district collector dtd. 28.10.2007).

The EIA report, however, stated that there were no significant conservation areas other than a 'minor bird-breeding site' 4 km away (ECEPL). On the other hand, Bombay Natural History Society (BNHS) details a large number of rare migratory birds in this site (BNHS, 2008).

MoEF appraises the proposal

The project was discussed in the MoEF meetings held on June 10-11, November 10-11 and December 15-16, 2008. The MoEF also considered the representations and complaints made by K Mrutunjaya Rao, Dr EAS Sarma and Sri Jagannadha, Inland Fishermen Cooperative Society, Vaddithandra,against the proposal. It also took into consideration the study reports of BNHS "Of Pelicans and Power Plants" that highlighted Telineelapuram as an Important Bird Area (IBA) (MoEF, 2008). In view of these representations, the members of the Expert Appraisal Committee (EAC) of the MoEF on thermal power plants and coal mine projects, constituted a subgroup and made a site visit on July 22, 2008. The subgroup confirmed the ecological significance of the site and the MoEF thus 'recommended that the proponent should shift their site upland sufficiently away from the marshy area

[2]CRZ is an area of 500 m from the sea demarcated along the coastline on which development is regulated through various sub-zones.

and submit the details for further consideration of the proposal' (MoEF 2008c). Thus on February 11, 2009, the MoEF, in its meeting, discussed a modified proposal submitted by the ECEPL. But instead of changing the location of the thermal power plant, the new proposal only reduced the plant site from the original 2450 acres to 1995 acres. The EAC recommended the project for environment clearance subject to a set of conditions. The project was granted an EC by the MoEF on April 9, 2009 (Oskarsson, 2014).

The proposal was also reviewed by the Standing Committee of National Board for Wildlife (NBWL). According to the Wildlife Protection Act 1972, destruction of wildlife habitats or diversion of these cannot be carried out without the approval of NBWL. The standing committee of the NBWL meets every three months to appraise projects that may have an impact on the wildlife habitats (Bhargav, 2010). Dr. Asad Rahmani, a member of the Standing Committee of the NBWL, brought the issue of the granted EC to the Bhavanapadu thermal power plant in a wetland to the notice of NBWL in its 15th meeting in July 2009. The opinion of the Chief Wild Life Warden, Andhra Pradesh was taken on the matter, and he informed that Naupada was not a "forest area nor part of a Sanctuary." Based on the arguments presented by Dr. Rahmani, the committee decided that the terms and conditions of the EC should be looked into to check the impacts of the project on the wetland's ecology. It was decided that the matter would be taken up with the Secretary (Environment), Andhra Pradesh and Chairman, Andhra Pradesh Pollution Control Board (APPCB) (Minutes of the 15th meeting of the Standing Committee of NBWL, 2009).

In a reply to the committee's letter, the state forest department stated that there were no official protected areas or migratory bird route at the site (Minutes of the 16th meeting of the Standing Committee of NBWL, 2009). It is worth noting that the very same department had established a bird-watching tower and had been keeping records of migratory birds next to the wetland since 1992. The committee, not being satisfied with the reply, created a team comprising Dr. Asad Rahmani and Dr. Asha Rajvanshi from the Wildlife Institute of India, to conduct a site inspection (Minutes of the 16th meeting of the Standing Committee of NBWL, 2009). The visit was to review the ecological conservation value of the swamp, assess the ecological significance of the area, identify features of conservation value including domestic and migratory birds, and review the impacts of the ECEPL project (Rahmani & Rajvanshi, 2009). The site inspection confirmed the ecological importance of the area and NBWL continued to discuss the issue in five subsequent meetings between July 2009 and May 2010. But eventually, the committee could not prevent the approval.

Impacts of land use change

Allegedly, ECPEL, in violation of the Environment Impact Assessment (EIA) Notification, 2006 initiated excavation work and started draining water from Naupada swamp in 2008 even before it had obtained an EC from the MoEF (Proceedings of Appeal No 16/2009 before National Environment Appellate Authority, 2010). The four streams, the Garibula Gedda, Bheemapuram Gedda, Enugula Gedda, Sandemma Gedda and surplus water from Vamsadhara Left Canal bring water into the wetland system, which, in turn, drains it into the Bay of Bengal near Naupada. The water inflows and outflows are delicately balanced in this region (MoEF, 2010). A minimum of a thousand fishing families are dependent on their livelihoods from the wet¬land and around 4,000 families harvest salt from this area. According to Sarma, about 1317 acres of land was filled and converted for the power plant, and if the level of the land were to be raised even by a few feet, the water from the wetland would submerge 20,000 to 30,000 acres of adjacent agricultural lands (Sarma E., 2011).

Collective Action against the impacts: Protest, Litigation and Administrative Complaints

Raising opposition

The power plant-affected villagers have been raising their voice since the power plant was proposed in Kakarapalli. One of the major actors in the long protest against the company is the Jagannatha Inland Fishermen Cooperative Society. This collective has been functioning since 1948 and now has 700 fishermen as its members. The cooperative society vehemently opposed the power plant construction as it would replace the wetland areas and that would cause an ecological imbalance in the entire region.[3]

[3]Interview conducted with Hannu Rao and Anantha Duryodhana, community members from Vaddithandra village on July 22, 2017.

Most of the fishing communities belong to the Kandra caste group. Hannu Rao, the former Sarpanch of Kakarapalli and the President of Jagannatha Cooperative Society, says that the power plant is not only a threat to the fragile eco system but also to the survival of thousands of fishing families. "Fishing is our traditional livelihood. We have been taking the swamp area on lease for fishing for ages. The last fishing lease was granted in June 2010 in Pitarigattu and Lingudugattu to Jagannatha Inland Fishermen Cooperative Society for a period of three years (MoEF, 2010). How can the authorities not see the fact that so much of our survival is based on this wetland region?"[4] He added. As mentioned above, the society made a submission against the power plant to the Expert Appraisal Committee. It demanded that the plant be shifted to an alternate site as originially recommended by the EAC (The Hindu, 2009).

The mandatory public hearing under the EIA notification, 2006 for the purposes of the environment clearance, was held on April 23, 2008. According to Mandapaka Narasinga Rao, the hearing was held in such a manner that the local community groups were not able to raise their concerns and the authorities did not hear them out.[5] EAS Sarma, a former Government of India Power Secretary, who was helping the project-affected communities, corroborates: "Like most public hearings, there was excessive police presence, and those who opposed were not allowed to have their say in detail." He further added that the villagers tried to point out that it was a wetland stretch and construction would cause flooding of the neighbouring agricultural fields. Some written objections were recorded. But he suspected that several farmers had already been induced by the company to speak in its favour. There were some who supported the resistance movement but changed their stance later on. The company assured jobs and development of the villages in the public hearing.[6]

According to the site inspection report prepared by the regional office of MoEF in Bengaluru in response to the firings in Sompeta at the site of Nagarjuna Power Plant in 2010 (for details see below), the APPCB, on the other hand, noted that there was no opposition to the Thermal Power Plant and the locals demanded employment, pollution control measures, protection of fishing livelihoods and drainage systems (MoEF, 2010).

All this while, the protest group was in touch with local scientists, local NGOs, and Forum for Better Visakha (FBV), an unregistered body that was advising them on ways forward to stop the project.[7] EAS Sarma had started working with the project-affected communities through this forum. He is the convenor of FBV, which was set up in 2004 and attempts to enable a meeting ground for citizens and NGOs to interact on public policy issues and bring civil society pressure on the political executive, the government and the others, in the interest of the society and for promoting good governance (Sarma, n.d.).

Litigation

The protest group decided to pursue legal recourse to resist the power plant construction following its approval in 2009. Mandapaka Narasinga Rao, the former Sarpanch of Kotabommali village (one of the power plant-affected villages), and a local cashew farmer, along with the fishermen cooperative society members, filed an appeal against the environment clearance of the project with the help of advocate Ritwick Dutta (According to EAS Sarma, Samata, a state level NGO put the villagers in touch with the advocate) in 2009 in the National Environment Appellate Authority (NEAA).[8] Their plea was to cancel the environment clearance as the project was going to replace the ecologically fragile wetland area.[9] EAS Sarma is also one of the appellants in the case. According to Narasinga Rao: "We were introduced to advocate Ritwick Dutta through one of my family members; When I came to know that he is a lawyer who advocates for environmental causes, I recommended his name to our protest group to approach him to seek support. With his legal aid, we moved forward and filed the appeal against the environment clearance given to the power plant by the MoEF".[10]

---

[4] Interview conducted with Hannu Rao from Vaddithandra village on July 22, 2017.

[5] Interview conducted with Mandapaka Narasinga Rao on July 23, 2017.

[6] As shared by EAS Sarma in an email with Meenakshi Kapoor in February 2018.

[7] As shared by EAS Sarma, in an email with Meenakshi Kapoor in February 2018.

[8] NEAA was created by the MoEF under the NEAA Act 1997 to hear appeals with respect to restriction of areas in which certain operations/activities are regulated/prohibited. The authority has become defunct after the issuance of National Green Tribunal Act, 2010.

[9] Interview conducted with Mandapaka Narasinga Rao on July 23, 2017.

[10] Ibid.

Around the same time in June 2009, Forum for Sustainable Development filed a case in the High Court of Andhra Pradesh. Farmers from three villages filed this case along with this NGO as they wanted to sell their lands as there was a restriction imposed on the registration of sales.[11] The Court of Andhra Pradesh ruled against the environmental clearance granted to the project. It demanded that the AP (Andhra Pradesh) Pollution Control Board should not issue Consent to Establish to the project till the case was being heard in the court (The Hindu, 2009). Consent to Establish from the APPCB was issued in the same month on June 15, 2009 (MoEF, 2010). However, after issuing a stay on the work on the project for three weeks, in September 2009 (The Hindu, 2009), the court decided in July 2010 that the matter would be adjudicated by NEAA only, as the matter fell under the jurisdiction of NEAA. (The Hindu, 2010).

The NEAA gave its decision on August 30, 2010, after 11 hearings and a site inspection. In those 11 hearings, allegations and rebuttals were included, details of which have been highlighted in the final order of August 2010. During the time of the hearings, the NEAA comprised only one member, J.C Kala, a retired Indian Forest Service Officer (Kohli, 2010). "After the proposed site visit, the NEAA concluded that the reports pertaining to the project which was being considered for the environment clearance, including those from MoEF, were incorrect. In his judgment, J.C Kala noted that the power project posed a threat to the surrounding fragile ecosystem and the livelihoods of the locals (Kohli, 2010). The order also refers to the series of assessments conducted by the Wildlife Institute of India (WII), Bombay Natural History Society and the report prepared by the National Board for Wildlife (NBWL) on the ecological sensitivity of the region (See above: section on MoEF Appraisal). The order pointed out that although all these assessments were against the project, the MoEF went ahead and gave clearance.

The MoEF submitted to NEAA a detailed set of explanations for the environment clearance it gave for the Kakarapalli thermal power project. The primary justification of the MoEF was built on the fact that the Government of Andhra Pradesh had given the information that the proposed site of the power plant does not fall within the Naupada swamps as per the approved Coastal Zone Management Plan (CZMP)[12] of the state. The MoEF also stated in its submission that the replies from the state revenue department had indicated that the area was not a conducive habitat for either resident or migratory birds. It claimed that on the basis of this information, it had decided to go ahead and grant an environment clearance to the power project (Kohli, 2010).

The NEAA judgment of August 30, 2010 concluded that the proposed region for the thermal power plant indeed was an ecologically sensitive area and it deserved to be conserved. The order also pointed out that the region should not have been cleared for the project. However, the order noted that in view of non-reversibility of some of the ecological impacts that had already happened due to the work, the project authorities would have to exhibit supreme seriousness for reducing further ecological footprints by maintaining strong and effective measures to reduce and remedy the impacts that could have been prevented had the plant not been located here for development (Mahapatra, 2011).

Narasinga Rao, the petitioner, feels that although the order acknowledged the issue, it had not addressed or resolved the concerns posed. "The order clearly says that the swamp needs to be protected for the ecological balance. It also agrees to the fact that the local communities would suffer from it by losing their livelihood, yet it gave sanction to the project. This shows that the government and authorities do not favour poor people. They always side with ones who have money and power", he added.

Locals revert to protests

The mobilisation against the power plant became stronger as the power plant construction was allowed by the NEAA even after recognising the issues pertaining to it. The affected communities wanted the construction of the plant to be stopped completely. The agricultural land of the 29 villages, that surrounds the power plant region, has been facing submergence as a result of the company's activity of wetland filling at the site. This

[11] As shared by EAS Sarma in an email with Meenakshi Kapoor in February 2018.

[12] Coastal Zone Management Plan is a reference document to regulate development in coastal regulation zones as notified in the country since 1991. The Plan demarcates ecologically sensitive areas, urban and rural areas and water areas within this zone. The CRZ 2011 notification had insisted to the coastal states to revise the CZMP, and this is still in the process.

has resulted in farmers joining the protest movement. From mid-2010, the power plant-affected groups from the villages Vad-ditandra, Akasalakkavaram and Kothur imposed a non-violent blockade against the movement of the company's vehicles. The protest group also began a relay hunger strike in the same year.[13] The families who would lose out on salt farming soon joined the movement. They all were concerned about the likely impact of pollution from the project on the water in the wetland, on its ecology and the other water sources, including the groundwater aquifers and the sea. The protest group argued that most of the 700 jobs that the project had offered as compensation would go to outsiders with better skills, whereas the local villagers, hardly trained for such jobs, would be eligible for less paying positions such as sweepers and watchmen (Sarma 2011). By then the villagers had realised that thousands of them who used to farm and fish would lose their livelihoods and would get reduced to daily wage employees if the power plant became a reality.

The protest movement became stronger and bigger as the farmers, fisher folk and salt workers united against the power plant. On February 28, 2011, a police firing occurred against the protesters, and three villagers, Jeeru Nageswar Rao, Batni Barikvadu and Seerapu Erraya died in the agitation. Although the firing was against the protestors, the people who were killed during the incident were not involved in the movement.[14] The firing took place at the local market place. Regular visitors to the daily market were also injured. In fact, the three people who were killed had actually come to market for other work and not to join the protest. The protesters believe that the firing shows the support of the government and the police towards the company.[15] "There was no provocation from the protesters' side. We were protesting peacefully like every other day, and a battalion of police came and tried to suppress us by forceful means", Hannu Rao recollects.

Batni Barikvadu was a landless agricultural labourer who did not have any active involvement in the protest. "He had gone to the local market as usual to repair some of his fishing tools", his wife Batni Ponnama recollects. Although Ponnama is not active in the protest, she is totally against the power plant. "The power plant has brought only bad things for us villagers here. It took my husband's life and it would continue to bring miseries to us in the future too", she added.[16]

Seerapu Erraya was a migrant labourer and was visiting his village at the time of the police firing. Erraya's wife Dhanalakshmi, mother of two girls, now works as an agricultural labourer. "I did not know much about the power plant issue until my husband was shot dead in the agitation. The power plant will put many people's survival at risk. If we lose our livelihood how are we supposed to raise our children? Doesn't the government take poor people's lives seriously?" She asks. As far as the concern of authorities, this incident was only a matter of breaking of law and order.[17]

The circle inspector of police of the region remembers this incident, as a disagreement on promised jobs in a public hearing between the villagers and the company resulted in the agitation and police firing. According to him, on February 28, 2011 the agitation became violent, and the firing happened to get that situation under control.[18] After the firing, several FIRs were filed against the protestors. P. Krishna Murthy, a retired teacher, practising advocate and an active protester, remembers receiving many threats from the police as well as the company authorities post the firing.[19] The next day, on March 1, 2011 the MoEF stalled the work on the Thermal Power Plant. The work resumed in September 2011 but acknowledging the complaints received against the power plant, the MoEF, in October 2011, asked the state government to stall the work till the complaints were examined (PTI, 2011).

[13] Interview conducted with Hannu Rao and Anantha Duryodhana from Vaddithandra village on July 22, 2017.

[14] Interview conducted with Hannu Rao from Vaddithandra village on July 22, 2017.

[15] Ibid.

[16] Interview conducted with Batni Ponnamma on July 23, 2017.

[17] Interview conducted with S. Dhanalakshmi on July 23, 2017.

[18] Interview conducted with Bhavani Prasad, Circle Inspector of Police, Tekkali Taluk on July 24, 2017.

[19] Interview conducted with P. Krishnamurthy on July 24, 2017.

Administrative complaints

The locals made submissions and complaints to the MoEF and the Expert Appraisal Committee on Thermal Power Plants and Coal Mining since the time the MoEF was considering the project and even after it received an EC. They feared that pollution from the ECEPL project would impact their livelihoods (PTI, 2011). Responding to the complaints made by the residents of the area and EAS Sarma and others, and incidents of police firing in Sompeta in which two persons protesting against the Nagarjuna Thermal Power Plant died in July 2010, the MoEF asked the regional chief conservator of Forests, Bengaluru to carry out an inspection in Srikakulam District along with other projects in the state (Projects included: (1) 2x660 MW (Phase I) Super Critical Coal Based Thermal Power Plant in Sompeta Mandal, Srikakulam District in Andhra Pradesh. (2) 2640 MW Bhavanapadu Thermal Power Plant near Kakkarapalli village, Srikakulam District, Andhra Pradesh by M/s East Coast Energy Pvt Limited. (3) Alumina Refinery (1.4 MTPA) and Co-generation Plant (90 MW) in Srungavarapukota, Vizianagaram, Andhra Pradesh by M/s JSW Aluminium Limited (4) Alumina Refinery (1.5 MTPA), Smelter Plant (25000 TPA) along with Captive Power Plant (90 MW) in Mandal Makavarapallem, District Visakhapatnam, Andhra Pradesh by M/s Anrak Aluminium Limited) (Jebaraj, 2010) (MoEF, 2010). In its report, the committee noted the ecological importance of the site, impact of the project on local livelihoods and construction of drainage before the issuance of EC (the project authorities claimed that it was on local demand) (Proceedings of Appeal No 16/2009 before National Environment Appellate Authority, 2010). However, the report stated that full identification of wetlands and other ecologically sensitive areas had not been done as yet and it was possible that the project site may not fall in a sensitive zone. It suggested a more detailed assessment of the project on the swamp (MoEF, 2010).

A similar story in Sompeta

It has been seven years since the firing happened in Kakarapalli. A similar struggle has been going on in Sompeta, another town in Srikakulam district, against a coal based thermal power plant, by the local communities. Sompeta has also witnessed violent outbreaks between the villagers and the police. In 2010, two villagers died in the police firing in Sompeta also (Korada, 2017). It is important to notice that both these incidents happened in the same district within the same span of time. The nature of the protest, protesters and the issue are the same in both Sompeta and Kakarapalli- local communities fighting against private industries for their ecosystems and livelihoods.

EAS Sarma notes: "there are many more Sompetas and Kakarapallis waiting to happen, not only in Andhra Pradesh but in the other states as well. One should live in hope that the views of the people at large will ultimately prevail over those that have no respect for democratic processes, the law of the land and the ecology in general" (Sarma E. A., 2011).

Bhavanapadu Power Plant is one of the projects in Srikakulam District that were inspected by the MoEF expert committee in 2010.

As discussed above, the Ministry had stalled the project on October 5, 2011, after it received 22 complaints against the Bhavanapadu Thermal Power Plant (PTI, 2011). It stated: "pending examination of complaints, the earlier order of even no. dated 22.09.2011 to rescind to stop work at the project site is kept in abeyance, and the Ministry of Environment and Forests directs that the ongoing construction activities at the project site shall be stopped until further orders." (MoEF, 2011). According to EAS Sarma, these complaints were mainly against likely pollution and disturbance to the wetland and the neighbouring Telineelapuram Bird Sanctuary. More recently, the complaints have been against the excavation of a "garland canal" surrounding the project site. Its length is 14 km and width is 50 feet.[20]

Current Status

The relay hunger strike that began in 2010 against the Kakarapalli power plant is continuing. The appeal against the NEAA order by Narasinga Rao and EAS Sarma is still pending in the Supreme Court.[21] The construction of the power plant has been temporarily put on hold due to the local protests and the financial debts caused by the delay of the project for the company. The project, however, has been granted a fresh environment and CRZ clearance by the MoEFCC[22] for the construction of intake facilities for drawl of seawater and discharge of wastewater facilities including construction of jetty for 4x660 MW thermal power project on July 12, 2012. (MoEFCC, 2012) The EC was amended on November 12, 2015 to allow the use of Heavy Fuel Oil (HFO) instead of coal as a startup fuel in the event of the shutdown of the boiler (2-3 times in a year). The initial EC had stipulated that the sulphur content in the liquid fuel should not exceed 0.5% but HFO could have sulphur content of 4%. (MoEFCC, 2016)

Bhvanapadu relay hunger strike against the power plant has continued since 2010

[20] As shared by EAS Sarma in an email with Meenakshi Kapoor in February 2018.

[21] Ibid.

[22] MoEF was renamed Ministry of Environment Forests and Climate Change (MoEFCC) in 2014.

