

Undoing Conservation: India's Tiger Reserves Giving Way for Infra Projects

A Compendium of 10 Case Studies on Tiger Reserves

Edited by
Nishank



Centre for Financial Accountability

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Table of Contents

Introduction	01
Legal Framework for Wildlife Protection and Tiger Reserves.....	04
When Rare Minerals Take Precedence over Tiger Conservation (Amrabad Tiger Reserve)	13
Kaziranga National Park: Amid Disconnected Landscapes	21
Conservation of Convenience: Developmental State at Crossroads with Wildlife and Van Gujjars (Rajaji Tiger Reserve)	33
Protecting Tiger Reserve vs. Making Way for Inter-state Travel (Bandipur Tiger Reserve)	45
When Human Needs Trump Nature Conservation (Panna Tiger Reserve)	51
Understanding the Problematic Nature of Development on Fragmentation of Animal Habitat (Kali Tiger Reserve)	62
Surrounded by a Coal Hub, Future of a Tiger Reserve at Stake (Tadoba-Andhari Tiger Reserve)	71
Pakke: Trapped In A Corridor (Pakke Tiger Reserve)	80
Construction vs. Conservation (Mukundra Hills Tiger Reserve)	87
Conservation and Customary Rights: The Explicit Double Standard in Anakkayam Hydel Power Plant and Parambikulam Tiger Reserve, Kerala	91
Way Forward.....	99
Annexure	101

Abbreviations

ADB	Asian Development Bank
ATR	Amrabad Tiger Reserve
BCCPL	Bander Coal Company Private Limited
CCF	Chief Conservator of Forests
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CBD	Convention on Biological Diversity, 1992
CEC	Central Empowered Committee
DAE	Department of Atomic Energy
DEIAA	District Environment Impact Assessment Authority
DFO	Divisional Forest Officer
DPR	Detailed Project Report
EDC	Eco-Development Committee
EAC	Expert Appraisal Committee
EIA	Environment Impact Assessment
EIA 2006	Environment Impact Assessment Notification, 2006
EPA	Environment (Protection) Act, 1986
EP Rules	Environment (Protection) Rules, 1986
ESA	Ecologically Sensitive Area
EFA	Ecologically Fragile Area
ESZ	Eco-Sensitive Zone
FAC	Forest Advisory Committee
FCA	Forest (Conservation) Act, 1980
FRA	Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006
HEP	Hydel Electric Project
ILO	International Labor Organization
KAAC	Karbi Anglong Autonomous Council
KAYVSS	Kaiga Anuvidhyut Yojana Virodhi Sangharsha Samiti
KBLP	Ken-Betwa River Linking Project
KSEBL	Kerala State Electricity Board Limited
KTR	Kaziranga Tiger Reserve
KNP	Kaziranga National Park
KNPTR	Kaziranga National Park and Tiger Reserve
MCM	million cubic meters
MHTR	Mukundra Hills Tiger Reserve
MTDC	Maharashtra Tourism Development Corporation
MTPA	million tonnes per annum
MMTPA	million metric tonnes per annum
MoEFCC	Ministry of Environment, Forest and Climate Change

MNRE	Ministry of New and Renewable Energy
MoRTH	Ministry of Road Transport and Highways
NBWL	National Board for Wild Life
NBWL-SC	National Board for Wild Life, Standing Committee
NDZ	No Development Zone
NEERI	National Environmental Engineering Research Institute
NGT	National Green Tribunal
NHAI	National Highways Authority of India
NMDC	National Mineral Development Corporation
NOC	No Objection Certificate
NPCIL	Nuclear Power Corporation of India Ltd
NRL	Numaligarh Refinery Limited
NTCA	National Tiger Conservation Authority
NTPC	National Thermal Power Corporation
NWDA	National Water Development Agency
PA	Protected Area
PESA	Provisions of the Panchayats (Extension to Scheduled Areas) Act, 1996
PkTR	Pakke Tiger Reserve
PrTR	Parambikulam Tiger Reserve
PnTR	Panna Tiger Reserve
PVTG	Particularly Vulnerable Tribal Group
PWD	Public Works Department
R&B	Roads and Buildings
RFA	Recorded Forest Area
RNP	Rajaji National Park
SEIAA	State Environment Impact Assessment Authority
SHEP	Small Hydro Electric Project
STRF	Special Tiger Reserve Force
TATR	Tadoba-Andhari Tiger Reserve
UCIL	Uranium Corporation of India
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
VSS	Vana Samrakshana Samithi
WCCB	Wildlife Crime Control Bureau
WCL	Western Coalfields Limited
WGEEP	Western Ghats Ecology Expert Panel
WII	Wildlife Institute of India
WLPA	Wild Life Protection Act, 1972

Introduction

India's burgeoning economic growth in the last two decades, especially in the infrastructure sector, has heavily impacted its forests and protected areas. Not only has there been a diversion of large tracts of forest land for non-forest purposes, but various infrastructure projects such as roadways, railways, transmission lines, irrigation projects, mining, etc. have also been allowed near or within protected areas, jeopardizing their flora and fauna in the process and negating efforts towards the conservation of important species. There are various checks and balances on paper to ensure that projects having adverse impacts are not allowed near or within protected areas, with additional layers of clearances such as forest and wildlife clearances, and the presence of bodies such as the National Board for Wildlife and the National Tiger Conservation Authority. In reality, many such projects have gone ahead in the name of being exceptions for the larger good.

Among protected areas, tiger reserves are the most vulnerable lot. They have incidentally witnessed some of the largest projects being pushed through. Several large scale projects have been put on hold only due to the timely intervention of citizens and environmentalists. This has happened despite the government's repeated proclamation of the importance of saving tigers. A large number of big and small linear infrastructure projects, along with other developmental projects, are being allowed to come up within and in the vicinity of tiger reserves. Several of these projects pose an existential threat to the flora and fauna in the regions where the tiger reserves are located, along with endangering the existing tiger population.