The State of Andhra Pradesh in the meanwhile has seen a bifurcation. The Andhra Pradesh government, two years after the state of Telanagana was carved out of it, stated in April 2017 that it didn't need thermal power plants anymore as the state was observing a power surplus (The Hans India, 2017).. The monthly report of 2016 on broad status of thermal power projects in the country by the Ministry of Power indicates that the power plant is still under construction and the construction work is currently held up due to financial issues (Central Electricity Authority, 2016). The report has also mentioned the opposition against the power plant as another reason for the delay in construction (Central Electricity Authority, 2016).

Karunya Hemlatha, an active protester, is determined to go ahead with the protest until the power plant construction gets cancelled permanently. "We are now aware of the rules and regulations better, and we will fight the power plant in all possible ways. Be it filing RTIs, sending letters or mass protest...We will do whatever is needed to save our land", she added.[23]

References

Andhra Pradesh State Portal. (n.d.). *Head Quarters: Srikakulam*. Retrieved from AP State Portal: http://www.ap.gov.in/about-ap/districts/srikakulam/

Bhargav, P. (2010, July 20). *Mandate of the Standing Committee of the NBWL*. Retrieved from Conservation India: http://www.conservationindia.org/resources/mandate-of-the-standing-committee-of-the-nbwl

BNHS. (2008). *Report on violations of environmental clearance procedures by the ECEPL at the proposed site for the 2640 MW Bhavanapadu Thermal Project in Srikakulam District, Andhra Pradesh*. Mumbai: BNHS.

Central Electricity Authority (CEA). (2016, November). *Monthly Report on Broad Status of Thermal Power Projects in the Country*. Retrieved from Central Electricity Authority: http://www.cea.nic.in/reports/monthly/broadstatus/2016/broad_status-11.pdf

EAS Sarma. (n.d.). Retrieved January 13, 2018, from eassarma.in: http://eassarma.in/?q=about_eassarma.htm

ECEPL, E. (n.d.). *Executive Summary of 2640 MW Bhavanapadu Coal Based Thermal Power Project Proposed near Kakarapalli village, SanthabommaliMandal Srikakulam District*. Hyderabad, Andhra Prdesh.

Environmental Resource and Response Centre. (2009). EIA Report of the issue: East Coast Energy Pvt Ltd in Srikakulam, Andhra Pradesh. *Environmental Resource Centre Journal (2): 13–14*.

Haidar, S. (2016, July 21). *A.P. set to be country's nuclear power hub*. The Hindu. Retrieved from http://www.thehindu.com/news/national/andhra-pradesh/A.P.-set-to-be-country's-nuclear-power-hub/article14499368.ece

Jebaraj, P. (2010, July 16). *Environment Ministry to inspect Sompeta site*. The Hindu. Retrieved from http://www.thehindu.com/todays-paper/tp-national/tp-andhrapradesh/Environment-Ministry-to-inspect-Sompeta-site/article16198694.ece

Kohli, K. (2010, December 25). *Already destroyed? Ok, then*. India Together. Retrieved September 7, 2017, from http://www.indiatogether.org/naupada-environment

Korada, P. (2017, July 15). *The Sompeta agitation lives on: How the police killing of 3 men fuelled a battlefor the wetland*. The News Minute. Retrieved from https://www.thenewsminute.com/article/sompeta-agitation-lives-how-police-killing-3-men-fuelled-battle-wetland-65223

Mahapatra, R. (2011, April 15). *The great wetland robbery in Kakarapalli*. Retrieved from Down To Earth: http://www.downtoearth.org.in/coverage/the-great-wetland-robbery-in-kakarapalli-33246

Manish. (2014, July 27). *Srikakulam to be developed as pharma hub*. The Times of India. Retrieved from The Times of India: https://timesofindia.indiatimes.com/city/visakhapatnam/Srikakulam-to-be-developed-as-pharma-hub/articleshow/39112348.cms

Minutes of the 15th meeting of the Standing Committee of NBWL. (2009, July). New Delhi.

[23] Interview conducted with Karunya Hemalatha from Kakarapalli village on July 22, 2017.

Minutes of the 16th meeting of the Standing Committee of NBWL. (2009, September). New Delhi.

MoEF. (2010, July 15). Retrieved from Ministry of Environment and Forests: http://www.moef.nic.in/downloads/public-information/ncc%20ltd.pdf

MoEF. (2010, July). *Site Inspection Report*. Retrieved from India Environmental Portal: http://www.indiaenvironmentportal.org.in/files/Site-Inspection-Report.pdf

MoEF. (2011, October 5). Retrieved from Ministy of Environment and Forests: http://envfor.nic.in/downloads/public-information/OM-05102011-B.pdf

MoEF, M. (2008). *Summary record of the 36th meeting of the Reconstituted EAC on EIA of Thermal Power Plants and Coal mine projects*. Delhi.

MoEFCC. (2012, July 12). *Environment Clearance to ECEPL*. Retrieved from Environmental Clearance: http://environmentclearance.nic.in/writereaddata/modification/PreviousTOR/0506201771J5RHQWAnnexure-PreviousEC.pdf

MoEFCC. (2016, June 14). *Half-yearly compliance report of ECEPL*. Retrieved from Environmental Clearance: http://environmentclearance.nic.in/writereaddata/Compliance/07_Sep_2016_134642707K6L3LNBL7thCRZHalfYearlyComplianceReport.pdf

Oskarsson, P. (2014). *Marginalising people on marginal commons: The political ecology of coal in Andhra Pradesh.* K. Lahiri-Dutt (Ed.), *The Coal Nation: Histories, Ecologies and Politics of Coal in India* (pp. 197-218). New York: Routledge.

Proceedings of Appeal No 16/2009 before National Environment Appellate Authority. (2010, August 30).

PTI. (2011, November 8). *MoEF again stalls Bhavanapadu power plant works*. Times of India. Retrieved from https://timesofindia.indiatimes.com/city/hyderabad/MoEF-again-stalls-Bhavanapadu-power-plant-works/articleshow/10650962.cms

Rahmani, A., & Rajvanshi, A. (2009). *Report based on the visit to Naupada swamp and the project site of the 2640 MW Bhavanpadu Thermal Power Project of M/S East Coast Energy Pvt. Ltd.*

Rao, R. (2010, February 10). *Srikakulam cannot sustain five thermal power plants: expert*. The Hindu. Retrieved from Retrieved from: http://www.thehindu.com/todays-paper/tp-national/tp-andhrapradesh/Srikakulam-cannot-sustain-five-thermal-power-plants-expert/article15982025.ece

Rao, R. J. (2009, October 3). *Five major thermal power plants in pipeline*. The Hindu. Retrieved from from: http://www.thehindu.com/todays-paper/tp-national/tp-andhrapradesh/Five-major-thermal-power-plants-in-pipeline/article16487906.ece

SARMA, C. R. (2013, February 21). *East Coast Energy to set up 1,320 MW plant in Srikakulam*. BusinessLine. Retrieved from https://www.thehindubusinessline.com/companies/east-coast-energy-to-set-up-1320-mw-plant-in-srikakulam/article20582255.ece1

Sarma, E. (2011). *Will the sparrow ever return?* Vishakhapatnam, Andhra Pradesh. Retrieved from http://eas-sarma.in/?q=will-the-sparrow-ever-return-eBook

Sarma, E. A. (2011). *Kakarapalli: Another Blot on India's Democratic Systems*. Economic & political Weekly, Vol. 46, Issue No. 11, 12-15.

Sarma, E. A. (2011, March 12). *Kakarapalli: Another Blot on India's Democratic Systems*. Andhra Pradesh. Retrieved from http://claim-for-commons.blogspot.in/2011/06/andhra-pradesh-claim-for-commons.html

Tata, M. (2010, January 25). *Blinded By Power*. The Outlook. Retrieved from https://www.outlookindia.com/magazine/story/blinded-by-power/263784

The Hans India. (2017, April 12). *Thermal power stations not viable now in AP: Kimida Kala Venkata Rao*. The Hans India. Retrieved from http://www.thehansindia.com/posts/index/Andhra-Pradesh/2017-04-12/Thermal-power-stations-not-viable-now-in-AP--Kimida-Kala-Venkata-Rao/292775

The Hindu. (2009, Spetember 23). *Construction at thermal plant stayed*. The Hindu. Retrieved from http://www.thehindu.com/todays-paper/tp-national/tp-andhrapradesh/Construction-at-thermal-plant-stayed/article16520080.ece

The Hindu. (2009, June 21). *Plea against eco clearance to Bhavanapadu power project*. The Hindu. Retrieved from http://www.thehindu.com/todays-paper/tp-national/tp-andhrapradesh/Plea-against-eco-clearance-to-Bhavanapadu-power-project/article16582268.ece

The Hindu. (2009, January 18). *Shifting of Bhavanapadu power plant demanded*. The Hindu. Retrieved from http://www.thehindu.com/todays-paper/tp-national/tp-andhrapradesh/Shifting-of-Bhavanapadu-power-plant-demanded/article16353408.ece

The Hindu. (2010, July 14). *Power plant case: HC asks petitioner to approach tribunal*. The Hindu. Retrieved from http://www.thehindu.com/todays-paper/tp-national/tp-andhrapradesh/Power-plant-case-HC-asks-petitioner-to-approach-tribunal/article16196294.ece

The Hindu. (2014, November 4). *Srikakulam turns into power hub.* The Hindu. Retrieved from http://www.thehindu.com/todays-paper/tp-national/tp-andhrapradesh/srikakulam-turns-into-power-hub/article6562477.ece

CASE STUDY II

Goa-Karnataka Border NH-66 Highway Expansion Project, Karnataka[1]

National Highway 66 (NH 66), previously known as the NH-17, is a busy National Highway that goes roughly north–south along the western coast of India, parallel to the Western Ghats. It connects the Panvel city of Mumbai to Kanyakumari, passing through the states of Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu. As of February, 2018, the highway is undergoing a major renovation in Karnataka, where the state government has accepted the National Highways Authority of India's (NHAI) request of an international standard, 60-metre-wide national highway with grade separators (Belgaumkar, 2010). The complete stretch from the Goa border (near Karwar) to the Kerala border (near Talapady) is currently being widened to four lanes, with space to accommodate future expansion to six lanes (Kamila, 2011). Since 2014, the expansion work of the Goa-Karnataka Border–Kundapur section of the highway and its secondary units located in Uttara Kannada district, has led to conflicts between the local communities and the project.

About Uttara Kannada

Uttara Kannada is the least populated (Government of Karnataka, n.d.) and one of the most ecologically significant districts of the state of Karnataka in India. Other than the dense Western Ghats forests, it has a coastline of 147 km comprising various habitats such as sandy beaches, rocky shores, mangroves, estuaries, coral reefs, algal beds and mud flats as its ecological assets. Five major rivers flow through the district and support the diverse flora and fauna of the district. Estuaries of these rivers flowing into the Arabian Sea also nurture unique biodiversity and ecosystems (Bivalve Collectors' group, Sahyadri Trust, Nilkund and CPR-Namati, 2014). With over 70% of the population being rural (Government of Karnataka, n.d.), major livelihoods pursued in the district are closely tied to the natural resources found in abundance in these ecosystems.1,32,000 people pursue fishing (Bivalve Collectors' group, Sahyadri Trust, Nilkund and CPR-Namati, 2014), and with 10% land in the district being cultivable, agriculture, apiculture, sericulture, animal husbandry and horticulture are popular livelihood options (Government of Karnataka, n.d.).

The district has seen many environmental movements, both in the forested upghats and coastal areas. As Balachandra Hegde, farmer and conservation activist from the region shared: "Tadadi has been a place for environmental movements since last thirty years. 1800 acres of land was first acquired for a caustic soda factory. Though they could not use the land for the said purpose, a series of proposals have been considered for the site, like thermal power projects, gas based power project, barge mounted power project, port etc." However, none have taken wings as yet. For the past two years, Tadadi is under consideration by the Ministry of Environment, Forests and Climate Change (MoEFCC) for development of the biggest port of Karnataka- a multipurpose all-weather port (Nayak, 2015). Besides Tadadi, proposals for a thermal power project at Hanakona near Karwar are also in the news. As Hegde puts it, "Western Ghats in Uttara Kannada district is closer to the sea. Unlike rest of Western Ghats, the Ghats here touch the coast in many places and hence any damage done to the coast of Uttara Kannada causes damage to Western Ghats." He adds, "Linear projects like Highways make more damages in Uttara Kannada than other parts of the West coast, because of this unique feature."

But the push for land use change is only increasing[2]. Uttara Kannada is being envisaged as the next tourism hub after the neighbouring Goa. In the wake of 'potential' of the coastal parts of the district for tourism and real estate projects, speculative land sales have increased all along the coast of Uttara Kannada

[1] For the purpose of this case study, all the field interviews and field observations were compiled by Ms. Anjana John, who was a part of the project till 31st January 2018. Names and other details of interviewees are provided in the annexure.

[2] Telephonic conversation between Meenakshi Kapoor and Balachandra Hegde, Farmer and Conservation Activist, Uttara Kannada, March 2018

(Hegde & Kapoor 2017). Besides Tadadi, the second phase of development of the naval base Sea Bird is also in the offing. Unregulated sand mining along the banks of its rivers is another activity that poses a threat to its ecology and traditional occupations.[3]

National Highway - 66

Panvel in Maharashtra is the starting point of the current National Highway- 66. It passes through the state of Karnataka on the west coast and ends at Edapally, a town in Cochin district of Kerala. Few stretches of the highway lie close to the Arabian Sea in the Coastal Regulation Zone (CRZ).[4] The project road begins from the Goa-Karnataka border (93.7 km) and ends at Kundapur (283.3 km). The total length of the project road is 189.6 km based on existing km stones. The alignment of the highway project is positioned between Arabian Sea coast and Western Ghats region of Karnataka (NHAI, 2012).

In South India, starting from the Goa-Karnataka border, the project road passes through a number of towns and villages via Karwar (106.7 km), Karwar port (108.8 km), Sea Bird Naval Project, Amdalli (124 km), Kumta (174.4 km), Haladipura (186.6 km), Honnavar (194.5 km), Kasarakod (197.8 km), Shirali (227.4 km), Bhatkal (232.3 km), Shirur (245 km), Byndur (250 km), Maravanthe (266 km), Tallur (279.5 km) and other villages in Karwar and Udupi districts before reaching Kundapur (283.3 km) (NHAI, 2012).

The National Highway Authority of India (NHAI) sought environmental clearance (EC) for "Widening and upgradation of the existing carriageway to 4/6 laning" of the above mentioned section of the Highway in September 2013 and the Ministry of Environment and Forests (MoEF) granted a clearance on February 14, 2014. NHAI subcontracted the IRB Infrastructure Developers Ltd, an Indian highway construction company for the highway expansion work in Uttara Kannada. The expansion work of the highway in Goa-Karnataka Border– Kundapur section began soon after the project obtained the EC in the year 2014 and is ongoing as on February 2018 (Malkarnekar, 2017).

The total land area that has been acquired for expansion of this section of the highway is 525.16 Hectares. According to the clearance letter, "Approximately 162.429 hectares of forestland" is also involved in the project (MoEFCC, 2014). The land areas along the highway are of various kinds such as industrial, agricultural, forest and barren land. According to the minutes of meeting of Karnataka Coastal Zone Management Authority (CZMA) held on August 26, 2013, few sections of the highway fall in CRZ I and CRZ III.[5] It was recommended for a CRZ clearance in the same month. However, the majority land use along the highway is for built up structures and agriculture. There are a number of settlements along the road that include residential areas, commercial

NH 66 highway passes through Karwar town, Uttara Kannada, Karnataka

[3] Interview with Mahabaleshar Hegde, Programme manager, CPR-Namati Environment Justice Program, in February 2018, conducted by Meenakshi Kapoor.

[4] CRZ is an area of 500 m from the sea demarcated along the coastline on which development is regulated through various sub-zones.

[5] CRZ I is the water area and CRZ III are the rural areas falling within the CRZ.

buildings, schools, hospitals, petrol stations, etc. (NHAI, 2012). The Sea Bird Naval base, Karwar also comes under this stretch of the highway. The project road passes through the Karwar port at 108.500 km and the road is situated parallel to the Arabian Sea coastline (NHAI, 2012).

Impacts

According to the state government, widening of the Goa-Karnataka Border– Kundapur section is being done with the aim of reducing the air and noise pollution that currently exists in the region, by reducing the traffic congestion. The government's claim is also challenged as one reads further about the impacts of the construction of the highway at a few select sites along the route of the highway. Evidence indicates that instead of reducing pollution, the construction activity has increased pollution-related damage in several sites. Dr Prakash Mesta, Scientist, Energy and Wetlands Research Group, Indian Institute of Sciences (IISC) Bangalore, elaborates: "On small roads vehicle speed is less, while on such wide highways, vehicles with much higher speed will create more noise and dust. Linked to this is the point that for a highway with a gradient of curvature (surface area at road turnings) that serves vehicles moving at the speed of 120 KMPH as planned for this highway, land acquired is much more." He further adds, "To provide a reference, in Kumta town the current road has a gradient of curvature to serve vehicles moving at the speed of 40 KMPH. The highway is linked with the planned port development; this will obviously lead to more vehicles, which are either port-bound or coming from the ports. This will lead to more traffic and more pollution. Also, for construction of this highway a lot of trees have been cut without proper documentation of trees that are felled. These trees would have acted as natural absorbents for dust and noise and prevent them from spreading."[6]

The state government has also indicated in its public communication that the highway will improve the connectivity between Uttara Kannada and Udupi districts. Finally, the improvement of local economy and industry due to better infrastructure facilities is also seen as one of the future outcomes of this highway expansion project (Dr. Mesta, 2018).[7]

However, from the outset there has been a wide range of impacts due to the construction of the highway. For instance, it was observed during the field visit in September 2017 that the widening of the highway has involved bringing down several hillocks throughout the Uttar Kannada-Goa stretch. This often causes landslides and water infuriation in the nearby areas. In June 2017, three people died and several others got injured in Tandrukuli village in the landslide. The villagers residing near the hill had already been requesting to be relocated to a safer area. Before the landslide itself, the villagers of Tandrukuli were getting affected by the hill demolition and the road construction as the walls of their houses walls were getting cracked due to the heavy hill blasting. Suseela Gouda, a resident of Tandrukuli and a roadside shop owner, says that after the landslide and the deaths, many officials and political representatives visited the village and the families of the deceased received compensation as well.[8]. However, the issue is still pertinent in the region and the villagers are under the scare of landslides in every rainy season.

There is an entire range of impacts related to saltwater intrusion, dust due to stone crushing and waterlogging that is discussed in detail through specific case stories below along with the strategies used by affected communities to address them.

There have also been direct impacts related to compensations against the land acquisition for the highway. According to the residents of Uttara Kannada[9] there are over 100 complaints made in the NHAI office in Udupi. The state government has also organised special officials to deal with these issues (DHNS, 2015) (S.O. News Service, 2016). These issues have also been reported in regional and national new papers (Sastry, 2017). However the case study has not delved into the conflicts related to land acquisition for the project.

[6] According to telephonic conversation of Mahabaleshwar Hegde with Dr Prakash Mesta, Scientist, Energy and Wetlands Research Group, Indian Institute of Sciences (IISC) Bangalore in March 2018.

[7] Ibid.

[8] As per the personal interview with Suseela Gouda, a resident of Tandrukuli and a roadside shop owner, in September 2017.

[9] Telephonic conversation of Meenakshi Kapoor with Mahabaleshwar Hegde (Program Manager, CPR-Namati Environmental Justice Program) in March 2018.

Understanding strategies to secure remedies

Bogribail Village, Ankola-IRB Stone Crusher Unit

The stone crusher unit in Bogribail village, Ankola, is also causing problems for the nearby residents. This stone crusher unit is under the ownership of IRB. The area of the unit is five acres and it is situated not very far from the households of Bogribail. The crusher unit has been operational since 2014, and around 50-60 households are impacted by the serious dust pollution caused by it. The unit remains closed during the monsoon season but functions for more than 16 hours a day rest of the year. The dust pollution caused by the crusher unit not only affects the agricultural work in the region, but could also be the cause of health issues among the villagers. Under the Air (Prevention and Control of Pollution) Act, 1981, in order to get consent to discharge for a stone crusher unit, the plant has to control the dust and noise by building a wind breaking wall and sprinkler system. Further, the consent to discharge of the crusher unit expired in 2016, yet the plant continues to function without any interruptions causing problems for the locals.

According to the Environment Clearance granted to the highway expansion in 2014 and the Karnataka Stone regulation Act 2011 mandate, the crusher should be located at least 500 metres away from households (Karnataka Govt., 2011). The IRB stone crusher unit in Bogribail did not only violate the first two requirements but was also located 50 metres from the nearest households (Rosenberg, 2017).[10] Krishna Gouda, an elderly farmer of Bogribail had to completely stop vegetable cultivation on his land as the dust that accumulated on land was affecting the harvest and hence it became non-profitable.[11] The villagers of Bogribail involved in agriculture are mostly small-scale farmers growing vegetables, coconut, mango and cashew nut.

There is also an Anganwadi[12] (government run crèche or shelter) with 31 children, functioning very close to the crusher unit. Mangala Ganesh Gouda, the Anganwadi worker, says that they are unable to even prepare the midday meal for the children without the dust getting mixed with it. She also notes that many of the villagers,

Health of children in Bogribail village Anganwadi that is situated within 500 m radius of the stone crusher, is getting impacted.

[10] Conversation of Meenakshi Kapoor with CPR-Namati's Uttara Kannada paralegal team in February 2018.

[11] Interview conducted with Krishna Gouda from Bogribail on September 20, 2017.

[12] Anganwadis were initiated back in 1975 as part of the Integrated Child Development Services program to combat child hunger and malnutrition.

including many children, are suffering from respiratory illnesses in the village due to the dust pollution (M.G. Gouda, September 20, 2017).[13]

Community paralegals associated with the CPR-Namati Environment Justice Program in Uttara Kannada district have been working with the affected farmers to understand and address the issue since October 2016. Before their involvement, the villagers had approached the IRB authorities as well as the NHAI officials regarding the problem of dust. However, the only response they received from the officials was that the affected families would receive monetary compensation.[14] This was not satisfactory, and did not address the conflict as the dust from the crusher continued to impact the crops and the village Anganwadi.

The villagers, along with the paralegal team, decided to approach the District Collector's office and the Pollution Control Board (PCB) to seek remedies. After several communications through letters, complaints, RTIs and direct meetings, the PCB sent two show cause notices to the stone crusher operators, seeking responses on explanations related to the violations and as a warning that their consent can be revoked. The first complaint was sent to both the PCB and the district collector in November 2016, followed by a number of visits and follow up letters (5 visits to the DC, 2 to the Bangalore PCB office, 1 to the regional MoEFCC office, and 15 visits to the regional PCB office were made and 6 letters were written).

While the remedy from the PCB was awaited, the company authorities paid compensation of a total INR 7,30,000 to 37 affected farmers for their agricultural loss in January 2017. This was distributed among them at the rate set by the Agriculture Department of the state (each cashew nut tree- INR 300, mango tree- INR 3000 and coconut tree- INR 90). In April 2017, the PCB issued the first show cause notice to the company. When the community and paralegals pointed out that the consent issued to the company had expired, the PCB held the application of the stone crusher unit for renewal and issued another notice to them in July 2017.

In the meantime, one of the concerns of the affected farmers was that some families had not received compensation and they continued to pursue that issue separately. The company again gave compensation to 14 families on the basis of the rate fixed by the Agriculture Department. In June 2017, the affected families received INR 1000/person/month for damage to health. Since the pollution continued for six months, they were paid INR 6000 each.

However, according to some villagers, the compensation was like a bribe to withdraw the complaints and letters that had been submitted against the crusher unit and IRB. Sarada Devi Gouda, a resident of Bogribail, whose husband works in another nearby stone crusher unit, says that the IRB authorities often try to keep the villagers' mouth shut by saying that they are working for the national highway project that comes under the central government and therefore the work cannot be stopped. "The officials assumed that once we receive the compensation, we would not raise any more questions but the issue of pollution remained the same, and we wanted it to be resolved", she added. However, the affected farmers and the paralegal team pursued the case and a remedy to the problem. After sending the show cause notices, the PCB did not renew the expired license of the crusher unit. The unit, however, continued to function.

In July 2017, the company paid the communities for the third time. An amount of INR 6,50,000 was issued in the name of Backward Caste and Agriculture Labour Welfare Committee of Srikuti, Ankola, which was disbursed to the 35 families living close to the stone crusher unit. The exact purpose of this payment to the villagers was not clear to the paralegals, but they suspected that it was given to the people so that they do not create a noise against problems related to dust in future.[15]

In September 2017, a PCB official made a visit to Bogribail to understand the intensity of dust pollution that was being caused by the crusher unit, and in his presence, the water sprinkler and wind breaking wall had been installed to reduce the level of dust pollution.[16] The crusher unit has started functioning again since the end of October after the monsoon season and the efficiency of the sprinkler and the wind breaking wall is to be completely understood in the coming months as the work progresses in the crusher unit. The PCB officials have promised the villagers that they will take necessary actions if the issue persists.

[13]Interview conducted with Mangala Ganesh Gouda from Bogribail on September 20, 2017.
[14]Interview conducted with Sarada Devi Gouda from Bogribail on September 20, 2017.
[15]Conversation of Meenakshi Kapoor with CPR-Namati's Uttara Kannada paralegal team in February 2018.
[16]Interview conducted with Maruti Gouda from CPR- Namati Environment Justice Program on September 20, 2017.

After multiple complaints and rigorous follow up by communities, wind breaking wall was built around the stone crusher unit in Bogribail village.

Belase Creek Saltwater Intrusion in Chandumata Village

As part of the NH-66 construction, a new bridge was constructed on Gangavalli River. Chandumata village is located along the bank of Gangavalli River and Belase Creek of the river. During the construction work, sand was dumped in Belase Creek that blocked it, which created localised problems in the area. For instance, during high tide, salt water that used to flow into the creek earlier, started entering the agricultural fields of Chandumata village. The saltwater intrusion into the agricultural fields in Chandumata destroyed the fertility of the land to a great extent. 300 acres of land that farmers used to cultivate rice, groundnut and onion became unsuitable for agriculture.[17] The villagers had reported the issue to a local newspaper, but no remedy was forthcoming.

The paralegal team of CPR-Namati Environment Justice Program came to know about the situation through the news report. The paralegals and the Chandumata villagers decided to deal with this issue through a collective action. They found out that the Micro Irrigation Department had a scheme for making sweet water available to the farmers, even outside of the Monsoon season. Farmers in coastal areas complain of getting saline water on ground water drawl in months other than monsoon due to the entry of salt water in the water table. Under the scheme, the Micro Irrigation Department has provisions and funds to help out the villagers to build bridge gates and planks to stop the salt water entering into the agricultural fields of Chandumata.

The team formed a committee that comprised the residents of Chandumata and nearby affected villages and approached the Micro Irrigation Department in August 2016. The Department officials interacted with them and assured that they would resolve the problem. In November 2016, the work of the bridge gates and wooden planks got completed, and the issue got resolved. However, the impact of the saltwater intrusion on fields would remain for another 3-4 years. "The soil needs that much time to recover and go back to the old

[17] Interview conducted with Chapka Gouda from Chandumata on September 20, 2017.

condition", says Chapka Gouda, an elderly farmer from Chandumata. He also points out that they were able to make the right moves with the support of the paralegal team and resolve the issue. He also recollects that they did not know how to go about this issue until the paralegal team came into the picture. "The paralegals not only helped us to collectivise among ourselves but also helped in document collection and approaching the officials", Gouda added.

Bridge built on Gangavalli River as a part of NH 66 road expansion. Sand dumping for construction of this bridge caused the salt water intrusion at Chandumata

Salikeri Village, Honnavar Creek water Flooding

Salikeri village comes under Haladipur Gram Panchayat in Honnavar Taluk. The village is on the side of NH-66 that passes through Honnavar. The villagers have been facing a crisis as the highway expansion work is blocking the water flow of a creek that passes through the region. Now, the creek water is blocked by the new road and the water floods to the nearby areas. Around 50 households in Salikeri village are affected by the creek water flooding. The bore wells constructed by the residents for both agricultural and household purposes get contaminated by the flooding.

The environment clearance (EC) letter has states the condition that a sufficient underpass should be provided for creeks and water channels. Mahabaleshwar Hedge, the program manager of CPR-Namati Environment Justice Program in Uttara Kannada, highlighted during an interview that the underpass was created only for all-season creeks, but monsoon creeks still got blocked. Ganapi Gouda, a resident of Salikeri, says that during the months of monsoon, their houses are often flooded as there is no way for the water to flow.[18] "A canal could have resolved the issue and I do not understand why the officials did not make plans for it while constructing the road. The road construction in our region was during one summer and therefore we also did not anticipate this issue. Currently it is very difficult to live here during the monsoon season due to this creek water flooding", she added.

[18] Interview conducted with Ganapi Gouda from Salikeri on September 19, 2017.

The residents of Salikeri are mostly involved in agriculture and other wage labour such as building construction, carpentry, etc. During the monsoon months in 2017, the villagers had approached the local Panchayat authorities and the Tehsildar and given 2-3 request letters to take action on this issue. After several requests and complaints, the Tehsildar came for a site visit and later IRB gave money to the Panchayat, and the Panchayat tried to resolve the issue by dumping sand in the region.

However, the sand dumping was only a temporary solution and did not prevent the flooding for long. Sitaram, a retired school teacher who is active among the villagers who are trying to tackle this issue, points out that the permanent solution to this problem is the construction of a canal that would allow the creek water to pass through.[19] "The canal construction should have been planned by the IRB authorities at the beginning itself. They tried to resolve their mistake through temporary ineffective ways. They have dumped sand two-three times in the flooding regions, but it is ineffective as the flooding continues during the rainy season. We have also approached the Taluk authorities regarding this problem but have not received any positive outcome yet. Right now we are not entirely sure about our next move as we have not got justice from anywhere", he added. Ironically, the environment clearance letter issued to the highway project in February 2014, mentions that appropriate measures must be taken for water harvesting under the general conditions (MoEFCC, 2014). At the time of the field visit in September 2017, the rains had subsided, and therefore the problem had ceased, and the villagers were not pursuing it anymore. However, the paralegals foresee that the problem could occur again in the monsoon months next year.

According to Sitaram, the Salikeri village had rich vegetation and biodiversity until the road construction began. He says that a large number of trees in Salikeri have been cut for the purpose of the highway construction and the fertility of the soil is also getting affected due to the creek water flooding. In the environment clearance letter, it is specified that around 23491 trees would be cut from the sides of the road for the purpose the project. Although cutting of trees is a concern, there have not been any complaints or questions from the local communities in the region.

Mavinkatta Stone Crusher and Blasting Unit, Mallari village, Bhatkal

The Mavinkatta stone crusher and blasting unit has been creating several problems for the villagers since its inception. The stone blasting unit is located in Mallari village of Mavinkatta Panchayat in Bhatkal Taluk. It is under the ownership of IRB, and around 60 to 75 households are highly affected by the stone blasting unit's day-to-day operations. The stone crusher and blasting unit have been functioning in the village for past 2 years. This unit started functioning in the region since December 2014.[20] The villagers point out that the entire region is covered with stone dust after the stone crusher and blasting unit started functioning in Mallari. The water sources in the village have been contaminated by the stone dust and the chemicals used for blasting purposes.[21] The villagers have also noted the depletion of ground water since the blasting and crusher work started in the region.

Bhatkal is known for its jasmine flower cultivation and trade. Several villagers of Mavinkatta are also involved in jasmine cultivation, and they have been facing a huge loss in their business as the cultivation gets affected by the water scarcity and the stone dust. Noise pollution is another major issue created by the blasting unit. The villagers complain that the authorities of the blasting unit do not follow the allowed timings for stone blasting that are from 8am to 6pm a day (MoEFCC, 2014). Praveen, a resident of Mallari village, who found out about the prescribed blasting timings from the Consent to Operate issued to the project by the Pollution Control Board, points out that the blasting starts around 5 in the morning every day and goes on till 8-9 at night. "We have raised several complaints to the Panchayat and local political leaders regarding the violations of the rules by the IRB stone blasting unit but have not received any positive response", Praveen added. Praveen shared that as per the Consent to Operate, the residents living close to the blasting unit are entitled to health check-ups every three months, but not a single health check-up has been conducted till today in Mallari.

[19] Interview conducted with Sitaram from Salikeri on September 19, 2017.

[20] Interview conducted with Praveen Kumar from Mavinkatta on September 19, 2017.

[21] Interview conducted with Anjali Naik from Mavinkatta on September 19, 2017.

Almost all the buildings in Mallari village have deep cracks on their structures due to heavy and continuous blasting. One can see several half built houses in the village that have been left alone after realising that the blasting can cause serious damages to the basic structure of the buildings. Anjali Naik, a resident of Mallari, shows the cracks that appeared on the walls of her house due to the heavy blasting. She also complains that there is a serious water crisis in the village due to ground water depletion.[22] At the beginning of 2017, around 250 villagers gathered and marched towards the blasting unit and the unit remained closed for three days due to strong protest. However, after a few days with the support of the police, the unit was reopened and started functioning again. According to Praveen, the police threatened the villagers saying that an FIR would be lodged against them if they continued to protest.

In June 2017, a group of villagers decided to use the Right to Information (RTI) Act, 2005 on their own as a mechanism to get more information about the blasting permissions so that they could point out the violations made by the blasting unit. Based on the information received from the KPCB office, the stone mining consent given by the PCB to the Mavinkatta blasting unit has expired and has not been renewed yet.[23] The villagers are planning to build a case against the blasting unit after receiving supporting documents and information. They hope that the RTI responses that are yet to be received (February 2018) would be able to show more such violations and they could use all this information to stop the functioning of the unit in Mallari permanently.

Issues related to the heightening of Road in Kodibaga

The residents of Kodibaga in Karwar are currently facing a crisis due to the heightening of the part of the highway that passes through the region. Kodibaga is a population dense area in Karwar town and the height of the highway that passes through this area has been increased by 7 feet in order to connect to the proposed flyover 4 km away. This is the only way for Kodibaga residents to reach the main road. Due to the increased height, since August 2017, they have been unable to access this main road until they travel 4 km and get connected to it. M.Kishore, a garage owner and resident of Kodibaga, says that ideally there should have been a connecting road to the highway from that region to avoid this problem.[24] "There are around 400 households and 3 educational institutions in this area and we are in a trapped situation right now. Even during an emergency we have to travel 4 km in order to reach the main road. The other side of Kodibaga is facing sea-facing the sea and therefore this road is our only connectivity option", he added. Dr. J.L Rathod, the Chief Administrator of the Post-Graduation Centre of Karnataka University Kodibaga, argues that it is a highly unscientific way of road expansion and an improperly planned project. "There are 150 students and 50 working staff in this institution. After the road heightening, reaching the college has become a nightmare for all of us. We had given a letter in August 2017, to the District Collector to resolve this issue by suggesting the building of a connecting road and a foot over bridge in the area. The collector said that he had forwarded it to the corresponding authorities but there is no response from them until today", Dr. Rathod added.[25] The residents and shop owners of Kodibaga had conducted a peaceful road blocking strike on September 13, 2017. However they have not got any positive response from the officials yet. They are planning to go ahead with stronger protest methods until they receive justice on this matter.

Conclusion

Infrastructure projects like the NH-66 expansion in Uttara Kannada could cause drastic changes to the land use patterns having huge impacts ranging from displacement, loss of livelihood opportunities, and pollution, to sometimes, manmade disasters like landslides. Non-compliance with conditions provided with the permission and consents granted to such projects could further exacerbate the impacts. In this case, the stone crusher unit clearly overlooked the conditions concerning its location and measures such as construction of a wind breaking wall and installation of a sprinkler system to control the dust. From the above cases, it can

[22] Interview conducted with Anjali Naik from Mavinkatta on September 19, 2017.

[23] Interview conducted with Praveen Kumar from Mavinkatta on September 19, 2017.

[24] Interview conducted with M. Kishore from Kodibaga on September 20, 2017.

[225] Interview conducted with Dr. J.L Rathod, Administrator, Karnataka University Post Graduation Centre, Kodibaga on September 20, 2017.

be seen that the local communities are going ahead with various strategies to tackle these issues to get both temporary and permanent solutions for their problems. In all the above-mentioned cases, the first move by the local communities was to approach the company to seek redressal for their issues. It can also be seen from the above cases that the communities have moved ahead when the issue could not get resolved at the initial level by choosing alternate strategies such as mobilisation, protests and administrative complaints. The local communities have also used mechanisms like RTI to gather information about the projects and the rules and regulations that need to be followed during the construction work so that they could substantiate their complaints. In the cases of Bogribail stone crusher unit and Chandumatta saltwater intrusion, the collaborative work of the village community and the paralegals has resulted in the attainment of remedies as well. While the administrative institutions took their time to resolve the issues, the company, in response to such complaints, handed out compensation to affected communities. Compensation was due to them for the discomfort and the risks they had to live with in the past, but that still doesn't absolve the company of the requirement to abide by the environmental stipulations. Communities' resolve in the matter and dogged pursuance of the issue are the highlights of the case. They pursued not only the compensation for the past irregularities committed by the company, but also the long-term remedies. Many times, communities have strategically chosen to use media reporting and dialogues between the community and the project authorities alongside administrative complaints that have helped in the attainment of a resolution. The study highlights the efforts that go into invoking institutional action and obtaining remedies in cases of environmental non-compliance.

References

Belgaumkar, G. D. (2010, March 19). *Plan to widen National Highway 17 opposed*. The Hindu.. Retrieved from http://www.thehindu.com/todays-paper/tp-national/tp-karnataka/Plan-to-widen-National-Highway-17-opposed/article16004123.ece

Bivalve Collectors' group, Sahyadri Trust, Nilkund and CPR-Namati. (2014). Proposal for declaration of Aghanashini Estuary as Critically Vulnerable Coastal Area (CVCA) under CRZ Notification, 2011. Submitted to Principal Secretary to Government, Departmen.

DHNS. (2015, August 12). http://www.deccanherald.com/content/494786/spl-officer-acquire-land-nh.html. Deccan Herald. Retrieved from https://www.deccanherald.com/content/494786/spl-officer-acquire-land-nh.html

Government of Karnataka. (n.d.). *Official Website of Uttara Kannada*. Retrieved from Official Website of Uttara Kannada: http://uttarakannada.nic.in

Hegde, M., & Kapoor, M. (2017, May 29). http://www.deccanherald.com/content/614309/when-coast-compromised.html. *Deccan Herald*. Retrieved from https://www.deccanherald.com/content/614309/when-coast-compromised.html

Kamila, R. (2011, May 24). *20-km road widening completed between Kundapur and Surathkal*. The Hindu.. Retrieved from http://www.thehindu.com/todays-paper/tp-national/tp-karnataka/20km-road-widening-completed-between-kundapur-and-surathkal/article2044198.ece

Karnataka Govt. (2011). The Karnataka Regulation of Stone Crushers Act, 2011. Retrieved from http://www.dpal.kar.nic.in/ao2012/8of2012(E).pdf

Malkarnekar, G. (2017, February 24). *4-lane NH 17 will enable high speeds between 80-100kmph*. The Times of India. Retrieved from https://timesofindia.indiatimes.com/city/goa/4-lane-nh-17-will-enable-high-speeds-between-80-100kmph/articleshow/57320273.cms

MoEFCC. (2014, February 19). *Environmental and CRZ clearance for NH-66*. Retrieved from Environmental Clearance: http://environmentclearance.nic.in/writereaddata/Form-1A/EC/052320141EC10-107(2011).pdf

Nayak, N. D. (2015, March 18). *Opposition to Tadadi port plan*. The Hindu.. Retrieved from http://www.thehindu.com/news/national/karnataka/opposition-to-tadadi-port-plan/article7005103.ece

NHAI, N. (2012, August). *Draft Environmental Impact Assessment- NH66*. Retrieved from Karnataka State Pollution Control Board: http://kspcb.gov.in/PH/Kunapur%20Draft%20EIA1.pdf

Rosenberg, T. (2017, August 8). *India's Barefoot Lawyers*. The New York Times.. Retrieved from https://www.nytimes.com/2017/08/08/opinion/indias-barefoot-lawyers.html

S.O. News Service. (2016, September 26). *Karwar NH extension issue: Honnavar Spl land acquisition officer dismissed from duty.* Sahil Online News Service. Retrieved from http://www.sahilonline.net/en/karwar-national-highway-extension-issue-uttara-kannada-dc-dismissed-land-acquisition-officer

Sastry, A. K. (2017, December 10). *Pace of widening NH 66 in stark contrast to Gadkari's claims*. The Hindu.. Retrieved from http://www.thehindu.com/news/national/karnataka/pace-of-widening-nh-66-in-stark-contrast-to-gadkaris-claims/article21386336.ece

CASE STUDY III

Shree Maheshwar Hydro Power Dam, Madhya Pradesh[1]

The Maheshwar dam is built in Nimad, the South western region of the state of Madhya Pradesh, 2 km upstream from the town of Mandleshwar (Schocking, 1999) The project is part of the Narmada Valley Development Plan[2] under which 30 large and 135 medium-sized dams have been planned in the Narmada valley (Friends of River Narmada, n.d.) ((Schocking, 1999). With a generation capacity of 400 Megawatts, the dam put nearly 60,000 acres of extremely fertile agricultural land and over 20 villages under full or partial submergence (Schocking, 1999). A large mass movement, comprising the local communities, farmers and environmental and human rights activists, has been protesting against the project as well as against the NVDP in general. The struggle in Maheshwar has been going on for more than 20 years.

Shree Maheshwar dam, along with Omkareshwar dam and Narmada Sagar Project, was envisaged to cater to the needs of the Sardar Sarovar Project by forming a network of dams on the Narmada valley. Narmada River that originates from Amarkantak and travels 1312 km to eventually meet the Arabian Sea, has been a point of discussion on damming rivers since as early as the colonial times. After being recommended by the Irrigation Commission of India in 1901 for construction of a barrage in Bharuch, the issue of damming Narmada caught the fancy of development planners of independent India as well. The Narmada Valley Project, though launched in 1975, faced several controversies over distribution of water between the riparian states and therefore the project got some concrete shape only in the late 1980s (Friends of River Narmada, n.d.) The Maheshwar project which is part of the Narmada Valley Development Plan was conceptualised in 1978 with the NVDA overseeing its planning, construction and development (Friends of River Narmada, n.d.).