Two centuries ago, India was home to an estimated 58,000 tigers. However, continued hunting and habitat destruction for several decades led to fewer than 2,000 tigers remaining in the 1970s. Thanks to a slew of legal and policy measures directed at conserving the tiger population, such as the creation of the National Tiger Conservation Authority, India is now home to eighty per cent of tigers in the world. In 2006, there were 1,411 tigers in the country. By 2018, this number had increased to 2,967. There are currently 53 tiger reserves spread across India. While the steady rise in the number of tigers indicates that tiger conservation efforts are headed in the right direction, the intrusion of infrastructure projects in such fragile areas undoes the gains achieved through the efforts of the past few decades.

In order to grasp the extent of infrastructure projects coming up within and near protected areas, the Centre for Financial Accountability published a Mapping Report titled "Rise in Infrastructure Projects in Protected Areas: A Self-Defeating Goal for Development" earlier this year. This report carries extensive data on projects near and within protected areas, including tiger reserves, which had either been given or had applied for clearances in the past few years. In order to build a deeper understanding of the impacts of infrastructure projects on protected areas, the current report presents case studies focusing on ten tiger reserves spread across the length and breadth of India. It provides key insights into the range of controversial projects which have either come up in these reserves or were planned but have been stalled. The ten tiger reserves covered in this compendium are: Pakke Tiger Reserve, Arunachal Pradesh; Kaziranga National Park and Tiger Reserve, Assam; Bandipur Tiger Reserve, Karnataka; Kali Tiger Reserve, Karnataka; Parambikulam Tiger Reserve, Kerala; Panna Tiger Reserve, Madhya Pradesh; Tadoba Andhari Tiger Reserve, Maharashtra; Mukundra Hills Tiger Reserve, Rajasthan;

Amrabad Tiger Reserve, Telangana; and Rajaji Tiger Reserve, Uttarakhand. Some of the key projects covered in this compendium include the Ken-Betwa River Interlinking Project passing through the Panna Tiger Reserve; a shelved uranium mining project in the Amrabad Tiger Reserve; the Anakkayam Hydel Electric Power Project in the Parambikulam Tiger Reserve; the stalled Hubballi-Ankola Railway Project passing through the Kali Tiger Reserve (which would have led to the felling of 2.2 lakh trees in the fragile Western Ghats); and a 40 km-long stretch of highway proposed through the Pakke Tiger Reserve. There are many other similar infrastructure projects which have been highlighted in this compendium. The individual case studies are preceded by an introductory chapter setting out the legal framework within which efforts towards wild life protection, especially tiger conservation, are taking place.

The case studies in this compendium have primarily been written based on the secondary research and telephonic interviews in few instances. The secondary research included referring to various news sources, primarily leading English dailies, magazines and news websites. Additionally, government websites have been referred, along with reports published on various portals. Though the data provided here is not exhaustive in nature, best efforts and meticulous care have been taken to include as much data as possible. In terms of timeline, the news articles referred here are spread over many years though the latest articles referred here are up to March 2022. It is also important to highlight that the researchers could not undertake any travels for conducting primary research while writing the case studies due to the varying Covid situation across the country.

Rather than analyzing the detrimental effects of a single project in the context of any particular tiger reserve, juxtaposing the impacts of multiple projects in tiger reserves gives insights into threats posed on a cumulative basis, enabling us to assess the gravity of the situation holistically. The aim of these case studies is not only to analyze how the existing tiger population may be impacted due to various projects, but also to help see these tiger reserves as rich but fragile biodiversity hotspots home to several species of plants and animals, including several endangered species. These case studies provide a rich source of information for the reader and will give a better sense of the direction in which we are headed in terms of conservation in general and tiger conservation in particular.

These case studies also throw light on how human settlements around these tiger reserves have been impacted since tiger reserves came up. The approach of authorities towards tiger conversation has been to create inviolate spaces (spaces devoid of human presence) in the core areas of tiger reserves, notwithstanding that forest communities have resided in these areas for centuries, and that they are more often an enabler in forest conservation than a roadblock in efforts towards tiger conservation. The case studies highlight the plight of various forest communities who have faced displacement and loss of livelihood in the name of tiger conservation. While government authorities have claimed that various such communities have been given compensation and many of them have been rehabilitated, stories from the ground show that there have been several violations of rights at the hand of forest officials, and even cases of conflict with the forest department. There have also been cases of violations of rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 faced by forest communities residing in protected areas, such as forced evictions without compliance with the mandatory requirement of free, prior, and informed consent from gram sabhas in writing.

The case studies also give a clue into the role of the judiciary in conserving protected areas. An instrumental role has been played by the Supreme Court-appointed Central Empowered Committee and the National Green Tribunal by intervening in crucial matters. The Supreme Court's verdict in upholding the night traffic ban in the Bandipur Tiger Reserve in August 2019 despite pressure from the Kerala government is one among several examples.¹

The case studies collectively also delve into the larger question of choosing between the anthropocentric approach and the eco-centric approach as the way forward in protecting our protected areas. Clearances for infrastructure projects, such as the widening of National Highways cutting through tiger reserves, have often been provided by authorities to allow the faster movement of people and goods through these areas, with an aim to 'benefit' the people and the economy. However, such actions come at the price of causing irreversible damage to wildlife and forests. Protected areas such as tiger reserves are natural habitats that are a culmination of evolutionary processes spanning millions of years. The unique biodiversity of protected areas cannot be sacrificed unquestioningly at the altar of 'development', and decisions taken by authorities need to undergo larger public scrutiny. Ongoing discussions on factoring in the 'ecological costs' involved in the implementation of infrastructure and developmental projects, therefore, are in urgent need of greater attention.