Privatisation of Maheshwar Dam

In 1989, NVDA handed the Maheshwar project to Madhya Pradesh State Electricity Board (MPSEB)[3] as by then it was clear that the project would be for power generation alone and not for other purposes (Hemadri, Mander, & Nagaraj). In 1991, the Central Government initiated a policy to attract the private sector to participate in the generation, transmission and distribution of electricity, under licence from the concerned state governments and to revive the staggering State Electricity Boards (Planning Commission). In pursuance to this policy, in 1992, it was decided that the Maheshwar project should be privatised and in 1993, the project was passed over to the private textile company S. Kumars (Dharmadhikary, 2015) (Vyas, 2015).

[1] For the purpose of this case study, all the field interviews and field observations were compiled by Ms. Anjana John, who was a part of the project till 31st January 2018. Names and other details of interviewees are provided in the annexure.

[2] Narmada Valley Development Plan (NVDP) is the largest inter-state, multipurpose river development scheme of India. The project was launched in 1975 by the Narmada Valley Development Authority (NVDA), an state government –run organisation constituted in 1985 for planning and implementation of the NVDP. NVDA, under the NVDP has prepared a detailed plan for exploitating water of Narmada and its tributaries for irrigation, power generation, navigation and other purposes (Source: http://www.mp.gov.in/en/web/guest/narmada-valley-development1)

[3] Soon after Indian independence, in 1948, with the Electricity Supply Act, the State Electricity Boards (SEBs) were created in India. The private parties which were providing electricity largely to urban areas in the pre-independence time came under the jurisdiction of SEBs which expanded themselves to rural areas as well. However, compared to the central entities such as NTPC (National Thermal Power Corporation) and NHPC (National Hydropower Corporation), the SEBs staggered through the four decades of their creation and the Central Government decided to bring private parties back into the picture. (Source: Planning Commission. History of Power Sector Reform. Power Sector Reform in Orissa: A case study in restructuring).

In 1985, The World Bank approved a loan of USD 500 million for the Sardar Sarovar Dam. However, in May 1989, the World Bank team asked the Central government to settle the dispute between the Gujarat and Madhya Pradesh governments about the rehabilitation of people who would be displaced due to construction of the dam. This was also in response to local protests against the manner in which the resettlement was planned for the project oustees and its environmental impacts remaining unaddressed. These impacts were highlighted by those who would be affected with the support of Narmada Bachao Andolan (For details about NBA, read the section below: Local Opposition, involvment of NBA and state government's response). The Bank also considered withdrawing from the project, if these concerns were not addressed (Thakurta, 1989).

After an independent review by a committee constituted by the World Bank, the Morse Commission highlighted the shortcomings in the resettlement plan and the its impact on the environment in 1992; the World Bank demanded compliance with stricter and tougher conditions concerning the above issues. In May 1993, the Indian Government cancelled the agreement with the World Bank and decided to continue the work on the dam on its own (Miller & Kumar, 1993).

Many activists indicate that the Government of India, anticipating that this withdrawal would have implications on the prospect of Maheshwar dam of obtaining development aid, decided to hand over the project to S. Kumars (Friends of River Narmada, n.d.), a private company. With this the project became the first privatised hydro power project of the liberalisation era[4] of the 90s (Dharmadhikary, 2015).

The Ministry of Environment and Forests (MoEF) granted an environmental clearance to the project on January 7, 1994 in favour of Narmada Valley Development Authority with the condition that rehabilitation of the affected people would be completed by 1998. Soon after, efforts towards procuring foreign investsments for the project commenced.

In 1996-97, a memorandum of understanding was signed between S. Kumars and the State Government of Madhya Pradesh with a target of completing the project construction by 2000 (Vyas, 2015). Together, MPSEB and S. Kumars set up Shree Maheshwar Hydro-electric Power Corporation Limited (SMHPCL) (Sharma, 2000). Researchers point out that the state government had allegedly granted favours to S. Kumars and agreed to a power purchase agreement which was skewed in favour of the company (Dharmadhikary, 2016). The unsatisfactory cost-benefit analysis of the project and high rate of tariff that was agreed upon in the agreement raised suspicion around the financial viability of the project.

Project Impacts

The MPSEB data indicates that 61 villages would be affected by the project (MoEF). While 13 of these villages would be fully submerged, 9 would be partially submerged and in the remaining 39 villages only agricultural land would be submerged. It also noted that in 9 of the 39 villages where 'no shifting of abadi is involved', only government land would be under submergence (MoEF) (Friends of River Narmada, 1998). MPSEB also noted that the dam would submerge 5697 ha in which 1060 ha was private land. As per its calculation, 2264 families would be affected (MoEF).

The agricultural soils here are extremely fertile and irrigated agriculture is one of the major livelihoods in this region. Most of the agricultural lands are irrigated through lift irrigation from the river. The farmers from the region cultivate three crops a year that include different sorts of grain, soya, pulses, peanuts, chillies, spices, bananas, guavas, citrus fruits, sugar cane, cotton and many different vegetables. Also, villages in the area possess large herds of buffalo, cattle and goats. Aside from meeting the villagers' own needs, agricultural production from this area supplies regional markets with grain, rice, melons, buffalo milk and many other goods. Its agriculture sustains not only a large part of the population in the 61 villages, but also employs many wage labourers living outside the project area[5] (Roy, 1999) (Friends of River Narmada, n.d.).

[4] Economic liberalisation in India began in 1991 and it opened up the country to global economy by limiting the government intervention in business. By putting a constraint on public sector monopoly, it encouraged a competitive marked-based economy in India. (Source: http://www.firstpost.com/business/25-years-of-liberalisation-a-glimpse-of-indias-growth-in-14-charts-2877654.html)

[5] Interview conducted with Sheru Singh and Mangat Verma on December 6, 2017.

Other than small scale farming, the livelihoods practiced in this region are fishing, boating services across the Narmada River, and seasonal agriculture on the river banks. The fisherfolk in this region belong to the Kahar caste group. Sheru, a resident of Mardana village and an activist against the dam, points out that the Narmada River is the centre piece of the economy of the villages in the Maheshwar Project region. "The river is not only the primary irrigation source of farming but also the backbone of the fishing livelihood in the region. Thousands of local fishing persons including myself, depend on the river for their survival income. Therefore the dam would have a grievous effect on our livelihoods along with the issue of displacing the surrounding villagers", he added.[6]

Local Opposition, involvement of NBA and state government's response

While the MPSEB had passed on the project to S. Kumars in 1989, the responsibility of resettlement was with the MPSEB; the company was supposed to make the budget for Rehabilitation and Resettlement (R&R) available (Hemadri, Mander, & Nagaraj). According to Hemadri et al, the initial process of land acquisition for the project began in 1987. However, Friends of Narmada, an international coalition and support network for Narmada Bachao Andolan (NBA), notes on its website that in February 1997, some villagers had received notices regarding land acquisition and they approached the NBA (Friends of River Narmada, n.d.).

The Narmada Bachao Andolan first originated as a protest movement against the displacement of local communities due to the construction of Sardar Sarovar Dam in Gujarat. Later on, the movement spread its focus on criticising the state's industrialisation based development which is 'massively destructive of people and the environment' (Baviskar, 1995) (The Right to Livelihood Award, n.d.). NBA, now is a social movement comprising cash croppers, tribal peasants and big farmers of Narmada valley. A core group of activists has organised them on the demand that big dams planned for the valley be quashed. NBA also works as a network, liaises with national and international NGOs, conducts research, disseminates information, lobbies with the government and the media, mobilises and coordinates protests in the valley and raises funds and plans strategies for the movement (Cox & Robinson, 2007).

Mangat Verma[7], an activist who has worked with NBA and is one of the founding members of Maheshwar Bandh Prabhavit Machhuara Sangh from Maheshwar, recollects that it was the NBA that took the initiative to educate the villagers regarding the adverse effects on the region by the dam construction and its functioning. "The authorities were reluctant to explain the effects of dam construction on us although we had approached them several times. It was the NBA activists who explained the adverse effects of the dam and made efforts to collectivise the villagers through public meetings and rallies", Mangat added.

Villagers under the banner of NBA carried out a series of rallies, protests and demonstrations in 1997. The first mass protest against the dam was on 11th January 1998 and more than twenty five thousand people were present (Palit & Vanaik, 2003).

After this massive protest, in January 1998 the state government announced a review of the Maheshwar project by constituting a task force. The task force was appointed by Subhash Yadav, the then Deputy Chief Minister in the state legislature of the Congress Party. There were representatives from MPSEB (Mandloi, the then Civil Engineer, MPSEB) as well as the representatives of the protest movement (Girish Sant, Alok Agarwal, K.P Datye and others) on it (Narmada Valley Development Department, Govt. of M.P., 1998).[8] The task force was asked "to look into the alternatives to all the Narmada Valley projects. In addition it was tasked with the responsibility to have detailed discussions on an alternate model of development for the valley and give recommendation to the government" (Narmada Valley Development Department, Government of Madhya Pradesh, 1998). The dam construction work that had started in 1997 was stalled with the constitution of the task force, only to be resumed in April 1998 in the name of construction of a 'protection wall'.

[6] Interview conducted with Sheru Singh from Mardana village on December 5, 2017.

[7] Interview conducted with Mangat Verma from Mandaleshwar on December 6, 2017.

[8] Task force to study Narmada valley development options.(2009, October).A draft report. Retrieved from http://www.narmada.org/maheshwar/docs/Book.html#alternatives

As a response to this, on April 22 and 23, 1998, over 3000 people gathered at the dam site. Despite the peaceful demonstration, they were met with police intimidation which left 30 protestors injured and hospitalised. Participating women were harassed and beaten up by the police (Hemadri, Mander, & Nagaraj) (Friends of River Narmada, n.d.). The reports of the incident followed in the national media; women's groups across the country demanded action against police atrocities. This led to the involvement of the National Human Rights Commission and National Commission for Women. They visited the area and demanded that the construction work be immediately stopped until the review is complete (Saheli, 1998). The then Chief Minister, Digvijay Singh from Indian National Congress Party visited the site on June 17, 1998 but gave 'no concrete response' on issues of displacement and finances of the project. Subsequently, in July, the Chief Minister extended the term of the task force by six more months (Saheli, 1998) (Friends of River Narmada, n.d.).

The task force came up with a report that year stating that the dam cannot be constructed without addressing the displacement and livelihood issues of the nearby villages. Its report stated that there is a necessity to adopt a much greater humane approach to resettlement and rehabilitation activities. It also stated that around 4000 families would be affected by the dam (as against the MEPB data that stated 2264 families would be affected). It recommended that a high-power committee be formed to "ensure proper rehabilitation and resettlement" and this committee should be "composed of representatives of the government, the NVDA, the MPSEB and sufficient number of representatives of the families affected by the project." It also suggested that the project should resume construction only after a cost-benefit analysis with fresh computation and a comprehensive plan for rehabilitation according to the state R&R policy have been done and only if that shows that the benefits are greater than the costs (Narmada Valley Development Department, Govt. of M.P., 1998)

However, the recommendations of the task force were not followed by the state government and the dam work continued (Bavadam, 2011). The movement against the project gained more momentum after this and the modes of protest included fasting and occupying the dam site by the affected villagers. "We did not even allow the project and survey authorities to enter our villages as the struggle against the dam became stronger. Sign boards stating that the entry of project authorities is prohibited were put up in several affected villages", Mangat said (Bavadam, 1998).

The movement had a strong support from the women of the local communities (Friends of River Narmada, n.d.). Sundara Ba[9], an elderly resident of Mardana village, recollects that almost all the women in her village were present for the protests and rallies against the dam. "We did not have any choice other than raising our voices against the dam. 800 families out of 1188 received eviction notices from the authorities in the late nineties and there were no clear answers from them regarding rehabilitation. The police and the company authorities have threatened us many times to back off from the protests and many of us got arrested as well but we were not ready to give up our struggle", she added.

Slew of 'failed' foreign investments

Noting the local opposition and huge social implications of the project, its very first investor, American utility PacifiCorp withdrew from it in May 1998 (Friends of River Narmada, n.d.). German power utilities Bayernwerk AG and Vereinigte Elektrizitätswerke Westfalen (VEW) signed an agreement in the same year and acquired 49% equity in the Shree Maheshwar Hydro Power Corporation (Hemadri, Mander, & Nagaraj). HypoVereinsbank was to provide a loan of USD 257 million of the total project cost of USD 530 million (Schocking, 1999). This deal was signed in lieu of a contract with the German company Siemens for purchase of turbines and other equipment for power generation. Siemens also hold 14% shares of the project though for a short term. Siemens applied for an export credit guarantee from the German Government. Although the German Government gave an in-principal approval for the guarantee, the final decision was subsequently put on hold due to the local protest (Venkatasen, 2000).

As the movement against the dam became stronger, NBA reached out to foreign agencies, the international investors and suppliers informing them of the projects' impacts and protests against it and received international support for the struggle (New Internationalist, 2001) (Declaration in support of the struggle for the promised

[9] Interview conducted with Sundara Bai, resident of Mardana village, on December 5, 2017.

suspension of construction of the Maheshwar Dam, Madhya Pradesh, India., 1998). As a result, in November-December 1998, in order to assess the impact of this German investment, a German environment and human rights organization Urgewald, conducted an investigative study on the project that included the site visit of ten villages that come under the submergence zone of the dam and conversations with the S. Kumars' authorities as well the MPSEB officials. Urgewald is an environment and development NGO that monitors German involvement in large-scale projects with significant social or environmental impacts in developing countries. The study came up with the conclusion that there was a massive deficiency of credible resettlement planning and there were systemic violations of rights of the affected people in the region in terms of compensation and rehabilitation (Schocking, 1999). The study pointed out that the project officials did not provide clear information regarding the land availability for the rehabilitation process. It termed it as a "resettlement fiasco". The study also questioned the economic viability of the project as its functioning would have adverse effects on the livelihood choices in the project region. It stated: "The cost-benefit analysis for the project is based on erroneous data (poor villages, unirrigated lands, little infrastructure). If compensation at replacement value would be undertaken, the project would very likely not be viable." It, as part of a coalition of 120 German NGOs, urged the government to withhold guarantee for the project.

The findings of the study, as well the hunger strike by the community leaders, convinced VEW and Bayernwerk to end their involvement in the Maheshwar project in April 1999. Both the German companies stated that they would think of any further involvement in the project only if the affected people get land for land compensation and rehabilitation (DTE, 1999).

However, Siemens was still committed to provide equipment to the project and hence needed the export credit guarnatee for a 100 million USD bank loan. Urgewald sponsored the visit of 3 village representatives from Nimad to ask the German government to decline Siemens' request for the export credit guarantee (New Internationalist, 2001). To decide on Siemens' application and under persuasion from the protestors, the German Development Ministry created a team of 3 experts that visited the valley in June 2000 to assess the status of resettlement (Venkatesan, 2000). The study found the project to have shortfalls on all major aspects of rehabilitation and resettlment. To the project authorities' shame, the report stated that even the data on the number of people to be affected had not been compiled since 1993. In one of the 61 villages it found out that the number of oustees had increased from 190 to 300 and it anticipated such increases in other villages too. The MPSEB survey had missed adding the landless people who would be affected by the project, in its calculation of affected families (Sharma, 2000) (DTE, 1999). After this report, Siemens had to take its application back.

In the same year in March, US-based Ogden Energy Group had expressed interest and signed a Memorandum of Intent to take 49% of shareholding of the project (Sharma, 2000) (Cox & Robinson, 2007) but by December 2000, it too withdrew from the project (NBA, 2000).

All this while, NBA and the villagers carried out numerous street protests and rallies, including those in front of German and American embassies in New Delhi questioning the two countries' investments in the project. They also met with different ministries, departments and the government commissions for human rights and women (Friends of River Narmada, n.d.). The 'failed' foreign investments were a huge success for the NBA and the movement against the dam.

Centre's response to shortfalls in R&R

As per the 1994 EC the rehabilitation was to be completed by 1998; NBA activists claim that there was no R&R plan in place till 1998. The R&R policy of the State Government of Madhya Pradesh, as approved in 1987, stipulated land for land with a minimum of two ha of irrigated land entitlement. (Ventaktesan, 2011) (Govt. of M.P.) However, the State Government wrote to the MoEF in 2010 indicating that NVDA had prepared an R&R plan in 1993. The plan was subsequently updated by MPSEB in 1998 and again in 2000-01. (MoEF). When NBA complained to the Ministry about the pending R&R plan in 1998, the ministry sent a team comprising representatives from The Ministry of Rural Development, MoEF and the Central Water Commission for investigation. Its report substantiated what the NBA was maintaining that there was not enough land available for rehabilitation and there was no 'credible' rehabilitation plan in place (NBA Press Release, 2006).

In May 2001, the NVDA's Environment clearance was transferred to SMHPCL by the Ministry of Environment and Forests (MoEF) (Bavadam, 2006). While transferring the clearance the MoEF stipulated that a comprehensive rehabilitation plan be submitted to the Ministry by December 2001. It also constituted a Monitoring Committee to oversee the rehabilitation work. When the R&R plan was not prepared till then, the Monitoring Committee of the MoEF made a visit to the area in February 2002 and found out that the rehabilitation plan still hadn't been prepared. The committee communicated to the project that the financials of the project cannot be closed and the construction cannot restart till such a plan is submitted (NBA Press Release, 2006).

Between 2001 and 2006 dam work stopped. However, this was not because of the non-existence of the rehabilitation plan but because S. Kumars defaulted on certain loans received from the state government and the work stopped in the dam property that was attached to these loans (NBA Press Release, 2001).[10] Shripad Dharmadhikary from Manthan Adhyayan Kendra, who has closely researched the Maheshwar issue, states, "part of the reason for this shut down for these many years can be traced back to the NBA. It kept questioning the finances of the project all along, which increased institutional accountability and may have pushed the government to stall the work."[11] NBA's role in highlighting financial irregularities was apparent through the media reports on the company's bad loans which referred to NBA's sources (Bavadam, 2006).

The work resumed in early 2006 after financial restructuring of the company and the property attached to the loan was released by the state government (Bavadam, 2006) (MoEF). However, the work on the dam was started without the SMHPCL submitting the R&R plan with the MoEF as stipulated in its EC.

At this point, the NBA served a legal notice to the MoEF through Supreme Court counsel Prashant Bhushan. The notice, according to NBA's press release in June 2006, pointed out that the dam was illegal. It stated, "... although work had once again begun on the project, no rehabilitation plan or cultivable and irrigable land was actually available for the rehabilitation of nearly 20,000 affected families or 100000 oustees.." It also stated that livelihoods of an additional 8000 people, whose livelihood depended on fishing, rowing and sand quarrying in the river, have not been considered for rehabilitation entitlements. The notice stated that the dam was not only "illegal" but "would lead to unfolding of a human tragedy." The oustees even protested outside the office of MoEF on May,[11] 2006. In a letter dated June 9, 2006, MoEF directed the state government to suspend the work on the dam immediately till an R&R plan duly submitted by the project authorities has been approved by the monitoring committee after a site visit (NBA Press Release, 2006) (The Hindu, 2006) (Bavadam, 2006).

Further, since most investments in the project were now domestic and from public financial institutions with Power Finance Corporation (PFC) as the lead lending agency, NBA linked the livelihoods concerns of the people of the Narmada valley with the urban individual investors. Thus NBA tried to generate public pressure to check mismanagement of funds and hold the government accountable (The Hindu, 2001). As Dharmadikary puts it, "NBA's strategey against the dam has been comprehensive from the beginning. From local protests, to approaching the government institutions and ministers, to reaching out to the foreign investors who were the enablers of the project at one point, highlighting financial irregularities or framing it as a public issue when the public exchequer got involved in the project, it has responded organically to the project developments, while also contributing to many of these developments."

Against the suspension order of the MoEF, SMHPCL filed an appeal in the High Court of Madhya Pradesh and received a stay order from it in June 2006 (MoEF). On February 28, 2009, the High Court of Madhya Pradesh stopped any further construction on the dam that could block the river[12] but stated in July 2009 that work could continue (IWP, 2009) (The Hindu, 2010). In the High Court of Madhya Pradesh at its Jabalpur bench the NBA filed a case (WP No. 1359 of 2009), with Chitrarupa Palit as the petitioner, demanding the enforcement of the state R&R policy. The case is ongoing (W.P. No. 1359 of 2009, 2013).

[10] Another report by the CAG (for the year ending march 2003) revealed that Power Finance Corporation had illegally disbursed loans of nearly 100 crore to S. Kumars (Source: http://www.thehindu.com/2004/06/05/stories/2004060509780500.htm)

[11] Telephonic conversation of Meenakshi Kapoor with Shripad Dharmadhikary, Manthan, in March 2018.

[12] Oustees demand stoppage of Maheshwar dam in front of Environment Monitoring Committee. (n.d.). India Water Portal. Retrieved from http://conflicts.indiawaterportal.org/node/89

Maheshwar dam project has seen several investors pulling out of it.