Often, the justification of 'unavoidability' or 'inevitability' is used in allowing projects through protected areas. Closer scrutiny reveals that such projects are eventually allowed for higher economic gains or enabling a consumerist energy-intensive lifestyle fueled by prevalent economic models, which are often at loggerheads with the goals of nature conservation. In the end, the onus is on us as a society to decide what we prioritize and how to ensure the sustainable co-existence of all species.

Nishank

Centre for Financial Accountability

¹ State of Kerala v. Srinivasa Babu, SLP (C) No. 13838/2010, order dated 07.08.2019 (Supreme Court).

International Framework

India's goals for conserving forests and protected areas are intrinsically tied to its commitment to various international frameworks for preserving biodiversity and combating climate change, such as the Convention on Biological Diversity, 1992 (CBD) and the 2015 Paris Agreement. The larger policies around protecting forest cover, especially wildlife sanctuaries and national parks (sometimes collectively referred to in this volume to as Protected Areas or Pas), are intended to reflect such commitments. Further, India's commitments under treaties like the International Labor Organization (ILO) Indigenous and Tribal Populations Convention, 1957 (No. 107) are indirectly reflected in various national laws that deal with indigenous people's right to live amongst and protect natural resources and biodiversity.³

For the purposes of this compendium, amongst international conventions, a brief mention may be made of the framework of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and its relationship with Indian national wildlife laws. This treaty regulates the international trade of species of plants and animals that urgently need protection. The treaty entered into force in 1975, and India has been a Party since 1976.⁴

The CITES contains three lists, or Appendices, which enumerate protected species based on the degree of threat assessed. The highest protection is accorded under Appendix I, which includes species threatened with extinction, trade of which is permitted only in exceptional circumstances.⁵ All subspecies of the tiger (*panthera tigris*) are protected under Appendix I of the CITES.⁶

Though India has no national-level law to implement this convention, it regulates trade in wildlife through the Wild Life Protection Act 1972 (WLPA), the Foreign Trade (Development and Regulation) Act 1992, the Customs Act, 1962, and the Foreign Trade Policy of the Government of India.⁷ Furthermore, the WLPA also follows a schedule-based approach to wildlife protection like the CITES, and includes six schedules, out of which Schedule 1 lists endangered species (including the Bengal tiger) and accords them the highest level of protection. Recently proposed amendments to the WLPA include the insertion of a chapter that specifically deals with implementing the CITES in India.⁸

² Malvika Kaushik is an environmental lawyer and researcher based out of Dehradun, Uttarakhand.

³ India has not ratified the more progressive Indigenous and Tribal Peoples Convention, 1989 (No. 169) that revises ILO Convention No. 107.

⁴ List of Contracting Parties, CITES.

⁵ Article 2, CITES.

⁶ Tiger, Taxonomy, [cites.org](https://cites.org/eng/taxonomy/term/499). <https://cites.org/eng/taxonomy/term/499>

⁷ Legal Framework for International Trade in Flora and Fauna, Wildlife Crime Control Bureau.

[http://wccb.gov.in/WriteReadData/userfiles/file/Trade%20Facilitation/Legal%20framework%20ITC%20HS\(1\).pdf](http://wccb.gov.in/WriteReadData/userfiles/file/Trade%20Facilitation/Legal%20framework%20ITC%20HS(1).pdf)

⁸ Bill Summary, Wild Life (Protection) Amendment Bill, 2021, PRS India.

<https://prsindia.org/billtrack/prs-products/prs-bill-summary-3903>

National Laws

Over time, India has enacted several laws pertaining to both the protection and the ‘management’ of the environment and wildlife. In the latter category come laws such as the Indian Forest Act, 1927, a colonial era law that focuses on regulating forest produce, particularly timber, and gives state governments the power to classify and manage forests as village forests, protected forests and reserve forests. Even the Biological Diversity Act, 2002, though having conservation of biodiversity as a primary aim, approaches the issue more from the perspective of preventing biopiracy and of ensuring that local communities with traditional knowledge of biological resources are given due benefits from access of such knowledge by outsiders.

Meanwhile, laws like the Provisions of the Panchayats (Extension to Scheduled Areas) Act, 1996 (PESA) in states under the Fifth Schedule of the Indian constitution, and arrangements for Autonomous District Councils in certain northeastern states under the Sixth Schedule, also provide a framework for greater control over natural resources for tribal populations and hence are also relevant to wildlife protection.

For present purposes, it will suffice to refer in detail to the Environment (Protection) Act, 1986 (EPA), the Forest (Conservation) Act, 1980 (FCA), the WLPA, and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA). The first two laws contain important protections against forest and habitat destruction. The third, as the name suggests, is the primary Indian law that focuses on protecting wildlife and enables the implementation of species-specific protection measures, including for the tiger. The last protects the rights of people from communities who have historically lived in close communion with forests.

FOREST CONSERVATION ACT, 1980

The FCA aims to protect forests by restricting the diversion of forest land. Section 2 is the cornerstone of the statute, laying down restrictions such as that state governments cannot divert forest land for non-forest purposes, de-notify a reserve forest, or assign forest land to a non-government user, without prior approval from the Central Government. The Central Government may constitute an Advisory Committee to give advice on the grant or refusal of such approval, as per Section 3. This requirement is also known as grant of “forest clearance”. The Forest (Conservation) Rules, 2003 lay down the manner of application and grant of forest clearance. The rules explain that applications are considered initially by either the Regionally Empowered Committees of the Ministry of Environment, Forest and Climate Change (MoEFCC) or the Forest Advisory Committee (FAC) at the central level, which are committees comprising bureaucrats and experts as specified in the rules, depending on the nature and extent of the project and of the forest area to be diverted. Clearance is granted by the MoEFCC after stipulating measures for mitigation of damage, for instance, compensatory afforestation, realisation of amount of Net Present Value of the forest diverted, and implementation of a wildlife conservation plan. Thus, there are two stages of forest clearance, preliminary and final (sometimes referred to as Stage 1 and 2).

The term “forest” has not been defined in the FCA, causing much confusion. Presently, the term is required to be interpreted according to its dictionary meaning, as per the 1996 directions of the Supreme Court in *TN Godavarman Thirumulpad v. Union of India*.⁹

⁹ *TN Godavarman Thirumulpad v. Union of India*, (1997) 2 SCC 267.

The Godavarman case has also become the site of judicial overtake of many aspects of forest governance in the country that has perhaps been welcomed and criticised in equal parts. Many key orders (such as the one relating to eco-sensitive zones passed in 2018, discussed below) were passed as part of the ongoing hearing of this case by the Supreme Court. It was also as part of this case that the Supreme Court appointed a Central Empowered Committee (CEC) to handle matters related to forest governance and oversee the implementation of the various directions passed by the Supreme Court from time to time.¹⁰

ENVIRONMENT (PROTECTION) ACT, 1986

The EPA is perhaps the most significant Indian legislation for environmental protection and pollution control. Sections 3 and 5 of this statute empower the Central Government to take any measure and give any direction necessary to meet these ends, such as making standards and safeguards, restricting the area in which any industry or other activity or class thereof can operate (Section 3(2)(v)), and ordering the closure, prohibition or regulation of any activity, industry or process (Explanation to Section 5). The EPA also empowers the Central Government to make necessary rules for environmental protection and pollution control.¹¹ The Environment (Protection) Rules, 1986 (EP Rules), besides several others, were framed using this power.

ENVIRONMENT IMPACT ASSESSMENT

It is under the EP Rules that the Environment Impact Assessment Notification, 2006 (EIA 2006) was issued. The Schedule to EIA 2006 stipulates in great detail the nature of infrastructure, industrial and other projects which require environmental impact assessment (EIA), and accordingly, environmental clearance from the central or state governments.

The level of clearance (central or state, or Category A and B respectively) depends on the nature of the activity. State governments can “screen” projects, i.e. decide whether they require clearance or not (thus sub-classifying them as Category B1 or B2), based on centrally issued guidelines. Over time, the Central Government has used these guidelines to whittle down the state governments’ screening power and effectively exempt many categories of projects from environmental clearance. For instance, onshore and offshore oil and gas exploration activities, which were earlier classified as Category A projects as per item 1(b) the Schedule to EIA 2006, were notified as Category B2 projects by the MoEFCC in 2020.¹²

The EIA 2006 provides that when a project requires environmental clearance, a central or state-level Expert Appraisal Committee (EAC) issues a document known as the Terms of Reference, based on which a consultant hired by the project proponent usually develops an EIA Report. The final report must incorporate feedback received from public consultation. This report is scrutinised by the relevant EAC, which then recommends either the approval or rejection of the project to the MoEFCC or the state-level EIA Authority, as the case may be. An environmental clearance, if issued, stipulates necessary environmental and social safeguards.

¹⁰ Armin Rosencranz and Sharachchandra Lele, Supreme Court and India’s Forest, Economic and Political Weekly, Vol. 43(5), 2 February 2008.

¹¹ Section 6, EPA.

¹² Notification S.O. 236(E) dated 16.01.2020, MoEFCC.

Ecologically Sensitive/Fragile Areas and Eco-Sensitive Zones

Rule 5(1) of the EP Rules elaborates upon the factors which the Central Government may take into account to decide whether to restrict or regulate an industry or other activity. These include considerations like biodiversity conservation,¹³ environmentally compatible land use,¹⁴ proximity to protected areas (clause (viii)), or any other relevant factor (clause (x)). In exercise of the power under Section 3 of the EPA and Rule 5 of the EP Rules, the MoEFCC has, in the past, restricted developmental activities in specific regions given their environmental fragility, sometimes terming them as ‘ecologically sensitive areas’ (ESA), ‘ecologically fragile areas’ (EFA), or ‘no development zones’ (NDZ). These have included regions like Murud-Janjira, a coastal village in Raigad, Maharashtra, notified in 1989, specific parts of the Aravalli Hills in Haryana and Rajasthan, notified in 1992, and the Numaligarh region in Assam, notified in 1992. These areas were not necessarily surrounding or proximate to Protected Areas, i.e. wildlife sanctuaries and national parks.

In the early 2000s, the idea of systematizing the protection of areas surrounding PAs, to act as “shock absorbers” or “transition zones”, took root through the National Wild Life Action Plan 2002-2016 and the Wildlife Conservation Strategy 2002. The latter was adopted in a resolution passed by the Indian Board for Wildlife (the precursor to the National Board for Wild Life, or NBWL) on 21 January 2002, and specifically recommended that areas within 10 km of national parks and wildlife sanctuaries should be declared as “eco-fragile areas” under Section 3(2)(v), EPA and Rule 5(1)(viii) and (x) of the EP Rules. As a result, the MoEFCC directed the Chief Wildlife Wardens of all states to submit plans to strictly protect a 10 km radius around PAs. However, several states expressed their reluctance to do so given the presence of habitation and other developmental activities in those regions. Accordingly, the NBWL in 2005 left it to states to propose suitable “eco-sensitive zones” (ESZ) around PAs which would be subject to regulation, as opposed to prohibition, of select activities, which would then be notified by the Central Government under the EPA.¹⁷

In 2011, the MoEFCC also issued a set of guidelines to help state governments identify the ESZs of their PAs and activities to be regulated there, i.e. ‘Guidelines for Declaration of Eco-Sensitive Zones Around National Parks and Wildlife Sanctuaries’ (ESZ Guidelines). The guidelines suggest that an ESZ may go up to a 10 km radius around a PA, but the extent may be more or less than 10 km depending on the ecological needs of the region, and may vary in width and in the nature of activity regulated, not only from PA to PA, but around a specific PA as well.¹⁸

¹³ Clause (v), Rule 5(1), EP Rules.