Centre-State Tussle

In February 2009, when the monitoring committee that was constituted by the MoEF to oversee the rehabilitation work, visited the project site, a delegation of the NBA and protestors met with the committee and updated it that a comprehensive R & R plan had still not been prepared (IWP, 2009). According to the chronology of events available on the website of MoEF, the then Minister, Environment & Forests, wrote to the Chief Minister of Madhya Pradesh in October 2009, expressing his "concerns" over poor compliance with the EC conditions particularly the ones concerning R&R. The chief minister assured in his reply in November 2009 that submergence would not take place without the consent of MoEF. In December 2009 and February 2010, the monitoring committee on R&R visited the project site and noted the R&R work had not progressed much while the construction had reached an advanced stage by then (MoEF).

Based on the committee's report, the MoEF issued a Show Cause Notice to SMHCPL on February 17, 2010. The ministry claimed that the reply received from the SMHCPL in March 2010 was "vague and unsatisfactory" without any concrete timelines or schedule for R&R implementation. (MoEF)

Following this, on April 23, 2010, the MoEF issued a stop work order on the grounds of "negligible R&R and non-identification of agricultural land for resettlement and rehabilitation purpose. Out of 22 villages, Resettlement and Rehabilitation had only been completed for one village (Jalud), two wildlife sanctuaries had not been created as agreed in the EC conditions, backwater level calculation report of Central Water Commission which was supposed to be given by December 2009 had not been submitted till 2010 (Mehdudia, 2010)."

On the request of the Chief Minister and ex-chief minister of the Madhya Pradesh, the MoEF modified the Stop Work Order to permit safety related work including increase in water level in the reservoir (Singh, 2012) on already constructed gates of the dam, while the work on the dams to be constructed was still not allowed (The Hindu, 2010) (Moneylife, 2010). Between May and December 2010, letters were exchanged between Chief Minister and ex-chief minister of the Madhya Pradesh and Jairam Ramesh, the then Minister of Environment, regarding recommencement of work on the dam but the stop work order was not lifted. During this time the NBA and the project- affected people continued to stage demonstrations and rallies and approaching different offices in state and central government demanding work on resettlement and rehabilitation (Menon, 2010). The state government however, promised that R&R would be completed by end of March 2011. Responding to the letters forwarded by the office of the Prime Minsiter, that it received from the ex CM of MP, Digvijay Singh regarding the project, the Minister of Environment reviewed the project again but reiterated in January 2011 that work would resume only after R&R is completed (The Hindu, 2010).

On Feburay 12, 2011, Shivraj Singh Chauhan, the then chief minister of Madhya Pradesh, went on a fast hunger strike and one of the reasons for this was the alleged delay in the resumption of work on Maheshwar Dam. On March 1, 2011 the Government of Madhya Pradesh, in a status report on R&R, claimed that 70% of R&R had been compeleted. Not being fully convinced of this claim, the MoEF asked the state to clarify calculations. The state governmet conducted a review of the status at the level of the Chief Minister, Madhya Pradesh and sent an update to the MoEF. The PM's office conducted a review of the project on May 2, 2011 and asked Jairam Ramesh, the then Environment Minister to review the stop-work order (MoEF).

Under immense pressure from the state government and PM's office and despite not being fully onboard (as the R&R work was still much behind schedule, only 10% of it had been completed till then), in May 2011, Jairam Ramesh lifted the stop work order and allowed construction work of the remaining 5 gates of the project as well (Shrivastava, 2011) (Ventaktesan, 2011). He stated in the order dated May 6, 2011, "It has been suggested by those canvassing for the removal of the stop-work order that the MoEF has no locus standi on the R&R issue. I strongly disagree." He ended his letter by stating, "I have no option but to agree to the lifting of the stop-work order on the construction of the last 5 slipway gates." But he adds, "The filling up of the reservoir up to 154 mtrs will be considered after the R&R work has been completed" (MoEF).

Efforts to protect the fishing rights

As the dam construction was progressing despite the strong protests, it soon posed a threat on fishing livelihoods as well. In order to address the question of fishing livelihoods, the fisherfolk of the region started an initiative independent of the NBA. They formed a collective called Maheshwar Bandh Prabhavit Machhuara Sangh in the year of 2007. Mangat Verma, who is also one of the founders of the fisherfolk collective, noted that although the fisherfolk wanted the dam construction to be completely stopped, many were also worried that they would lose their fishing rights if the dam started functioning. "We are concerned about the future of our livelihood because we had seen the fisherfolk losing their fishing rights to outside contractors after the dam gets constructed", he added.

The members of the Maheshwar Bandh Prabhavit Machhura Sangh visited the nearby dams at Bargi and Omkareshwar and learnt that once the dam gets constructed and starts functioning, the government gives fishing contracts to local businessmen and the traditional fisherfolk are completely out of the picture. "We did not want the same thing to happen to us - to lose our fishing rights on Narmada. Therefore we decided to protect our rights and fought for a formal recognition of our rights from the government", said Mangat. The collective organised a protest march on June 13, 2007 for independent fishing rights and for the ban of fishing contracts. "We went through all possible ways to establish our rights. We urged the local activists and politicians to be involved in our movement. We also gave several letters and petitions to the Chief Minister and the Fisheries Department of Madhya Pradesh to consider our plea to formalise our fishing rights", Mangat added.

In the year 2011, in the state of Madhya Pradesh, the local fisherfolk received independent rights for fishing in the region (Shastri, 2012). Both Mangat and Sheru who are spearheading the fisherfolk collective that has 1702 members from 36 villages, consider attaining the independent rights as a great achievement of their collective movement. However, Alok Agarwal, a senior leader from the NBA thinks these fishing rights may

not mean much because he says, "no R&R is feasible in the project. The project is unable to ensure livelihood rights of agriculturists and fisherfolk alike." Members of the collective also fear this. They point out that if the dam starts functioning, it would change the river flow and it would negatively impact the living organisms in the river (Salve, n.d.). "The number and types of fishes have gone drastically low in other dam regions such as Bargi and Omkareshwar. We are worried that this could happen in Maheshwar as well if the dam gets operational", said Sheru.[13]

Narmada riverbank. The dam has also threatened the livelihood of the fisherfolk dependent on the river

Challenge to state's attempts at arranging land for R&R

In the High Court of Madhya Pradesh, in its single judge bench at Indore, a number of petitions were filed by close to 20 villagers against the state government with Anil Trivedi as their lawyer. The petitions were heard as one joint writ petition (no. 217/2012) by the HC. The petitions challenged the notification issued by the government under section 4(1) and section 17 of the Land Acquisition Act 1894 to acquire their lands for the purpose of rehabilitating the oustees of Maheshwar project. The farmers argued that since the compensation had not been given to them until then and they were still in possession of the land, the acquisition process should be discontinued. Later on, the petitioners also argued that under RFCTLARR, 2013, the government needs to follow the procedure under clause 24 of the said act. The court decided on March 17, 2016 that the land should be in possession of the farmers and the process initiated under the old act is discontinued. If the Government wishes to acquire the land the process should begin afresh under the new law (Writ Petition 217/2012, 2012).

[13] Interview conducted with Sheru Singh and Mangat Verma on December 6, 2017.

Approaching National Green Tribunal for Justice

In the year of 2011, construction of three units of the dam got completed. However, as part of the project plan for the dam to get commissioned, the height of the dam had to be raised to154 metres for it to get commissioned. The protest movement began occupying the dam site again as filling up the reservoir up to 154 metres would submerge thousands of local villagers' lands. This is when the community representatives decided to approach the National Green Tribunal (NGT). Antarsingh Patel and Sanjay Nigam, residents of Maheshwar tehsil in Khargaon district who would be affected by this change, filed a petition (26/2012) in NGT (PTI, 2012). The government of Madhya Pradesh had proposed a 3 level filling of the reservoir at 154 m, 160 m and 162.76 m. The government claimed that at 154 m, 40 MW of electricity would be generated "without any abadi submergence". Using this ground the state government obtained an approval from the MoEF for filling up the reservoir upto 154 m.

Appearing for the petitioners, advocate Ritwick Dutta challenged the decision of the MoEF of May 1, 2012 to allow the dam to be raised to 154 meters. He argued that although the State and Central Governments deny this, the increase will lead to submergence of private land and will impact locals who had not been compensated till then. He demanded that compensation and rehabilitation for those likely to be affected should be completed before the increase is made (NGT, 2012). Sanjay Nigam, one of the petitioners of the NGT case, recollects that it was with the support of the NBA activists that they filed the petition in NGT (NGT, 2012). However, after staying the filling for some time in June 2012, the NGT in its order of August 9, 2012, however, allowed the increase in height as it found that the measures suggested by the MoEF to check submergence were sufficient (NGT, 2012) (Singh, 2012)[14]. It had directed the state government to complete the rehabilitation process in 3 months and file an affidavit with an update. The government failed to do so but on November 22, 2012 it submitted that R&R for the project had been ignored and blamed SMHCPL for not releasing the R&R funds (Pallavi, 2012). In its order on the same date, the NGT directed the committee constituted by the MoEF to review the submergence of land due to filling up of the reservoir up to 154 metres.

With this, the NGT also intervened in the R&R issue of the project, and in April 2014, the NGT barred storage of water in the reservoirs and further work till rehabilitation was complete (Pallavi, 2014). On July 3 2014, in a subsequent affidavit, the petitioners demanded that the compensation to those who are are yet to be paid should be decided as per the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013. Thus in July 2014, the NGT directed the state government to resolve the rehabilitation issues (The Hindu, 2014). In October 2015, it reiterated that gates of the dam should not be closed or lowered and no further submergence should take place till R&R is complete (Jha, 2015).

Maheshwar Dam: The Current Status

In March 2013, observing that SMHPCL did not have funds to complete the project R&R and had not achieved its commercial operation date, the state government threatened to cancel the power purchase agreement. Many believed that high cost of electricity agreed upon in the pact was the real reason for this development (Singh, M.P, 2013). Around the same time, the proceedings for land acquisition for the project also lapsed (Pallavi, 2013). The process of acquisition of land from 6500 houses of Puthrad, Sulgaon, Bhatian Bujurg, Mardana, Nagawan, Amlata and Sasabarud villages in Khargaon district began on March 5, 2010. At this time, following section 41 of the Land Acquisition Act 1894,[15] the state government and the SMHPCL had executed an agreement that obliged SMHPCL to submit 740 crore for R&R with the government in advance. The land acquisition award could not be passed as the company failed to submit with the state government the INR 740 crore for rehabilitation. To save the project, in October 2014, a high-level committee was constituted (Dharmadhikary, 2016). In May 2015, this committee suggested three scenarios: according to the first scenario that was tried out the first, SMHCPL was granted 90 days' time to bring INR 600 crore as equity and INR 1200 crore as debt to complete the project. But SMHPCL failed to do so and in September 2015 lenders of the project met to discuss the next steps. They decided to adopt scenario

[14]Interview conducted with Sanjay Nigam from Mardana village on December 7, 2017.

[15]Land Acquisition Act 1857 was replaced by the Rights to Fair Compensation and Transparency in land.

The cost of power generated by the dam would be much higher than the current power tariff.

two, which was to take majority shares in the company and take management control while looking for a public company to take over the project (Dharmadhikary, 2016) (Ghosh, 2017). Following this, in December 2015, a state-owned consortium Power Finance Corporation (PFC) decided to take over the Maheshwar project from S. Kumars (now known as MW Corp) in order to speed up the process of rehabilitation and operationalise the dam (Ahuja, 2015). PFC estimated that at least INR 1500 crore would be required to complete the R&R process and restart the project. This was now a huge liability on the public exchequer. With a tariff of 8.53 per unit as estimated in December 2011, the power would be way costlier than even the electricity generated through solar power plants (at 5-6 Rs per unit), which means the project will not generate any revenue any time soon for PFC. As for the R&R, it seems once again public money will be spent to fill in for what a private company has failed to do (Dharmadhikary,2016). It is possible that the third scenario proposed by the committee for Maheshwar project i.e. abandoning the project, may emerge as the way out (Dharmadhikary, 2016).

After investing close to INR 2,560 crore in the form of debt and equity, the lenders to the project had issued a loan recall notice to SMHPCL on January 5, 2016, followed by a notice for invocation of pledge on May 19, 2016 (Ghosh, 2017).

In 2017, the PFC had also filed a case in National Company Law Tribunal (NCLT) Ahmedabad against the S. Kumars' promoter with the allegation of siphoning project funds and failure of repaying debts. However, the NCLT came up with a judgment in favour of S.Kumars stating that the allegations against the company by the PFC were "vague" and failure of repaying the debts does not amount to acts of oppression." (Ghosh, 2017). The PFC led consortium has given an appeal (237/2017) against this order in Delhi bench on NCLT. According to a report in Bhaskar, a Hindi News Daily, on March 12, 2018, the NCLT in its judgment directed the Centre and State Government to complete the project in 'public interest' on priority basis (Dainik Bhasker, 2018).

Simultaneously, after PFC took over, there are claims that the compensation for land oustees has been resumed since November 2017. Mangat Verma, who is one of the oustees, confirmed this.[16] According to R.S Balodia, Land Acquisition Officer who is in charge of Maheshwar Project in SMPHCL, the compensation process of land oustees is gradually progressing and around 50% have been covered in seven villages that are Mardana, Nagawa, Bhatyan, Bujurg, Sasawad, Amalatha and Sulgaon.[17]

On December 4, 2017, a case was filed by 46 land oustees from Mardana village to receive their compensation as per the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFTCLARR) Act, 2013 instead of the Land Acquisition Act, 1894, at the High Court Bench Indore (Writ Petition No. 21465/2017 Anandram & Others vs State of MP and another). This opportunity arose only with the operationalisation of the Right to Fair Compensation and Transparency in Land Acquisition, Resettlement and Rehabilitation Act, 2013. The petitioners, with the help of their legal counsel Girish Ukhale, claim that compensation award was passed in March, 2013 and accepted by the oustees 'under protest' but the compensation amount was not deposited in their account till January 1, 2014, by when the RFCTLARR Act had come into force. They demand that the compensation should be awarded to them according to section 24(2) of the new act.[18]

According to D. Sharma, Assistant Engineer from MPSEB who is currently monitoring the Resettlement and Rehabilitation process of SMPHCL, currently there are no funds allocated for rehabilitation.[19] "Since there is a case pending between the PFC and S. Kumars in the Delhi NCLT, the project is in a standstill mode", Sharma said.

Some interviewees stated that the NBA is not any more as active in the movement, as it used to be. However, Alok Agarwal from NBA clarifies, "We are still active. In the last eight years, since the work on the dam is stalled, our focus has been on taking the issues of R&R to the high court and the NGT. We have also been highlighting the financial unviablity of the project". He adds, "We are doing what is required at the moment".[20] After the completion of three units of the dam, many of the community groups who supported the protest movement lost their hopes that they would be able to put a permanent halt on the.[21]

There was also alleged fallout between the NBA and the Maheshwar Bandh Prabhavit Machhuara Sangh regarding the objectives of the struggle. As the fisher folk collective demanded independent fishing rights in the dam site, it conflicted with NBA's 'no dam' objective as the question of private fishing contracts would arise only when the dam gets operational.[22]

As years pass by, the community leaders who have been in the forefront of the protests are uncertain if they will ultimately attain justice. "Our lives have been in uncertainty for many years due to this dam project. At first we resisted the dam itself but now the movement has weakened and most of us only want a proper rehabilitation. Although we have resisted the dam for all these years I am not sure how long we can go on like this", says Sheru.[23] "I was in my late thirties when the struggle against the dam began and now I am sixty years old. A few of the prominent protestors have passed away during this period. It is high time we got some clarity about our future", said Sundara Bai.[24] Many others from the dam-affected communities express the same concern as the resistance has gone weak and they still haven't received any answers yet.

[16] Telephonic conversation of Meenakshi Kapoor with Mangat Verma in March 2018.

[17] Interview conducted with R.S Balodia, Land Acquisition Officer from SMPHCL on December 6, 2017.

[18] Telephonic conversation of Meenakshi Kapoor with Mangat Verma in March 2018.

[19] Interview conducted with D.Sharma, Assistant Enginner, MPSEB, Maheshwar.

[20] Phone conversation of Meenakshi Kapoor with Alok Agarwal, Narmada Bachao Andolan in March 2018.

[21] Interviews conducted with Mangat Varma, Sundara Bai, Sheru Singh.

[22] From the interview conducted with Mangat Verma on December 6, 2017.

[23] Interview conducted with Sheru Singh from Mardana village on December 5, 2017.

[24] Interview conducted with Sundara Bai from Mardana village on December 5, 2017.

References

Ahuja, M. (2015, December 22). PFC-led consortium to take over Maheshwar hydel project in MP. Hindustan Times.. Retrieved from https://www.hindustantimes.com/indore/pfc-led-consortium-to-take-over-maheshwar-hydel-project-in-mp/story-6zcvcKdjfLRv4ruq5gKIRL.html

Bavadam, L. (1998, July). *Controversy over a dam.* Frontline, 15(14). Retrieved from http://www.frontline.in/static/html/fl1514/15140440.htm

Bavadam, L. (2006, July). Private project, public fears. Frontline,, 23(13). Retrieved from http://www.frontline.in/static/html/fl2313/stories/20060714003502700.htm

Bavadam, L. (2011, Apr-May). Trouble over Man. Frontline,, 18(09). Retrieved from http://www.frontline.in/static/html/fl1809/18090970.htm

Baviskar, A. (1995). *In the belly of the river*. UK: Oxford University Press.

Cox, K. R., & Robinson, J. (Eds.). (2007). *The SAGE Handbook of Political Geography*. UK: SAGE Publications.

Dainik Bhasker. (2018, March 16). *Maheshwar Pariyojana janhit mein poori karaye kendra v rajya sarkar*. Dainik Bhasker.. Retrieved from https://www.bhaskar.com/mp/maheshvar/news/MP-MAT-latest-maheshvar-news-031004-1277703-NOR.html

Declaration in support of the struggle for the promised suspension of construction of the Maheshwar Dam, Madhya Pradesh, India. (1998, May 11). Retrieved from http://www.narmada.org/nba-press-releases/1998/maheshwar.declaration.html

Dharmadhikary, S. (2015, December 31). *Turning a full circle*. India Together. Retrieved from http://www.india-together.org/turning-a-full-circle-human-rights

Dharmadhikary, S. (2016, August 1). Maheshwar Dam: Private Mess, Public Cleanup. International Rivers.. Retrieved from https://www.internationalrivers.org/blogs/328-26

Dharmadhikary, S. (2016, August 1). *Maheshwar Dam: Private Mess, Public Cleanup [Blogpost]*. Retrieved from International Rivers: https://www.internationalrivers.org/blogs/328-26

DTE. (1999, May 31). *Support Withdrawn*. Retrieved from Down to Earth: http://www.downtoearth.org.in/news/support-withdrawn-19911

Friends of River Narmada. (n.d.). *A Chronology of events in the Maheshwar struggle.*. Retrieved from Friends of River Narmada: http://www.narmada.org/maheshwar/chronology.html

Friends of River Narmada. (n.d.). *Large dams on the Narmada river*. Retrieved February 2018, from Friends of River Narmada: http://www.narmada.org/nvdp.dams/

Friends of River Narmada. (n.d.). *The Maheshwar Dam : a Brief Introduction*. Retrieved December 2017, from Friends of River Narmada: http://www.narmada.org/maheshwar.html

Friends of River Narmada. (n.d.). *The Maheshwar Dam Project : Factsheet*. Retrieved from Friends of River Narmada: http://www.narmada.org/maheshwar/maheshwar.factsheet.html

Ghosh, S. (2017, July 3). *Power Finance Corporation pulled up by NCLT for filing case against Shree Maheshwar Hydel Power Corporation*. Financial Express.. *Financial Express*. Retrieved from https://www.financialexpress.com/india-news/power-finance-corporation-pulled-up-by-nclt-for-filing-case-against-shree-maheshwar-hydel-power-corporation/746324/

Govt. of M.P. (n.d.). *Provisions of Rehabilitation Policy*. Retrieved from NHDC Limited: http://nhdcindia.com/pdf/Provisions_of_Rehabilitation_Policy.pdf

Hemadri, R., Mander, H., & Nagaraj, V. (n.d.). *Dams, Displacement, Policy and Law in India*. Cape Town: World Commission on Dams.