¹⁴ Clause (vi), Rule 5(1), EP Rules.

¹⁵ Meenakshi Kapoor, Kanchi Kohli, and Manju Menon, *India’s Notified Ecologically Sensitive Areas: The Story So Far*, 4-5 (Kalpavriksh, 2009).

¹⁶ Section 9, Wildlife Conservation Strategy 2002.

¹⁷ Decision in NBWL meeting dated 17.03.2005 communicated vide letter dated 27.05.2005, as reported in the ESZ Guidelines, MoEFCC, F. No. 1-9/2007 WL-1 (pt) dated 09.02.2011. http://forestsclearance.nic.in/writereaddata/Addinfo/0_0_1113121612211GuidelinesforESZ.pdf

¹⁸ Section 4, ESZ Guidelines.

The Supreme Court intervened in this matter in *Goa Foundation v. Union of India, Ministry of Environment and Forests*, which was being heard in the context of illegal mining in Goa, and ultimately began hearing the issue of ESZs with the ongoing proceedings in the Godavarman case. Despite repeated directions to the state governments, few came forward with plans to declare ESZs around PAs. In an order passed on 04.12.2006, the top court directed that if state governments did not comply, the court would consider passing an order to implement the original resolution adopted by the Indian Board for Wildlife in 2002, i.e. implementation of a strict 10 km ESZ around all PAs.¹⁹ In this order, the court also directed that the MoEFCC refer to the Standing Committee of the NBWL, which is a smaller committee within the NBWL (NBWL-SC), all environmental clearances already granted in a 10 km periphery of PAs.

By 2018, the ESZ for most PAs in India had either been declared by the MoEFCC under Section 3 of the EPA, or a draft notification had been prepared. On 11.12.2018, the Supreme Court directed that a uniform 10 km ESZ be declared for all Protected Areas for which state governments had failed to submit ESZ plans, which were 21 in number.²⁰ None of the PAs covered in the present volume were among the defaulters.

Recently, the top court passed a significant judgment fixing a minimum 1 km ESZ for all PAs where a wider ESZ has not yet been proposed or notified. However, it directed an interim 10 km ESZ to be maintained for PAs covered under the order of 11.12.2018. It also prohibited mining inside PAs and directed compliance with the list of prohibited activities in the 2011 ESZ Guidelines.²¹

The EIA 2006 also deals with the protection of ecologically sensitive areas. In one of the general conditions in the notification, it is mentioned that Category B projects shall be treated as Category A if they are wholly or partly located within 10 km from the boundary of Protected Areas under the WLPA or are “Eco-sensitive areas as notified under Section 3 of the Environment (Protection) Act, 1986”. These would include all such areas notified so far, whether termed as ESAs, NDZs, ESZs or known by any other name.

WILD LIFE (PROTECTION) ACT, 1972

The WLPA aims to protect and conserve plant and animal species. It also focuses on the management of Protected Areas and zoos, and the regulation of wildlife trade. Discussed below are key provisions of this statute relevant to the present compendium, contextualised alongside relevant policy measures.

Project Tiger and the National Tiger Conservation Authority

In an effort to conserve the tiger population, in 1973, the Government of India declared tiger as India’s national animal, banned its hunting and set up the famous conservation scheme, Project Tiger. Initially, nine tiger reserves were created under the project, envisioned as safe havens for tigers to flourish and receive legal protection against poachers. Currently, there are 53 tiger reserves spread over 18 states.²²

¹⁹ *Goa Foundation v. Union of India, Ministry of Environment and Forests*, WP (C) No. 460/2004, order dated 04.12.2006 (Supreme Court).

²⁰ *TN Godavarman Thirumulpad v. Union of India*, WP (C) No. 202/1995, order dated 11.12.2018 (Supreme Court).

²¹ *TN Godavarman Thirumulpad v. Union of India*, WP (C) No. 202/1995, order dated 03.06.2022 (Supreme Court).

²² Project Tiger, NTCA. <https://ntca.gov.in/about-us/#project-tiger>

Project Tiger is a Centrally Sponsored Scheme, i.e. it acts as a conduit for central funding to states for tiger conservation.²³ In 2006, the project was given legal backing through a statutory authority, viz. the National Tiger Conservation Authority (NTCA) with the insertion of Chapter IV-B in the WLPA through the Wild Life (Protection) Amendment Act, 2006. The 2006 Amendment also created the Tiger and Other Endangered Species Crime Control Bureau (Wildlife Crime Control Bureau (WCCB)) under Chapter IV-C.

The NTCA has several powers and functions. A critical role is in the formation of tiger reserves, since state governments need the recommendation of the NTCA to establish or alter the boundaries of a tiger reserve (the latter also requiring the NBWL's approval), and the NTCA and NBWL's approval in order to de-notify one. De-notification, indeed, is only permitted if it is in the public interest.²⁴

Another key function of the NTCA is to disallow ecologically unsustainable land use within tiger reserves such as mining and industrial projects, as provided in Section 38(O)(1)(b). However, as is usual in Indian environmental governance, diversions are made easier through built-in exceptions. For instance, Section 38(O)(1)(g) entrusts the NTCA with ensuring that tiger reserves and corridors are not diverted for ecologically unsustainable uses, but permits the same if it is in public interest and has the approval of the NBWL, subject to the advice of the NTCA.

The NTCA also approves tiger protection and conservation plans of states. Section 38(V)(3) of the WLPA requires every state government to prepare a Tiger Conservation Plan to ensure the protection of and ecologically compatible land use in tiger reserves and also to ensure that forestry operations in the area are compatible with tiger conservation. Also, as per Section 38(X) of the WLPA, every state government is required to set up a Tiger Conservation Foundation for the purpose of tiger conservation and management and promoting participatory eco-development.

Further, the NTCA lays down normative standards and guidelines for the implementation of Project Tiger and monitors their compliance.²⁵

People's Rights in Tiger Reserves: Core and Buffer Areas

Section 38(V) of the WLPA deals with the question of the rights of people living in tiger reserves. It is primarily the state government's responsibility to protect the agricultural, livelihood, developmental and other interests of such people.²⁶ There is a differentiation between the "core" and "buffer" areas of a tiger reserve, detailed in the Explanation to Section 38 (V) (4). Core or critical habitat areas of tiger reserves are those areas of national parks and wildlife sanctuaries which are supposed to be kept "inviolable" to protect tigers, but without "affecting the rights" of Scheduled Tribes and other forest dwellers.²⁷ Indeed, the "core area" refers to the actual protected bounds of the tiger reserve, around which a buffer area is then created.

²³ About Us, NTCA. <https://ntca.gov.in/about-us/#ntca>

²⁴ Sections 38(V)(1) and 38W, WLPA.

²⁵ Section 38(O)(1)(c), WLPA.

²⁶ Section 38(V)(4), WLPA.

²⁷ Explanation to Section 38(V)(4), WLPA.

Since tiger reserves are created out of PAs, in order to understand the protection enjoyed by a tiger reserve, we have to refer to the provisions governing wildlife sanctuaries and national parks. Wildlife sanctuaries and national parks both have restrictions on who can reside in the region, and on activities like tourism, photography and research.²⁸ There are also restrictions on using forest produce, but it is allowed for the “personal bona fide needs” of people living in and around the Protected Area.²⁹ These activities are subject to permits granted by the Chief Wildlife Warden. Grazing is not permitted in national parks.³⁰ In both wildlife sanctuaries and national parks, the diversion of habitat is restricted, and can occur with the permit of the Chief Wildlife Warden, but only with the authorisation of the state government, in consultation with the NBWL. The state government has to be satisfied that such diversion is for the “improvement and better management” of wildlife.³¹

Buffer areas, on the other hand, are peripheral areas that require to be protected, but to a lesser extent, only to ensure the integrity of the core area. These regions are where the law imagines “coexistence between wildlife and human activity”, and specifically aims for “due recognition of the livelihood, developmental, social and cultural rights of the local people”.³²

Both core and buffer areas are required to be notified by the state government based on scientific and objective criteria and in consultation with a specially constituted Expert Committee. However, under Section 38(V), consultation with affected Gram Sabhas is needed only while notifying buffer areas, not core areas, i.e. it is not needed when a tiger reserve is being notified. Moreover, buffer zones serve the same functions as ESZs notified under the EPA, but legally, the two concepts are different, with different manners of notification. There is also no requirement that they two correspond exactly with each other. However, NTCA guidelines suggest that when an ESZ is being notified around a tiger reserve, the buffer zone should be included within the ESZ.³³

Sub-section (5) of Section 38(V) lays down specific conditions for protecting people’s rights during resettlement while creating “inviolable areas” for tiger conservation, i.e. the core area of tiger reserves. These are as follows:

- (a) the forest rights recognition and land acquisition proceedings for affected persons is complete;
- (b) the state government has established, with the consent of the affected Scheduled Tribes and other forest dwelling communities, and in consultation with an ecological or social scientist familiar with the area, that the activities or even mere presence of these people is sufficient to cause irreversible damage to wildlife and threatens tigers’ existence and habitat, and that other “reasonable options of co-existence” are not available,

²⁸ Sections 27, 28 and 35(8), WLPA.

²⁹ Sections 29 and 35(6), WLPA.

³⁰ Section 35(7), WLPA.

³¹ Sections 29 and 35(6), WLPA.

³² Explanation to Section 38(V)(4), WLPA.

³³ Letter F. No. 15-22/2013-NTCA dated 23.04.2018 from the Assistant Inspector General, NTCA, to various Chief Wildlife Wardens. <https://ntca.gov.in/assets/uploads/guidelines/ESZ-23-08-2019.pdf>

- (c) resettlement or alternative packages in line with the National Relief and Rehabilitation Policy have been provided,
- (d) affected Gram Sabhas and affected individuals have given their informed consent to the resettlement program, and
- (e) facilities and land have been allocated at the resettlement site.

Role of National Board for Wild Life, Especially in Wildlife Clearance

The NBWL is chaired by the Prime Minister and includes the Minister of Environment, Forest and Climate Change, three Members of Parliament, representatives from NGOs, environmentalists, ecologists and conservationists, various government secretaries and directors of research institutes like the Wildlife Institute of India, Dehradun (WII).³⁴ Its functions are outlined in Section 5(C) of the WLP. The Supreme Court has described it in the following terms: “NBWL is, therefore, the topmost scientific body established to frame policies and advise the Central and State Governments on the ways and means of promoting wild life conservation and to review the progress in the field of wild life conservation in the country and suggesting measures for improvement thereto. The Central and the State Governments cannot brush aside its opinion without any cogent or acceptable reasons. Legislation in its wisdom has conferred a duty on NBWL to provide conservation and development of wild life and forests.”³⁵

As stated previously, the recommendation of the NBWL is necessary to divert habitat from Protected Areas. However, the procedure and conditions under which wildlife “clearance” has to be obtained from the NBWL have been further fleshed out through judicial orders and government guidelines. In 2002, the Supreme Court directed that all activities diverting habitat within wildlife sanctuaries and national parks would require wildlife clearance from the Standing Committee of the NBWL.³⁶ The NBWL-SC envisaged under Section 5(B) comprises some of the NBWL’s members, and exercises powers and performs duties delegated to it by the NBWL.