IWP. (2009, February 3). *Oustees demand stoppage of Maheshwar dam in front of Environment Monitoring Committee*. India Water Portal.*l*. Retrieved from http://conflicts.indiawaterportal.org/node/89

Jha, B. K. (2015, November 4). *NGT asks to complete rehab before filling Maheshwar dam*. The Times of India.. Retrieved from https://timesofindia.indiatimes.com/city/indore/NGT-asks-to-complete-rehab-before-filling-Maheshwar-dam/articleshow/49658075.cms

Mehdudia, S. (2010, May 17). Eminent persons support MoEF order on Maheshwar Dam. *The Hindu*. Retrieved from http://www.thehindu.com/todays-paper/tp-national/Eminent-persons-support-MoEF-order-on-Maheshwar-Dam/article16036503.ece

Menon, N. (2010, November 28). *25,000 Maheshwar dam oustees march in Madleshwar: Narmada Bachao Andolan [Blogpost]*. Retrieved from Kafila: https://kafila.online/2010/11/28/25000-maheshwar-dam-oustees-march-in-madleshwar-narmada-bachao-andolan/

Miller, S. K., & Kumar, S. (1993, April 10). *Narmada dam fails World Bank's final test*. New Scientist.. Retrieved from https://www.newscientist.com/article/mg13818680-400-narmada-dam-fails-world-banks-final-test/

MoEF. (n.d.). *Maheshwar Hydro Electric Project: Chronology of Events*. Retrieved from Ministry of Environment and Forest: http://www.moef.nic.in/downloads/public-information/Chronology_Maheshwar.pdf

MoEF. (n.d.). *Subject: Maheshwar Hydroelectric Project, Madhya Pradesh*. Retrieved from India Environmental Portal: http://www.indiaenvironmentportal.org.in/files/maheshwar.pdf

Moneylife. (2010, May 17). *Maheshwar hydro-power project lands up in environmental clearance mess again.* Moneylife.. Retrieved from https://www.moneylife.in/article/maheshwar-hydro-power-project-lands-up-in-environmental-clearance-mess-again/5415.html

Narmada Valley Development Department, Government of Madhya Pradesh. (1998, January). *Government Order. No. 12-1-112-27-2-97/104. Bhopal. Dated 29.01.98. Government of Madhya Pradesh*. Retrieved from Friends of River Narmada: http://www.narmada.org/maheshwar/docs/Book.html

Narmada Valley Development Department, Govt. of M.P. (1998, January 29). *Task Force Report on Alternates of Water Resource Development of N.V.D.A.* Retrieved from Friends of River Narmada: http://www.narmada.org/maheshwar/docs/Book.html#alternatives

NBA. (2000, December 13). *Press Note: OGDEN WITHDRAWAL PUTS MAHESHWAR PROJECT INTO JEOPARDY: NBA urges financial institutions to stop squandering public funds into this Project and stop violation of financial norms*. Retrieved from Friends of River Narmada: http://www.narmada.org/nba-press-releases/december-2000/ogden.withdraws.html

NBA Press Release. (2001, November 18). *New CAG Report tabled in Madhya Pradesh Vidhan Sabha confirms S.Kumars financial malpractices; M.P. government must desist from picking up equity in the destructive Maheshwar Project*. Retrieved from Friends of River Narmada: http://www.narmada.org/nba-press-releases/november-2001/cag.report.html

NBA Press Release. (2006, June 12). *Press Note: Ministry of Environment and Forests orders stoppage of work on Maheshwar dam; Project authorities violate conditions of clearance; Maheshwar Project should be scrapped in national and state interest*. Retrieved from Friends of River Narmada: http://www.narmada.org/nba-press-releases/june-2006/moef.html

New Internationalist. (2001, July 1). *A temple too far*. New Internationalist.. Retrieved from https://newint.org/features/2001/07/01/maheshwar

NGT, APPEAL NO. 26/2012 (National Green Tribunal August 9, 2012).

Palit, C., & Vanaik, A. (2003, June 11). *Monsoon Risings*. Retrieved from Counter Currents: https://www.countercurrents.org/en-narmada110603.htm

Pallavi, A. (2012, November 26). *Madhya Pradesh government lied about rehabilitating people affected by Maheshwar dam*. Retrieved from Down to Earth: http://www.downtoearth.org.in/news/madhya-pradesh-government-lied-about-rehabilitating-people-affected-by-maheshwar-dam---39655

Pallavi, A. (2013, March 23). *Maheshwar dam land acquisition award lapses as developer fails to cough up rehabilitation amount*. Retrieved from Down To Earth: http://www.downtoearth.org.in/news/maheshwar-dam-land-acquisition-award-lapses-as-developer-fails-to-cough-up-rehabilitation-amount-40697

Pallavi, A. (2014, July 4). *Maheshwar dam: NGT directs state to sort out rehabilitation problems*. Retrieved from Down To Earth: http://www.downtoearth.org.in/news/maheshwar-dam-ngt-directs-state-to-sort-out-rehabilitation--problems--45089

Planning Commission. (n.d.). *POWER SECTOR REFORM IN ORISSA: A CASE STUDY IN RESTRUCTURING*.

PTI. (2012, May 31). Green tribunal says no to filling Maheshwar dam reservoir. *The Economic Times*. Retrieved from https://economictimes.indiatimes.com/news/environment/developmental-issues/green-tribunal-says-no-to-filling-maheshwar-dam-reservoir/articleshow/13689490.cms

Roy, A. (1999, May 24). The Greater Common Good. *Outlook*. Retrieved from Outlook: https://www.outlookindia.com/magazine/story/the-greater-common-good/207509

Saheli. (1998, September). *THE MAHESHWAR DAM STRUGGLE: WOMEN AT THE FOREFRONT*. Retrieved from Saheli Women Resource Centre: https://sites.google.com/site/saheliorgsite/solidarity/the-maheshwar-dam-struggle-women-at-the--forefront

Salve, C. (n.d.). *The fishing community of Madhya Pradesh suffers due to Narmada Dam [Blogpost]*. Retrieved from Video Volunteers: https://www.videovolunteers.org/the-fishing-community-of-madhya-pradesh-suffers-due-to-narmada-dam/

Schocking, H. (1999). *THE MAHESHWAR DAM IN INDIA: A Report by Heffa Schocking March 1999*. Delhi: Planning Commission. Retrieved from http://planningcommission.nic.in/reports/articles/ncsxna/index.php?repts=maheshwar.htm

Sharma, K. (2000, June 30). *German review faults Maheshwar dam project*. The Hindu.. Retrieved from http://www.thehindu.com/2000/06/30/stories/0230000r.htm

Shastri, P. (2012, September 14). *Narmada fishermen demand direct fishing rights*. Hindustan Times.. Retrieved from https://www.hindustantimes.com/india/narmada-fishermen-demand-direct-fishing-rights/story-yuM408eIcQtuyU0RSeA9hK.html

Shrivastava, K. S. (2011, May 10). *Ban on construction work at Maheshwar dam lifted*. Retrieved from Down To Earth: http://www.downtoearth.org.in/news/ban-on-construction-work-at-maheshwar-dam-lifted--33470

Singh, M. P. (2012, May 14). *Maheshwar dam project unviable: Prashant*. The Hindu.. Retrieved from http://www.thehindu.com/todays-paper/tp-national/tp-newdelhi/maheshwar-dam-project-unviable-prashant/article3416768.ece

Singh, M. P. (2012, August 10). *NGT allows filling of Maheshwar dam; review in three months*. The Hindu.. Retrieved from http://www.thehindu.com/news/national/other-states/ngt-allows-filling-of-maheshwar-dam-review-in-three-months/article3750868.ece

Singh, M. P. (2013, March 20). *M.P. threatens to cancel pact on Maheshwar dam*. The Hindu.. Retrieved from http://www.thehindu.com/todays-paper/tp-national/mp-threatens-to-cancel-pact-on-maheshwar-dam/article4527891.ece

Thakurta, P. G. (1989, May 31). *World Bank threatens to withdraw support to Sardar Sarovar project*. India Today.. Retrieved from https://www.indiatoday.in/magazine/environment/story/19890531-world-bank-threatens-to-withdraw-support-to-sardar-sarovar-project-816135-1989-05-31

(2001, June 24). *Public money down the drain?* The Hindu.. Retrieved from http://www.thehindu.com/2001/06/24/stories/1324061c.htm

(2006, June 13). *Centre suspends work on Maheshwar project*. The Hindu. Retrieved from http://www.thehindu.com/todays-paper/tp-national/tp-otherstates/centre-suspends-work-on-maheshwar-project/article3118753.ece

(2010, April 30). *Madhya Pradesh approaches PM for help on Maheshwar dam*. The Hindu.. *The Hindu*. Retrieved from http://www.thehindu.com/todays-paper/tp-national/Madhya-Pradesh-approaches-PM-for-help-on-Maheshwar-dam/article16028157.ece

(2010, May 20). *Maheshwar Dam: ball back in Ministry's court*. The Hindu.. Retrieved from http://www.thehindu.com/news/national/Maheshwar-Dam-ball-back-in-Ministrys-court/article16302069.ece

(2014, July 6). *Resolve issues of Maheshwar dam oustees, NGT tells MP*. The Hindu.. Retrieved from http://www.thehindu.com/news/national/other-states/resolve-issues-of-maheshwar-dam-oustees-ngt-tells-mp/article6182203.ece

The Right to Livelihood Award. (n.d.). *Medha Patkar and Baba Amte / Narmada Bachao Andolan*. Retrieved from The Right to Livelihood Award: http://www.rightlivelihoodaward.org/laureates/medha-patkar-and-baba-amte-narmada-bachao-andolan/

Venkatesan, V. (2000, Jul-Aug). *A moral victory for the NBA*. Frontline,, 17(15). Retrieved from http://www.frontline.in/static/html/fl1715/17151150.htm

Ventaktesan, V. (2011). *A tale of two dams*. Frontline,, 25(12). Retrieved from http://www.frontline.in/static/html/fl2812/stories/20110617281203200.htm

Vyas, J. (2015, November 1). *Maheshwar Bandh Pariyojana: char saal mein hi company ne kar diye the haath khade*. Naidunia. Retrieved from https://naidunia.jagran.com/madhya-pradesh/indore-maheshwar-dam-project-in-four-years-the-company-had-made-up-the-hand-544295

W.P. No. 1359 of 2009 (The High Court of Madhya Pradesh January 7, 2013).

Writ Petition 217/2012 (High Court of Madhya Pradesh 2012). Retrieved from http://www.indiaenvironmentportal.org.in/files/land%20acquisition%20Maheshwar%20Dam%20Madhya%20Pradesh%20High%20Court.pdf

CASE STUDY IV

Gevra Mines, Chhattisgarh[1]

With over 10,000 million tonnes of deposits, the Gevra coal mine is the single largest source of power grade coal in India (Sharma, 2012). The mine has been in operation since 1981, and land acquisition for the project dates back to 1979 with subsequent acquisitions in 2001 and 2009. There have been grievances that the acquisition has led to forced relocation, loss of livelihoods and insufficient compensation. People who were displaced have been resettled to colonies set up very close to the mine, and they complain of water contamination and pollution. In 2012, when it spread over an area of 4942 acres, it was the largest open cast mine in India. Still continuing to be the largest mine, today it has double the land area and spans across 9884 acres (4000 hectares) of land in Korba[2] district of Chhattisgarh. Following an expansion of its production capacity, efforts to acquire more land began in 2014. On May 2, 2016, Korba witnessed a massive protest by SECL against land acquisition for mining. Around 679 people from 41 villages protested at the site of the Gevra Mines (Land Conflict Watch, 2017). These villagers were all farmers who demanded jobs, rehabilitation and compensation as per the amended Land Acquisition Act. There is a proposal to further increase the capacity of Gevra Mines up to 70 MTPA in the near future amidst all the existing unaddressed grievances.

Gevra Mines- History

Coal mining began in Korba in 1935 with an underground mine, in an area that is today known as Transport Nagar. Post-independence, Korba emerged as an important industrial area "in the wake of growing industrialisation since the 1950s." Under the first five-year plan, two coal mines were set up in Korba in 1958. Through the 1960s, and 1970s, a series of underground and open cast mines, industrial plants and thermal power plants were initiated in the district (Dhagamwar, De, & Verma, 2004). In 1978, Korba Super Thermal Power Station (KSTPS), to be located on the western bank of Hasdeo in the district of Bilaspur of Madhya Pradesh,[3] was cleared by the Government of India. KSTPS is the largest thermal power station in India. In March 1979, to meet the coal requirement of KSTPS to produce 1100 MW of electricity, Central Mine Planning and Design Institute (CMPDI) prepared the project report for Gevra opencast project. The initially planned capacity of 6 Million Tonnes Per Annum (MTPA) was expected to meet the then need of the KSTPS (of 4.25 MTPA) and also support its expansion by 1000 MW. However, the Government of India, in accordance with the then requirement of the KSTPS, approved the project in December 1979 for a capacity of 5 MTPA.

After KSTPS received an approval for expansion, its coal requirement was estimated at about 8 MTPA. To meet this need, CMPDI prepared a project report for expansion of Gevra opencast project in March 1982 with a production capacity of 10 MTPA. The Government of India approved this report in September 1985 (EIA / EMP for Gevra OC Expn). Soon after in 1987, Coal India Limited, the largest mining company in the world, which is a government enterprise, together with Government of India, procured a loan of USD 643 million from the World Bank. The loan was issued for a project titled Coal Mining and Coal Quality Improvement Project. The project, among other things, included the second phase of development of the mine to raise its production to 10 MTPA (World Bank, 1987). The project produced coal beyond 10 MTPA between 1991 and 1997. In 1997, it produced 17.88 million tonnes of coal. By 2000 it had a plan to increase its capacity from 12 MTPA[4]

[1] For the purpose of this case study, all the field interviews and field observations were compiled by Ms. Anjana John, who was a part of the project till 31st January 2018. Names and other details of interviewees are provided in the annexure.

[2] Korba became a separate district in Bilaspur division of Madhya Pradesh in 1998. In November 2000, after the bifurcation of Madhya Pradesh, Korba district fell in Chhattisgarh.

[3] ibid.

[4] It could not be found out when it got approval for a production capacity of 12 MTPA.

to 25 MTPA. It received an Environment Clearance[5] from the Ministry of Environment & Forests (MoEF) for its expansion to a production capacity of 25 MTPA on October 4, 2004. According to the Environment Clearance letter, the mine at the time was to spread over an area of 3584.671 ha.

Table 1: Chronology of Environment Clearances granted to Gevra mine

Month Year	Approval/Expansion Details
December 1979	GoI approves Gevra mine for a capacity of 5 MTPA. Land area not available in public documents
September 1985	GoI approves the capacity expansion to 10 MTPA. Land area not available in public documents
October 2004	MoEF grants EC to Gevra mine for its expansion to 25 MTPA with total land area of 3584.671 ha
June 2009	MoEF grants EC to Gevra mine for its expansion to 35 MTPA with total land area 4184.486 ha
January 2014	MoEFCC grants EC to Gevra mine for its expansion to 40 MTPA. No additional land area was required (4058.146 had been acquired by then; remaining 126.340 was yet to acquired)
February 2015	MoEFCC grants EC to Gevra mine for its expansion to 41 MTPA. No additional land area was required
March 2016	CIL considered an expansion of Gevra mine up to 70 MTPA. It would require additional 597.302 ha of land
November 2017	EAC recommended the project for expansion up to 45 MTPA

Land acquisition for the first phase

In the year of 1979, the first phase of land acquisition began, and 12 villages received the notification for land acquisition.The land was acquired in the name of Coal India Limited (CIL) which is a shareholder of the mine and its subsidiary South Eastern Coalfields Limited (SECL) owns the mine. According to an RTI response received by Urjadhani Bhuvisthapit Kalyan Samiti (Unofficial translation- Committee for the welfare of those relocated by the energy capital), Korba, from SECL, Gevra in 2016, 2850.516 hectares of land had been under Coal Bearing (Areas Acquisition and Development) (CBA) Act 1957.[6] A report by Down to Earth gives a similar figure- 3000 hectares of land was acquired under the said Act in 1980. The Act lays down the procedure for the acquisition of land in areas where coal deposits have been identified and recorded. The land can be acquired for government companies. According to the website of Ministry of Coal (Ministry of Coal-GOI), the Coal Bearing Areas Act allows for acquisition of land only for mining; for other purposes such as infrastructure, office, etc. land was to be acquired under the Land Acquisition Act 1894.

According to the interviewees, a total of 2630 families from 12 villages had been relocated in the first phase. But in April 2008 the MoEF noted in one of its monitoring reports that 968 PAFs (Project Affected Families) were already relocated for production capacity of 10 MTPA of Gevra mine. Similarly there are different claims for timing of relocation as well. The interviewees claimed that the resettlement of families who lost their land in the first phase of land acquisition began only in 1998. However, the loan document of the World Bank (for details see the above section) dated March 25, 1987 states that more than half of the resettlement for Gevra project had been completed by then (World Bank, 1987).

According to the villagers, the second phase of land acquisition was carried out between 2001 to 2009 for the expansion of Gevra project and the land areas of seven villages were acquired during this period in three stages. After the Gevra opencast mine project received its first environmental clearance for a production capacity of 25 MTPA in 2004 under the Environment Impact Assessment Notification, 1994, G.Udaybhaskar, Additional Director of MoEF visited the project site on April 20, 2005 with six other persons. He noted in his inspection report that the compliance with clearance conditions was “unsatisfactory”. Among other concerns, the report

[5] Projects listed in the Environment Impact Assessment (EIA) Notification, 2006, need to take an Environmental Clearance (EC) from the MoEF or the State Environment Impact Assessment Authority (SEIAA), as the case may be, before they start any activity. The expert appraisal committees of MoEF/SEIAA appraise project proposals, evaluate their environmental impacts and recommend if the project should be granted an EC or not. For projects that they recommend for an EC, they also suggest appropriate safeguards as conditions.

[6] RTI response received by Urjadhani Bhuvisthapit Kalyan Samiti, Korba in 2016.

noted that there had been land transfers from Dipka mine to Gevra mine but reconciliation of land for all three projects had not been done. It stated, "Part of land notified under CBA for use of Dipka mine is transferred to Gevra mine with approval of mine safety act. There is a need to reconcile land for all three projects i.e. Dipika[7], Gevra & Kusmunda mines and maintain the uniformity (in) all approvals. This is missing. PA is also casual. (Since) Land environment is directly affected due to OC mining this is absolutely needed."

Different numbers are provided for the project-affected people in different documents. The monitoring report issued under the Environment Impact Assessment Notification, (EIA) 2006, by the MoEF in April 2005, mentions that 1468 families from 11 villages were to be displaced for the expansion of Gevra project (25 MTPA). However, in April 2008, the MoEF noted in another monitoring report that for the mine expansion from 10 MTPA to 25 MTPA, additional 1230 families would be relocated. In June 2009, when the project received environmental clearance for its expansion from 25 MTPA to 35 MTP A (for details see below section), the MoEF noted in the clearance letter that the project at 25 MTPA involved R&R of 777 PAFs (Project Affected Families) from 12 villages- "Gevra, Ponri, Bareili, Beltikri, Dipka, Dhureha, Junandih, Mangaon, Ghatmunda, Kusmunda, Binjhra and Jingatpur"[8].

Dilharan Das, whose 0.4 acres of land from Podi village got acquired during the land acquisition in 2001 asks, "I am poor and all I had was this small piece of land. Now that has been acquired and I am left with nothing. The policies only favour the rich farmers as they have more land with them. I was not even given any information before they acquired my land. What am I supposed to do? What would be my family's future?"[9] Dilharan belongs to the Korva community which is notified as the Particularly Vulnerable Tribal Group (PVTG)[10] in the country. He was not given any notice prior to the acquisition of his property and he recollects the night that he and his family got evicted as the company JCB started demolishing their house while they were sleeping inside. He lodged a complaint with the local police station but they were not even ready to register his complaint. Like Dilharan, many others have had such experiences of violent and forceful evictions.

Focused group discussion-in Raliya village. A total of 113 acres of private land has been acquired from the village for expansion of Gevra mine.

[7]The Mine is called 'Dipka', but in this government letter it has been referred as 'Dipika'. However in subsequent government documents the mine is referred as 'Dipka'.

[8]Spellings for names of villages as mentioned in the clearance letter have been retained as are.

[9]Interview conducted with Dilharan Das from Podi village on June 2, 2017.

[10]In India, the Ministry of Home Affairs has categorised 75 tribal groups which have a low level of development, as Particularly Vulnerable Tribal Groups. These groups usually pursue pre-agricultural system of existence, have zero or negative population growth, and have an extremely low level of literacy.

Irregularities in land acquisition: Expansion from 25 MTPA to 35 MTPA

The 10th five-year plan (2002-2007) of India projected a demand for non-coking coal of 622 million tonnes for the 11th five-year plan (2007-2012). At the time the total indigenous supply of non-coking coal was projected to be 562.32 million tonnes leaving a deficit of 59.68 million tonnes. To meet this deficit, Emergency Coal Production Plan of CIL was formulated, and Gevra opencast mine was identified as one of the projects of the plan. Under this, an expansion from 25 MTPA to 35 MTPA was envisaged for Gevra (EIA / EMP for Gevra OC Expn). This time the total land requirement was 4184.486 ha of which 3584.671 ha had already been acquired by the project. Public hearing for the project was held on August 22, 2008. The project obtained an Environment Clearance for this expansion on June 3, 2009. The clearance letter stated that the expansion from 25 MTPA to 35 MTPA involves R&R of 2743 PAFs from another 8 villages: "Amgaon (475), Raliya (150), Pondi (383), Bahanpat (450), Bhatora (435), Naraibodh (400), Bhelai Bazar (350), and Gevra (100)."[11] The EC letter provides the breakup of land as below:

Land type	Area (in hectares)
Government land	625.285
Tenancy/private land	2502.57
Forestland	1038.63
Total	4184.486

Rehabilitation Issues

The state of Chhattisgarh issued a rehabilitation policy in 2007 called Ideal Rehabilitation Policy (Adarsh Punarwas Niti 2007). It mandates a job opportunity for one person per family whose land gets acquired. As part of Coal India's latest Rehabilitation and Resettlement policy of 2012, it gives one job per 2 acres. The rest are provided a one-time livelihood compensation of INR 5 lakh per acre (Nath, 2016). In 2013, the Government of India passed the Right to Fair Compensation, Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act. Under its section 24(2), it provides for a compensation of nearly four times the actual land cost. It also mandates that at least one employment or onetime payment of INR 5 lakh or minimum annuity of INR 2000 per month for 20 years per family be given to the affected families, irrespective of how much land a family has to relinquish.