Further, a 2018 circular issued by the NTCA clarifies that in line with the requirements of Section 38(O)(1) outlined above, clearance is required from the NBWL-SC, upon the recommendation of the NTCA, for projects undertaken in tiger reserves and corridor/linking areas.³⁷ Additionally, a 2020 circular issued by the MoEFCC fleshes out these conditions for areas falling outside delineated PAs.³⁸ It clarifies that wildlife clearance from the NBWL-SC shall be required for activities mentioned in Section 38(O)(1)(g) of the WLP in tiger corridors. For notified ESZs of Protected Areas, wildlife clearance is required only if the proposed activity is listed in the EIA Notification Schedule (and hence needs environmental clearance). In case no ESZ has been notified, wildlife clearance is needed if the activity requires environmental clearance and is proposed within 10 km of the Protected Area. Thus, obtaining wildlife clearance in areas outside PAs has been tied to environmental clearance requirements.

³⁴ Section 5, WLP.

³⁵ Centre for Environmental Law, WWF-India v. Union of India, Writ Petition (Civil) No. 337 of 1995, judgment dated 15.04.2013 (Supreme Court).

³⁶ Centre for Environmental Law, WWF-India v. Union of India, WP(C) No. 337/1995, order dated 09.05.2002,.

³⁷ Circular dated 28.11.2018 issued by the NTCA, F. No. 7-9/2010-NTCA (Part).

https://ntca.gov.in/assets/uploads/guidelines/Compliance_Infrastructure_Development.pdf

³⁸ Circular dated 16 July 2020 issued by the MoEFCC (Wildlife Division), F. No. 6-60/2020WL Part (1).

[http://forestsclearance.nic.in/writereaddata/public_display/schemes/1607404722\\$Clarification.pdf](http://forestsclearance.nic.in/writereaddata/public_display/schemes/1607404722$Clarification.pdf)

State Boards for Wild Life

The composition of the State Boards for Wild Life largely mirrors that of the NBWL, but at the state level. They are required to be constituted by State Governments.³⁹ The state boards have a purely advisory role. They are supposed to advise states on matters related to wildlife conservation, including site selection for Protected Areas, formulation of policies, and harmonising the needs of forest dwellers with the goal of conservation.⁴⁰ The state boards do not have any statutory role in the issue of wildlife clearances or in the declaration or de-notification of Protected Areas, such as the NBWL does.

Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

The FRA recognises and provides the manner of recording the rights in forests and forest land for Scheduled Tribes and traditional forest dwelling communities, whose rights were not recorded despite having lived in forests for generations. This statute seeks to enhance biodiversity conservation by recognising the rights and responsibilities of forest dwelling communities to the sustainable use of forests, while also ensuring their livelihood and food security.⁴¹

The FRA ensures that these communities have rights of ownership, protection against eviction, rights for rehabilitation in case of eviction, access to collect and use minor forest produce, rights to traditional seasonal resource access for nomadic and pastoral communities, rights to protect and manage any community forest resource, and community rights to intellectual property and traditional knowledge related to biological and cultural diversity, amongst others. These rights are detailed in Section 3.

Holders of rights as well as the village level institutions where such rights holders live are empowered under Section 5 to protect wildlife, biodiversity, forests and other ecologically sensitive areas, as well as the people's habitat and their cultural and natural heritage, and to ensure compliance with decisions at the Gram Sabha level towards these ends, including for regulating access to community forest resources.

The FRA largely corresponds with the WLPA with regard to security from eviction. Like the WLPA, it does not provide any absolute protection from eviction after recognition of rights in forest areas, including in 'critical wildlife habitats', which includes core areas of tiger reserves.⁴² It instead lays down protective conditions for resettlement of forest dwelling communities. The conditions laid down in Section 4(2) and (5) of the FRA are almost identical to those in Section 38(V)(5) of the WLPA, but with important distinctions. In an improvement, it is additionally mandated in the FRA that the prior informed consent of Gram Sabhas has to be "free" and "in writing".

However, there is no mention of the informed consent of affected individuals, unlike the WLPA. Also, the FRA does not require the State Government to take the consent of local affected communities while satisfying itself that their presence is detrimental to wildlife and there is no means of co-existence save for resettlement.

It is important to recognize that though in totality, these laws seek to strengthen conservation and also recognize the role of forest dwelling communities in conservation and their right to practice symbiotic lifestyles, the State apparatus itself often ends up undermining these protections. Many of the case studies in this compendium demonstrate this amply.

³⁹ Section 6, WLPA.

⁴⁰ Section 8, WLPA.

⁴¹ Preamble, FRA.

⁴² Section 2(b), FRA.

When Rare Minerals Take Precedence over Tiger Conservation

A Case Study on Amrabad Tiger Reserve

By Nishant Mate⁴³

Amrabad Tiger Reserve (ATR) is India's second largest tiger reserve (in terms of core area) located in the state of Telangana. ATR along with Nagarjunasagar-Srisailam Tiger Reserve probably forms India's largest protected dry forest. ATR was earlier part of Nagarjunasagar-Srisailam Tiger Reserve, which was declared as a tiger reserve in the year 1983 and after the bifurcation of Telugu States in 2014, the northern part of the reserve was declared as Amarabad Tiger Reserve.

Geographical Context

The reserve, lying in the Nallamala hills, spread across Nagarkurnool and Nalgonda districts in southern part of Telangana, is the abode of a large diversity of flora and fauna. ATR is about 150 km south of Hyderabad on the southern bank of River Krishna. The core covers a total area of 2166.37 sq km and has a buffer area of 445.02 sq km.⁴⁴ ATR is the second-largest tiger reserve in terms of core area but the sixth-largest tiger reserve in terms of total area among the 53 tiger reserves in India. It lies in the three forest divisions of Amarabad, Achampet in Nagarkurnool district, and Nagarjuna Sagar division in Nalgonda district. Major reservoirs like the Srishailam Dam and Nagarjuna Sagar Dam are fed by the river Krishna and its several perennial streams that originate in ATR.