The table 2 illustrates the details of land acquisition and the status of mining and resettlement of those seven villages, that were included in the second phase of Gevra land acquisition (as of August, 2016).

Table 2: Status of Mining, Land Acquisition, and Resettlement

Village Name*	Year of Land Acquisition Notification	Total Private Land Acquired	Percentage of SC/ ST Land Owners	Number of Land Owners	Total Employment Generated (as per CIL R&R Policy)	Employment Given	Status of Resettlement	Status of Mining
Podi	2001	358.57 acres	80%	1018	179	117	None	Mining completed in 2013-14
Amgaon	2001 and 2007	602.38 acres	90%	636	301	116	17 families got resettlement	Completed in 2014-15
Bahanpath	2001 and 2007	244.82 acres	60%	585	122	28	None	80% mining has been completed

[11] Spellings for names of villages as mentioned in the clearance letter have been retained as are.

Village Name*	Year of Land Acquisition Notification	Total Private Land Acquired	Percentage of SC/ ST Land Owners	Number of Land Owners	Total Employment Generated (as per CIL R&R Policy)	Employment Given	Status of Resettlement	Status of Mining
Bhatora	2001, 2007 and 2009	319.53 acres	60%	501	159	39	None	Not yet started
Raliya	2001 and 2007	113 acres	80%	255	56	0	None	Not yet started
Bhilai Bazar	2007	80.05 acres	95%	160	40	0	None	Not yet started
Naraibodh	2009	460 acres	40%	865	230	0	None	Not yet started

Source: RTI filed by Urjadhani Bhuvisthapit Kalyan Samiti, Korba, on November 3, 2016 to SECL and the response was given on November 25, 2016.

**Spellings for names of villages as mentioned in the RTI response have been retained as are.*

As per this table, the total number of land owners who lost land is 4020. These figures of affected people don't match with those recorded by MoEF.

Even if one goes by SECL's claims of the number of people affected, the above table shows that the 2012 R&R policy of CIL does not do much justice to the land oustees as there is a huge difference in the number of land owners and the jobs generated. All the above villages are majorly populated by SC and ST communities; only 17 families have been resettled till today. Munna Lal Korva, who comes under the PVTG category, has 0.5 acres land in Podi village and is not entitled to employment according to CIL R&R policy. He also has not got resettlement as of now. Munnalal has taken some land for lease in Raliya village and has built a house there with the INR 3 lakh compensation he received. Currently, he works as a construction labourer in Korba.

There is a huge gap between the number of landowners and the number of jobs provided after the application of CIL R&R policy. CIL blames this gap on the early notification of land acquisition. It states that while the acquisition got delayed due to CIL's policy of offering a job for every 2 acres of land, it made the land valuable. CIL claims that it led to land fragmentation (Bose, 2012). But from the gap reflected in the table, it is evident that many small- scale farmers don't even get entitled for employment in SECL, and those who make it to the employment category have to wait for a long period to finally get a job. For example, in Podi (or Pondi or Ponri) village, around 358 acres of land has been acquired, and 179 villagers are entitled to employment. However, until now only 117 people have got jobs.[12] To overcome this issue, in late 2011, CIL revised its R&R policy and offered INR 6-10 lakh an acre of land depending on its fertility coupled with a job offer or compensation of INR 5 lakh an acre for loss of livelihood. According to SECL's claims, villagers from Amgaon and Podi (or Pondi or Ponri) started accepting offers since July 2012 (Bose, 2012).

However, not all have been given what was promised. Babita Adiley, whose house was demolished in 2014, recollects the fact that she was not even given a day's notice before the SECL authorities and police forcefully evicted her and her family.[13] She divulged that she was beaten up by the police when she resisted the eviction. Babita went till the High Court to get resettlement and employment.[14] However, since there was only 0.25 acre of land in her name, she was not given a job as the CIL's R&R policy does not commit to giving jobs to the land holder who has less than 2 acres (Coal India Ltd., 2012).

[12] RTI filed by Urjadhani Bhuvisthapit Kalyan Samiti, Korba on November 3, 2016, to SECL and the response was given on November 25, 2016.

[13] Interview conducted with Babita Adiley on June 1, 2017.

[14] Ibid.

By 2014, Chhattisgarh state had also issued a state level rehabilitation policy. But SECL chose its own policy over the state policy for completing R&R (Nath, 2016). According to the CIL policy, SECL gives a job for every 2 acres of land lost but this has left small landholders without a job. They are offered INR 5 lakh as a livelihood compensation, which they have rejected as being too low (Coal India Ltd., 2012).

In Babita's view, the authorities are unfair to women land oustees even though the law indicates equal rights for men and women on their inherited land. "I was accused of lying and mocked by the authorities for fighting for my rights everywhere. The law talks about gender equality but in practice women are exploited and denied their rights", she added.

In fact, in the case of Babita, if her compensation, had been decided as per the Right to Fair Compensation, Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR), 2013 (because the land was acquired after the act came in force), as per section 24 (2) of this law, she would have received a compensation of nearly four times the actual land cost.

Also, according to SECL's claims, residents of the resettlement colonies are entitled to free medical check-ups from the company once a month as mandated in the CIL Resettlement and Rehabilitation Policy (Coal India Ltd., 2012). Initially these check-ups used to be conducted in the form of medical camps by the SECL regularly. However, according to Manjeet, at least for the past five years there are no medical camps arranged in the resettlement sites[15]. Prakash Kumar Korram, who is a resident of Gandhi Nagar Resettlement Colony, says that they have approached the SECL authorities several times to resume the medical camps but have got no results other than false promises from them.[16]

Impact on Livelihood

Due to the acquisition of a large area in Gevra, there has been a major shift in the patterns of livelihood choices in this region. The forestland around Podi, Raliya and Amgaon villages plays a vital role in the day to lives of the villagers, especially the ST and SC inhabitants in that region. The forestland is used by them for grazing cattle, collecting fuel and forest products, and cultural activities, making them heavily dependent on it (Nath, 2016). Many small-scale farmers are forced to give up farming after their land gets taken away from them. They are left either with the hopes of getting employment in the company or working as construction or agricultural wage labourers. Another choice in front of them is to work as contract labourers doing mining related jobs.[17] There are also instances that people lose the opportunity to get jobs because of false job claims. Ramlal Rohidas, whose 7 acres land was acquired from Sirki village, realised after a long wait that someone else had received the job under his name by producing false documents. He now works as a wage labourer and supports his 12-membered family.[18]

Those who finally make it to the company face another set of issues. The land oustee who receives a job in SECL is not eligible to get accommodation facilities like the other employees since he/she is entitled for resettlement as per the land acquisition rules and that has been an extremely slow process.[19] There are various trade unions operating for the betterment of working conditions in SECL. According to D.K Mishra, the Vice President of South Eastern Coal Mazdoor Congress (SECLMC), trade unions can only fight for employee justice and safety within the company. "We know that people are denied justice in the land acquisition process but we do not have much power or say in it. All we can do is address the difficulties of the ones who are working in the company", Mishra added.[20] There are around 150 land oustees out of the 530 members of SECLMC.[21]

[15] Telephonic conversation with Manjeet Yadav from Gevra on April 8, 2017

[16] Interview conducted with Prakash Korram on June 3, 2017.

[17] Interview conducted with Manjeet Yadav from Gevra on June 2, 2017.

[18] Interview conducted with Ramlal Rohidas on June 3, 2017.

[19] Interview conducted with D.K Mishra, Vice President of South Eastern Coal Mazdoor Congress (SECLMC) from Gevra on June 3, 2017.

[20] Ibid.

[21] Ibid.

Gevra mine's production capacity was increased from 35 MTPA to 37 MTPA in 2013. The mine currently has a capacity of 45 MTPA.

Expansion from 35 MTPA to 41 MTPA

To meet the difference between the demands and supplies of non-coking coal projected in subsequent five year plans of the country and its reliance on Gevra opencast project, SECL sought another expansion of the mine. SECL submitted an application with the MoEF in April 2013 to increase the production capacity of Gevra mine from 35 MTPA to 47.25 MTPA (MoEF). The EAC in its meeting in October 2013, on account of non-fulfillment of certain EC conditions (see details below in the section on environmental violations), approved an increase in production capacity by 2 MTPA. The EAC, in this meeting also observed, "SECL has exceeded the production limit. This construes a violation case." Taking note of the two pending cases in the High Court of Chhattisgarh regarding the excess production, the EAC left the matter to the court (MoEF, 2013). Soon after, the Ministry of Coal made a request with the EAC in a meeting held on December 11, 2013, to allow larger expansion, the EAC recommended the expansion of the project to 40 MTPA (MoEF). On January 3, 2014, the MoEFCC granted an Environment Clearance to the project. The mining area remained the same, but out of 4184.486 ha of land, Stage I forestry clearance had been obtained by then for 4058.146 ha and for the remaining area (126.340 ha) was yet to be obtained as of January 2014, which came by the year end. The project was exempt from conducting public hearing,[22] the only opportunity for the people likely to be affected by a project to voice their concerns before the state government and the project authorities, in the process of project appraisal. On February 6, 2015, the MoEF granted another EC to the project allowing a production capacity of 41 MTPA.[23] Going by the minutes of the EAC, it seems that during this time, the EAC didn't discuss the project's performance on EC conditions while appraising the project (MoEF&CC, 2014). The recorded minutes don't make any mention of such an appraisal.

[22] An MoEF memorandum dated December 19, 2012 (OM J-11015/30/2004-IA.II(M)) stipulated that mining projects seeking an expansion of below 5 MTPA are exempt from the requirement of conducting public hearing. The upper limit for mine expansion without public hearing was amended on September 2, 2014 to 6 MTPA.

[23] An MoEF memorandum dated December 19, 2012 (OM J-11015/30/2004-IA.II(M)) stipulated that mining projects seeking an expansion of below 5 MTPA are exempt from the requirement of conducting public hearing. The upper limit for mine expansion without public hearing was amended on September 2, 2014 to 6 MTPA. Following this amendment, SECL applied for the expansion to 41 MTPA.

Environmental violations

The report of the Additional Director of the MoEF (see section: land acquisition in the first phase) noted many environmental violations during the site inspection conducted in April 2005. It noted that fugitive emissions were not being monitored; metring of water pumped out of the mine and reused was not being carried out; no bag filters were provided for the coal handling plant (CHP); ground water was not being recharged artificially, and check dams needed to be built before monsoon (MoEF, 2005). In September 2007, while appraising the project's application for expansion, the Expert Appraisal Committee noted the bad air quality in the area. In its letter to SECL on October 22, 2007, the MoEF stated: "The Committee noted that the air quality status and its impacts on social spectrum of some coal mining areas of Korba industrial belt, indicate that the AAQ (Ambient Air Quality) levels are very high in the region and are of concern. The primary source of the fugitive emissions is the major coal mines- Gevra-Dipka-Kusmunda in the area and transport of coal produced from these mines." According to this correspondence, in response, SECL shared with the EAC that in the next two years it planned to switch entirely to MGR/rail for transport of coal from Gevra mine. However, EAC noted in October 2013 (see details above), that coal was still being transported through trucks. However, these issues were not raised in the future EAC meetings and in Gevra, villagers still complain of plying of trucks that causes dust pollution. Dilkunwar, a housewife who resides in the Chainpur Resettlement Colony complains about the coal dust the villagers are exposed to on a daily basis. "The floor of our house is always covered with the grey layer of dust. We don't even have proper road connectivity to our houses. My children go to school through these dusty mud roads which are not even constructed properly and are used for the coal carrying trucks to pass by", she adds.[24]

Ramlal Rohidas whose 7 acres of land was acquired from Sirki village, now lives in the Sirki Resettlement Colony and works as a wage labourer in the same mining region. He complains that although his house has a free electricity connection from the SECL, he does not have clean water access.[25] The only pond in their resettlement colony is right next to the coal waste dumping area of the mine, and the water cannot be used for drinking or cooking since it gets contaminated by the coal dust. "We always have to depend on our neighbours who have wells for water and if they deny us water, my family will die of thirst. That is the only option we have in front of us", says Ramlal.[26]

The entire mining region of Gevra, Dipka and Kusmunda is highly affected by the environmental impacts of coal mining. Mines create air, water and land pollution resulting in deterioration of agriculture, health hazards etc. The local communities of Gevra complain about the water scarcity caused due to heavy mining in the area. The existing water bodies are highly exposed to the coal dust and the water gets contaminated. Many villagers in Gevra have no choice other than to use this contaminated water for the daily needs.[27] As mentioned before, the agricultural lands near the mining areas are also extremely exposed to the coal dust and this affects the crop yield badly. Korba has been designated as a Critically Polluted Area by the Central Pollution Control Board. To address the issue of pollution, the Chhattisgarh Environment Conservation Board has created the Comprehensive Environmental Pollution Abatement Action Plan for Korba Critically Polluted Area. The plan has suggested measures to decrease soil and water contamination and put in rigorous rules on effluent disposal, fly ash dumping and solid waste management (CPCB, 2011). However, according to the villagers, most of these rules are not followed by SECL and other companies in the region.[28] The families who reside in the resettlement colonies are heavily exposed to the coal dust on a daily basis since the resettlement colonies are very close to the mining areas. Prakash notes that people in Gevra are dealing with two big issues at the same time- land acquisition and pollution. "It is hard to say which issue is worse. Our land has been taken away and we are forced to live in a highly polluted environment. I am not against mining or development but there should be a better way to do it", he adds[29].

[24] Interview conducted with Dilkunwar Bai on June 2, 2018.

[25] Interview conducted with Ramlal Rohidas from Sirki on June 3, 2017.

[26] Ibid.

[27] Group discussion conducted with the villagers of Pondi and Raliya on June 1, 2017.

[28] ibid.

[29] Interview conducted with Prakash Korram on June 3, 2017.

Strategies

Collective efforts against land acquisition

Sampooran Das, an active politician of the CPI (M) from Gevra, notes that the people in Gevra started responding to the issues of land acquisition and pollution due to mining from the mid-1990s. He recollects the farmers' mobilisation in Naraibodh village in the Gevra mining region on August 11, 1997. The farmers demanded to meet the Tehsildar and address their issues. The gathering ended up in a police lathi charge.[30] However, the efforts against the land acquisition got a push when the state government picked up the land acquisition process in 2010, after a preliminary notification under section (4) of the CBA, 1957[31] was published in 2001.

In November 2011, Sarthak Srijanatmak Sanstha (SSS), Korba[32], an NGO, requested the Chief Minister of Chhattisgarh and the district collector to cancel the acquisition process because it was not in compliance with Panchayats (Extension to the Scheduled Areas) Act PESA, 1996. Korba district is a notified area under the fifth schedule of the Constitution. The Constitution of India, in its fifth schedule, defines 'scheduled areas' as areas (an administrative entity) that have a majority of tribal population and are economically backward. PESA Act, 1996, grants the right to be consulted to the gram sabha (village assembly) of 'schedule areas' before land acquisition for or rehabilitation of people affected by development projects.

However, there are media reports that claim that no such consultations have taken place for the expansion of Gevra project. SSS also made a representation before the Governor of Chhattisgarh and petitioned with the collector demanding cancellation of acquisition proceedings. In response, SECL informed the collector in March 2012, that CBA doesn't stipulate that for land acquisition under the Act, the PESA Act, 1996, needs to be complied with. At the time, the collector suggested that only the state government could issue an instruction regarding compliance with PESA Act. In May 2012, the NGO reached out to the chief secretary of Govt of Chhattisgarh with the same request. Despite all these requests, the office of the collector went ahead with the acquisition process and on January 7, 2013, it published a declaration of acquisition under section 9(1) of the CBA (dated January 1, 2013). For a week afterwards the villagers protested against the extension of Gevra project. In August 2014, evictions started in Ponri village and according to Amnesty International, which was with the villagers and raising the issue of human rights violations in Korba for the Gevra expansion project at a global level, 5000 people from 18 villages would have been evicted at that time (Amnesty International, 2014).

As a step towards collective action for seeking redressal of land and livelihood issues, since 2014, people impacted by Gevra mine have also aligned with the Chhattisgarh Bachao Andolan. Formed in 2009, this is a broad democratic alliance of 22 groups that includes people's organisations, trade unions, and other independent people's movements and focuses on people's issues in Chhattisgarh. The organisation has been vocal about the injustices happening to the local communities of the state due to mining activities. The organisation's work is spread into the Sarguja, Korba and Raigarh districts of Chhattisgarh (Wal, 2015). About the support provided by the Chhattisgarh Bachao Andolan, for those affected by Gevra mine, Alok Shukla,[33] Convenor collective of the organisation says, "We stand with those affected by Gevra mine and support their struggle and demands concerning rehabilitation and employment. Besides expressing solidarity, we help the communities of Gevra to design and organise events and obtain information from government departments. Being in the state capital, Raipur, and having links with people's movements and struggles all across Chhattisgarh, we have been able to provide such support." On May 2, 2016, 679 people from 41 villages protested at the site of the Gevra mines (Land Conflict Watch, 2017). These villagers were all farmers who demanded jobs, rehabilitation and compensation as per the amended 2013 Land Acquisition Act. There have been strong oppositions rising from the villagers against these unfair activities. The mass protest is a sign of disagreement and discontent against the system and practices of land acquisition in the region (PTI, 2016).

[30] Interview conducted with Sampooran Das on January 26, 2018.

[31] Under section (4) of CBA, 1957, a preliminary notification is issued in which the concerned authority notifies its intention to prospect for coal in a given area.

[32] Sarthak Srijanatmak Sanstha, an NGO that works with the communities living around mining areas in Korba has been active on the issues of Gevra, Dipka and Kusmunda mines since early 2008-2009.

[33] As per a telephonic conversation on April 8, 2018.

Another initiative, Urjadhani Bhuvisthapit Kalyan Samiti, was formed in 2016 to address the issues of land oustees in Gevra, Kusmunda and Dipka mines. It is a collective movement that was formed by the local communities of this region to resolve the existing issues in the land acquisition process. According to Manjeet Yadav, one of the founders of Bhuvisthapit Samiti, the main objectives of this collective are: rightful compensation for the land oustees; rightful employment; speedy and adequate resettlement; and to provide awareness about the land acquisition process to the villagers to avoid land grabbing and exploitation.[34] This organisation is led by a group of local activists who make constant efforts to have dialogues with company and government authorities for grievance redressal mechanisms. Through an end number of letters and RTIs to various departments and ministries, Bhuvisthapit Samiti has been able to gather the history and current status of many unresolved land acquisition issues related to Gevra mines.[35] The Bhuvisthapit Samiti is currently working to ensure more local participation in the district level meetings and discussions related to land acquisition so that there should be a better representation of the issues faced by the villagers.[36]

Litigation by SSS

SSS (Sarthak Srijanatmak Sanstha) filed a Public Interest Litigation (PIL) on January 28, 2013 in Chhattisgarh High Court and it claimed that multiple laws have been violated during the land acquisition in Gevra. The case was heard between April 2013 and October 2014, and on November 27, 2014, the case was disposed (High Court of Chhattisgarh).[37] SSS stated that CBA Act 1957, PESA Act 1996 and Forest Rights Act 2006 have been violated in the land acquisition process.[38] Section (4) of the CBA prohibits the use of the acquired land for a purpose other than mining. It also doesn't allow sale of such land. However, as stated in a report in Down to Earth, Lakshmi Chand Chouhan, Secretary of Sarthak Srijanatmak Sanstha, claimed that in violation of CBA, the land is being given by SECL to private companies (Nath, 2016). The project involved 1038.63 hectares of forestland. The Scheduled Tribes and other Traditional Forest dwellers (Recognition of Forest Rights) Act 2006 (FRA, 2006), recognizes the rights of traditional forest dwelling communities to manage, use and conserve forestland. On August 8, 2009, the MoEF had issued directions to all state governments that before any diversion of forestland for non-forest purpose is carried out, the process of 'settlement' of communities' claims over forestland under the said act should be completed. The petitioners claimed that this process was not followed in the case of Gevra expansion.

Actions against environmental violations

The Community Environment Monitoring (CEM), an organisation involved in campaigns against environmental pollution in Tamil Nadu, Himachal Pradesh and Chhattisgarh (The Other Media), has been working with groups in the states to train communities in monitoring the environment around coal/limestone mines and cement plants (AID). In Korba, CEM has been working with local communities in the mining region and training them to collect water samples to identify the toxic levels in it (Dharmadhikary, 2015). The objective of CEM is to shape skills among pollution-impacted community representatives to monitor, document and communicate pollution and its effects to regulators and the general public, take science-based action to eliminate pollution and hold polluters accountable, and to prevent the entry of environmentally destructive industries in their communities. Through this action, the initiative also aims to improve public participation in environmental decision-making.[39]

Many local groups of Gevra have also realised the fact that they should be provided with the technical knowledge as well as the right information about the issues they are dealing with so that they can fight for their rights with more power in their hands. Janabhivyakti, a state level NGO, in partnership with the CPR-

[34]Interview conducted with Manjeet Yadav from Gevra on June 2, 2017.

[35]Interview conducted with Manjeet Yadav and Sonu Yadav on June 2, 2017.

[36]Ibid.

[37]From the website of High Court of Chhattisgarh. http://services.ecourts.gov.in/ecourtindiaHC/cases/case_no.php?state_cd=18&dist_cd=1&court_code=1&stateNm=Chhattisgarh#

[38]Ibid.

[39]Ibid

Namati Paralegal Program, works with the local communities of Gevra on the issues of violation of environment protection rules in mining. The major issues that they deal with are the unauthorised mine blasting, fly ash dumping and transportation of coal without following the rules mandated to avoid dust pollution.[40] Prakash, who has recently started working with Janabhivyakti, distinguishes the changes that have occurred after he started working with the paralegal approach. "I have lived here in the Gevra region all my life, and I did not know that so many violations have been happening in the mining process around me. In those instances where I knew that the law was being violated, I was not clear how to go about it. After joining the community paralegal team I have learned how to address and tackle these issues, and I am trying to share the things I have learned with others", he adds.[41]

In January 2017, with an objective to draw attention to the issues of air pollution in areas such as Korba and not limit them to only metro cities such as Delhi and Mumbai, CEM started considering installing low-cost air monitors. As shared by Aruna Chandrasekhar. As shared by Aruna Chandradekhar, a journalist who was a part of the discussions around monitoring of air pollution in Korba and was formerly associated with Amnesty International, by September 2017, CEM has installed 4 air quality monitors in Korba. Out of these one is close to Gevra opencast mine project. Since October 2017, the monitors are operational, and data is being collected to establish a baseline of air quality in the area. CEM intends to use the data to create awareness about the issue of pollution in Korba, turn it into a wider issue like Delhi air pollution and eventually, use this data in appraisals for future expansions of existing mining and industrial projects.[42]

Current Status

The Official Memorandum No. J-11015/224/2015-IA.II of the MoEFCC dated 15.09.2017 allowed that the mining projects can obtain expansion in EC capacity up to 40% of their existing capacity with exemption from public hearing (SECL, 2017). After this memorandum, SECL applied for another expansion from 41 MTPA to 49 MTPA in the existing lease area of 4184 hectares. On November 27, 2017, the EAC, while appraising the project, expressed "deep concern over the baseline air quality in the area, especially the higher PM10 value which is bound to increase with the proposed expansion of the project." It noted that the current control measures provided by SECL at the mining site were not sufficient. On these grounds the EAC recommended the project for EC only for a production capacity of 45 MTPA and only till March 31, 2019. It stated that control measures would be evaluated in the latter half of 2018-19 and based on the results, further continuation of the mine would be considered (MoEFCC, 2017). In March 2016, CIL board approved the project report for expansion of Gevra opencast project up to a production capacity of 70 MTPA. This would require acquisition of an additional 597.302 hectares of land (SECL, 2016).

According to R. Sreedhar, Director, Environics School of Management Sciences, over 2400 families who have been displaced but have not been offered jobs in mining operations of SECL, have come together to form the Korba Bhuvisthapit Company Limited. The company intends to demonstrate that communities can take up and handle activities supporting mining operations in the region. These include transportation, plantation, operation of renewable energy projects and to create pressure on SECL to provide opportunities for ancillary activities to the displaced members. As a step ahead, the company has identified 15 acres of land to operate a solar plant of 3-5 MW. With the help of Environics, it is currently looking for investors and technology providers for the same. The company is also in talks with Vaspar Technologies, Bengaluru, to initiate innovative building materials production units that can also utilise fly ash. As of March 2018, although these developments are in an early stage, capacity building for management of these activities is going on.[43]

Although Manjeet Yadav agrees with the fact that there have been little changes in the situation all this while in Gevra, he is hopeful that collectives like Bhuvisthapit Samiti can make a slow but effective transformation.[44] The villagers have tried everything from protest, to litigation, to approaching the government departments

[40]Interview conducted with Prakash Korram on June 3, 2017.

[41]Ibid.

[42]Based on a telephonic conversation of Meenakshi Kapoor with Aruna Chandrasekhar in March 2018.

[43]Based on an email exchange with R. Sreedhar, Director, Environics in March 2018.

[44]Ibid.

After March 2019, EAC will evaluate the pollution control measures of Gevra mines and based on it, will decide if the project should continue.

but the project has progressed relentlessly. Discrepancy between SECL and government's figures of the number of project-affected people is only a sign of the state's apathy towards those impacted by the mine. In such a scenario, the villagers are now exploring the effectiveness of collecting evidence of environmental pollution and writing evidence-based complaints to government offices seeking mitigation of impacts. With the mine's plans to expand, their efforts to be organised and have a greater participation of affected people at community meetings and raising concerns about compensation and land acquisition will be of great use. In the wake of future expansion, the community's plans to seek a share of the benefits coming out of mining operations in the region is also hoped to offset the impacts by improving the economic and living conditions of the affected people.

References

AID. (n.d.). *Community Environment Monitoring*. Retrieved from Association for India's Development: https://aidindia.org/community-environment-monitoring/

Bose, P. R. (2012, July 29). *Coal India's new compensation deal saves SECL's Gevra project*. The Hindu Business Line. Retrieved from https://www.thehindubusinessline.com/economy/coal-indias-new-compensation-deal-saves-secls-gevra-project/article23080652.ece

Coal India Ltd. (2012). *Rehabilitation and Resettlement Policy: Coal India Limited 2012*. Retrieved from Coal India Ltd.: https://www.coalindia.in/DesktopModules/DocumentList/documents/CIL_RR_2012_100412.pdf

CPCB. (2011, January). *Development of Comprehensive Environmental Pollution Abatement Action Plan for Critically Polluted Area- Korba*. Retrieved from Central Pollution Control Board (CPCB): http://cpcb.nic.in/industrial_pollution/Korba.pdf

Dhagamwar, V., De, S., & Verma, N. (2004). *Industrial Development and Displacement: The People of Korba*. SAGE India.

Dharmadhikary, S. (2015, March 16). *Coal energy and pollution: Can communities fight the threat?* India Together.. Retrieved from http://www.indiatogether.org/workshop-highlights-impact-of-coal-power-plants-and-industry-pollution-on-community-health-health

EIA / EMP for Gevra OC Expn. (n.d.). Retrieved from Chhattisgarh Environment Conservation Board: http://enviscecb.org/gevra/exe%20summary%20gevra%20eng.pdf

International, A. (2014, September 4). *Indigenous And Dalit Communities At Risk Of Forced Evictions In Chhattisgarh*. Retrieved from Amnesty International: https://amnesty.org.in/news-update/indigenous-dalit-communities-risk-forced-evictions-chhattisgarh/

Land Conflict Watch. (2017, February 23). *Gevra Mine Expansion*. Retrieved from Land Conflict Watch: https://www.landconflictwatch.org/research/gevra-mine-expansion

Ministry of Coal (GOI). (n.d.). *Land Acq. Under CBA Act 1957*. Retrieved from Ministry of Coal, Govt. of India: https://coal.nic.in/content/land-acq-under-cba-act-1957

MoEF. (2005, May 20). *Monitoring report for Gevra Open Cast mine of SECL*. Retrieved from Ministry of Environment, Forest and Climate Change (GOI): http://environmentclearance.nic.in/writereaddata/Monitoring/40_3-13-04-I.pdf

MoEF. (2013, October). MINUTES OF THE 2ND EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL. New Delhi. Retrieved from http://environmentclearance.nic.in/writereaddata/Form-1A/Minutes/0_0_101128123312181MoM_2ndEAC_Oct2013.pdf

MoEF. (n.d.). *Environment Clearance to South South Eastern Coalfields Ltd*. Retrieved from Ministry of Environment, Forest and Climate Change, GOI: http://environmentclearance.nic.in/writereaddata/Form-1A/EC/020720141EC_Gevra.pdf

MoEF&CC. (2014). MINUTES OF THE 27thEAC (THERMAL & COAL MINING PROJECTS). New Delhi. Retrieved from http://environmentclearance.nic.in/writereaddata/Form-1A/Minutes/0_0_11114123912181MoM_December2014.pdf

MoEF&CC. (2017, November 27). *Final minutes of the 22nd meeting of the EAC held on 27th November, 2017 for appraisal of*. Retrieved from Ministry of Environment, Forest and Climate Change (GOI): http://environmentclearance.nic.in/writereaddata/Form-1A/Minutes/0512201797P6P4P3MOMfinal.pdf

Nath, S. R. (2016, June 29). *Illegal and unfair acquisition of mining land in Korba*. Down to Earth.. Retrieved from http://www.downtoearth.org.in/news/illegal-and-unfair-acquisition-of-mining-land-in-korba-54627

PTI. (2016, May 2). Chg: *Over 600 villagers held for protest at SECL mining site*. Business Standard.. Retrieved from http://www.business-standard.com/article/pti-stories/chg-over-600-villagers-held-for-protest-at-secl-mining-site-116050201067_1.html

SECL. (2016, May). *Phase-wise Mining Plan for Gevra Opencast Expansion Project*. Retrieved from Ministry of Environment, Forest and Climate Change (GOI): http://environmentclearance.nic.in/writereaddata/Online/TOR/28_Nov_2016_12595560360QDTOGMGevraPhasewisejustification.pdf

SECL. (2017). *Environmental Clearance for SECL: Annexures*. Retrieved from Ministry of Environment, Forest and Climate Change (GOI): http://environmentclearance.nic.in/writereaddata/Form-1/20102017MJ89IQ6N-Form_I_Gevra.pdf

Sharma, S. (2012, September 3). *Coalgate: India's largest open cast mine in land row*. The Times of India.. Retrieved from https://timesofindia.indiatimes.com/india/Coalgate-Indias-largest-open-cast-mine-in-land-row/articleshow/16227370.cms

The Other Media. (n.d.). *Community Environmental Monitoring.* Retrieved from The Other Media: http://theothermedia.in/community-environmental-monitoring/

Wal, A. (2015, January 14). *Chhattisgarh tribals in Delhi with pleas to save their land*. DNA. Retrieved from http://www.dnaindia.com/india/report-chhattisgarh-tribals-in-delhi-with-pleas-to-save-their-land-2052206

World Bank. (1987). India - *Coal Mining and Coal Quality Improvement Project* . Washington D.C.: World Bank.

Annexure I: Questionnaire administered to collect data for the case studies

Case Research Report

Name of Case & Case Number :
Location :
Interview Date(s) :
Persons interviewed/spoken to about this case (names & role in case):
1.
2.
3.
4.
5.

I. Case Chronology

I. Case Summary

a. Location, country
b. Type of case (circle one): hydropower/ports/mining/plantation/other
c. Give a short summary of the case (5 lines max):
d. Status of the case (pending/solved): if a case is resolved is there a chance that the solution may not be enforced?
e. When was this case first reported?

II. Full Description of case

1. Give a full description of conflict. What the dispute is about, and between what parties?
2. If any, mention big differences in interpretation of the involved parties: Do they 'frame' the conflict (i.e. interprete what is going on) in different ways? Illustrate with short quotes. (other peoples analysis)
3. Give a chronology of events: what happened when? What actions were undertaken by different parties?
4. If the case went to court, describe the preceedings at the court.

   Analysis: Describe the background of main parties involved: Briefly mention relevant characteristics (profession, local status, relevant social connections, etc). of all the parties involved (including dispute resolvers)

   Brief legal analysis: According to you, what outcome does state law (and, if relevant, customary law) prescribe for this case?

III. Adopted Strategies

1. Name and describe the different courses of action that affected communities undertook at different moments in time.
2. What reasons did informants give for choosing these different courses of action at that moment? Why were alternative possible strategies (e.g., legal action, lobby, etc.) not pursued? Give quotes.
3. Representation: Which local actors were most active as representatives of affected communities? Why them? Was their role as representatives contested and/or raise concerns among others?
4. Discuss the involvement of outside NGO-actors. If so, how did affected communities get in touch with outside NGOs? How did they affect the strategies and the final outcomes? How is their involvement viewed by informants?

5. Did the affected communities and their partners pursue a media strategy? What effect did media reports have on outcome of the case?
6. Discuss the involvement of political actors: did affected communities seek help from them, what did they contribute and at what cost? How do informants evaluate their support?
7. Did affected communities opt for legal action? Why (not)? What kind of legal action was undertaken, and why in this form?
8. Did negotiations between affected communities and company/state take place? Describe the proceedings: who was present, who represented the community, what claims were being discussed and what outcome was reached? Give quotes of informants' description of negotiation

   Analysis: what might be the main reasons for the failure or success of these negotations?

   Analysis: what was the role of State representatives in this conflict? Did they adopt a neutral position, or support either side of the conflict? If so, what actions suggest that they were partial?

If paralegal involved:

- How and why the paralegal was involved in this case? Did the client first report the case to others?
- Ask informant: How would he have dealt with the case if there was no paralegal? Would the outcome have been different? Give quotes.
- Ask the paralegal: What was his main advice(s) to his or her client? Why this set of advice? Give quotes.

IV. Final Outcome

1. How long did it take for this case to reach the present outcome?
2. If a solution was proposed (as described above): Were the parties involved satisfied? Why (not)? Give quotes.
3. If a solution/verdict or deal was reached: was it enforced? If not, why not? Give quotes
4. What was done to make sure the proposed solution was enforced?
5. Monetary compensation: Did affected families receive compensation? Yes/no?

   a. If agricultural land: How much per hectare?

   b. If displacement of home: how much per family?

   c. Was alternative housing provided?

Did or would the land use change cause environmental degradation? If yes how?
What other consequent effects did the land use change cause socially and politically?

6. Did the land use change affect the livelihood of affected communities, in positive and negative ways? Describe and give quotes.'

V. Researcher's Analysis

Give your own thoughts and ideas about why the case progressed as it did, what were the main causes, why the parties took the steps they did, etc. Also, please point out any inconsistencies in the accounts given by different parties in the case, and what your best guess is on how to resolve the different accounts.

Annexure II:

For the purpose of the study, interviews and personal communications were conducted with various participants. Following is the list of people who have contributed through personal interviews and email communications:

- Hannu Rao, former Sarpanch of Kakarapalli village and the President of Jagannatha Cooperative Society, Srikakulam District, Andhra Pradesh,India.
- Anjali Naik, resident of Mavinkatta Village, Bhatkal Taluk in Uttara Kannada, Karnataka, India.
- Pravin Kumar, resident of Mavinkatta Village, Bhatkal Taluka in Uttara Kannada, Karnataka India.
- Mahabaleshar Hegde, Program manager, CPR-Namati Environment Justice Program, Uttara Kannada district in Karnataka, India.
- Ramesh Chandra Tandel, Fisherman and resident of Kolak Village, Vapi Gujarat
- Sudha Bhardwaj, lawyer and trade unionist, Chhattisgarh
- Anantha Duryodhana, resident, Vadditandra Village in in Santhabommali Mandal of Srikakulam District, Andhra Pradesh, India.
- Batni Ponnamma, resident, Vadditandra Village in in Santhabommali Mandal of Srikakulam District, Andhra Pradesh India.
- Mandapaka Narasinga Rao, the former Sarpanch of Kotabommali village (one of the power plant affected villages) and one of the petitioners who filed the appeal against the environment clearance of the Bhavanapadu power plant on the National Environment Appellate Authority in 2009.
- Bhavani Prasad, Circle Inspector of Police, Tekkali Taluk, Srikakulam District, Andhra Pradesh, India
- Jeeru Lakshmi, resident, Vadditandra Village in Santhabommali Mandal of Srikakulam District, Andhra Pradesh, India.
- Karunya Hemalatha, resident, Kakarapalli village in Santhakavati Mandal in Srikakulam District of Andhra Pradesh, India.
- Dhanalakshmi, resident, Vadditandra Village in Santhabommali Mandal of Srikakulam District, Andhra Pradesh, India.
- P. Krishnamurthy, practicing advocate in Srikakulam District, Andhra Pradesh India
- EAS Sarma, former Government of India Power Secretary and one of the appellants of the National Environment Appellate Authority in the Kakarapalli case
- Sitaram, resident of Salikeri Village, Honavar Taluk in Uttara Kannada, Karnataka, India.
- Ganapi Gouda, resident of Salikeri Village, Honavar Taluk in Uttara Kannada, Karnataka India.
- Rajeshwari, resident of Salikeri Village, Honavar Taluk in Uttara Kannada, Karnataka, India.
- Pandurang T. Gouda, resident of Chandumata Village, Ankola Taluka in Uttara Kannada, Karnataka, India
- Chapka Gouda, resident of Chandumata Village, Ankola Taluka in Uttara Kannada, India.
- Krishna Gouda, resident of Bogribail Village, Ankola Taluka in Uttara Kannada, Karnataka, India.
- Mangala Ganesh Gouda, resident of Bogribail Village, Ankola Taluka in Uttara Kannada, Karnataka, India.
- Sarada Devi Gouda, resident of Bogribail Village, Ankola Taluka in Uttara Kannada, Karnataka, India.
- Suseela Gouda, resident of Tandrukuli Village, Kumta Taluka in Uttara Kannada, Karnataka India.
- Huliya Gouda, resident of Tandrukuli Village, Kumta Taluka in Uttara Kannada, Karnataka, India.
- Dr. J.L Rathod, Administrator, Karnataka University Post Graduation Centre, Kodibaga, Karwar Taluka in Uttara Kannada, Karnataka India

- Maruti Gouda, CPR-Namati Paralegal, Kumta Taluka in Uttara Kannada, Karanataka India
- M. Kishore, Kodibaga of Karwar Taluka in Uttara Kannada Karnataka India
- Dr Prakash Mesta, Scientist, Energy and Wetlands Research Group, Indian Institute of Sciences (IISC) Bangalore, Karnataka, India.
- Balachandra Hegde, Farmer and Conservation Activist, Uttara Kannada district in Karnataka, India.
- CPR-Namati Environmental Justice Paralegal Team in Uttara Kannada district of Karnataka, India.
- Sheru Singh, resident of Mardana Village, Maheshwar tehsil of Khargone district in Madhya Pradesh, India.
- Sundara Bai, an activist from Mardana Village, Maheshwar tehsil of Khargone district in Madhya Pradesh, India
- Mangat Verma, one of the founders of Maheshwar Bandh Prabhavit Machhuara Sangh from Maheshwar tehsil of Khargone district in Madhya Pradesh, India.
- R.S. Balodia, Land Acquisition Officer of Maheshwar Project in SMPHCL, Maheshwar tehsil of Khargone district in Madhya Pradesh, India.
- D. Sharma, Assistant Engineer from MPSEB also currently monitoring the Resettlement and Rehabilitation process of SMPHCL, Maheshwar tehsil of Khargone district in Madhya Pradesh, India.
- Sanjay Nigam, resident of Maheshwar tehsil of Khargone district in Madhya Pradesh, India.
- Shripad Dharmadhikary, and activist and founder of Manthan Adhyayan Kendra in Madhya Pradesh, India.
- Babita Adiley, resident of Podi Village, Pali Tehsil of Korba District in Chhattisgarh, India.
- Dilharan Das, resident of Podi Village, Pali Tehsil of Korba District in Chhattisgarh, India.
- Munna Lal Korva, resident of Podi Village, Pali Tehsil of Korba District in Chhattisgarh, India.
- Surendra Kumar Rathore, resident of Korba District, Chhattisgarh, India
- D.K Mishra, the Vice President of South Eastern Coal Mazdoor Congress (SECLMC), Korba district in Chhattisgarh, India
- Ramlal Rohidas, resident of Sirki Village, Pali Tehsil of Korba District in Chhattisgarh, India.
- Prakash Kumar Korram, resident of Sirki Village, Pali Tehsil of Korba District in Chhattisgarh, India.
- Shiv Dayal Kumar, resident of Bhinjra Village, Korba Tehsil of Korba District in Chhattisgarh, India.
- Noothan, resident of Sirki Village, Pali Tehsil of Korba District in Chhattisgarh, India.
- Dilkunwar Bai, resident of Chainpur village, Kartala Tehsil of Korba District in Chhattisgarh, India.
- Manjeet Yadav, one of the founders of Bhuvisthapit Samiti in Korba District, Chhattisgarh, India
- Sonu Yadav one of the founders of Bhuvisthapit Samiti in Korba District, Chhattisgarh, India
- Sampooran Das, member of Centre of Indian Trade Unions (CITU), Korba District, Chhattisgarh, India.
- R. Sreedhar, Director, Environics Trust, Delhi, India.
- Aruna Chandrasekhar, Independent Researcher, Delhi, India.
- Alok Shukla, convener at Chhattisgarh Bachao Andolan, Chhattisgarh, India.

About Centre for Policy Research (CPR)

The Centre for Policy Research (CPR) has been one of India's leading public policy think tanks since 1973. The Centre is a nonprofit, independent institution dedicated to conducting research that contributes to a more robust public discourse about the structures and processes that shape life in India.

www.cprindia.org

About Namati

In a world where billions live outside the protection of the law, Namati is dedicated to putting the law in people's hands. It is building a global movement of grassroots legal advocates who work with communities to advance justice. These advocates are fighting on the front lines to ensure that people can protect their land, access essential services, and take part in the decisions that govern their lives.

www.namati.org

Women walking after a day at coal mines in Hazaribagh, Jharkhand

CENTRE FOR POLICY RESEARCH

NAMATI
INNOVATIONS IN LEGAL EMPOWERMENT