Ecological Importance

ATR possesses a moderately rich floral diversity with the landscape experiencing wide rainfall, altitude and edaphic gradients. There are estimated to be 1,400 plant species, among which 353 species are found to have medicinal properties. Dense grass is found in 30% of the forest area, while in an additional 20% area it is found scattered. The dominant tree species include the crocodile bark tree (*Terminalia tomentosa*), Indian blackwood or anjan (*Hardwickia binate*), mahua (*Madhuca latifolia*), tendu (*Diospyros melanoxylon*), Indian boxwood or papra (*Gardenia latifolia*), axlewood (*Anogeissus latifolia*), East Indian satinwood (*Chloroxylon swietenia*) and terminalia.⁴⁵

The animals found in ATR include the tiger, leopard, sloth bear, wild dog, striped hyena and jackal. Additionally, prey species such as the sambar, chital, chousingha, nilgai, wild pig and chinkara are also found in ATR.

Overall, 80 species of mammals, 303 species of birds, 54 species of reptiles and 20 species of amphibians have been found in ATR. The Nallamalla forests, a track of the Eastern Ghats, are also famous for endemic species of flora and fauna.

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⁴⁴ Amrabad Tiger Reserve Notification, GO Ms. No.:03/EFS&T (For. II) Dept., Government of Telangana, dated 06.02.2015
Status of Tigers, Co-predators & Prey in India Report – 2018 – Ministry of Environment, Forests and Climate Change – April 2020 - https://moef.gov.in/wp-content/uploads/2020/07/Tiger-Status-Report-2018_For-Web_compressed_compressed.pdf

⁴⁵ Official website of Amrabad Tiger Reserve - <https://amrabadtigerreserve.com/biodiversity/>



Fig. 1 - A view of the famous Octopus View Point within Amrabad Tiger Reserve
(Source: Twitter Account of Amrabad Tiger Reserve @AmrabadTiger)

Apart from its ecological importance, this entire landscape has high heritage value with several ancient temples located in and around ATR like Srisailam, Uma Maheshwaram, Akkamahadevi caves, Kadilivanam and Mallelatheertham, etc. Along with this, ATR is also home to many sacred groves and ancient rock formations.

Number of Tigers in the Tiger Reserve

According to a news report from July 2021, the Telangana Forest Department had informed that there were 14 tigers in ATR. The numbers came up during the Phase-IV monitoring carried out in 2020-21. The previous Phase-IV monitoring was done in 2019 when 12 tigers were identified.⁴⁶ Meanwhile, director of Amrabad Tiger Reserve had claimed that there could be 26 to 28 tigers in the entire tiger reserve.

Legal Provisions that protect the Amrabad Tiger Reserve

As an additional measure of protecting the tigers in the state, the Telangana government had decided in January 2019 to constitute a 112-member-armed Special Tiger Protection Force headed by the Assistant Conservator of Forests for protecting tigers in the Amrabad and Kawal tiger reserves.⁴⁷

So far, the ESZ of Amrabad Tiger Reserve has not been notified. A draft notification was issued in 2018, where it was proposed that the ESZ would be spread over 315 sq km in the range of 0-1 km around the existing buffer zone of ATR. However, it was somewhat unusual that the proposed ESZ area was only around 12 percent of the size of ATR.⁴⁸

Communities Living within the Tiger Reserve

The Chenchus, a Scheduled Tribe categorized as a PVTG, are the key forest community living within ATR who have been living in the Nallamala forests since centuries, spanning over Andhra Pradesh and Telangana. However, their numbers have been sharply declining over the decades. As per census data, their population had come down by 15 per cent from 49,232 in 2001 to 41,787 in 2011.⁴⁹ The Chenchus have been mostly cut off from the modern world and have primarily been hunter-gatherers, dependent on the forests for their survival.

⁴⁶ Telangana census puts tiger count at 14; department says actual number could be 26-28 - The Indian Express - July 17, 2021 - <https://indianexpress.com/article/india/telangana-census-puts-tiger-count-at-14-department-says-actual-number-could-be-26-28-7408534/>

⁴⁷ Telangana to Set up 'Save Tiger Protection Force - The Quint - January 22, 2019 - <https://www.thequint.com/news/india/telangana-to-set-up-save-tiger-protection-force>

⁴⁸ Tiger reserves in Telangana receive raw deal in proposed Eco-Sensitive Zones - New India Express - April 09, 2018 - <https://www.newindianexpress.com/states/telangana/2018/apr/09/tiger-reserves-in-telangana-receive-raw-deal-in-proposed-eco-sensitive-zones-1798980.html>

⁴⁹ Project Tiger may evict Chenchus - The Hindu - November 26, 2015 - <https://www.thehindu.com/news/national/andhra-pradesh/project-tiger-may-evict-chenchus/article7917406.ece>



Fig 2: A View Inside the Amrabad Tiger Reserve showcasing the dry forests

Title: Amrabad Tiger Reserve - India - Dr Jayashree Ratnam
 Creator: Oregon State University
 (<https://www.flickr.com/photos/oregonstateuniversity/>)
 Source: <https://www.flickr.com/photos/oregonstateuniversity/36661577381/in/photostream/>
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<https://creativecommons.org/licenses/by-sa/2.0/>

The degradation of forests and decrease in rainfall has caused the Chenchus to lose their livelihood. In the 1980s, some of them moved to the fringes of the forest in search of work, though their domicile officially remained in the villages where they originally lived. Since the implementation of the Mahatma Gandhi National Rural Employment Guarantee Scheme, many of the Chenchus spend at least 4-5 months in the forests living in temporary camps to earn daily wages. In certain seasons, members of the community go as far as Hyderabad and Vijayawada, working as private watchmen in farms and orchards. Even so, a significant proportion of their incomes still comes from forest produce and livestock that graze in forests.⁵⁰

The Chenchu tribe collects minor forest produce such as mahua (ippa) flowers, tendu (beedi), madipi ginjalu (seeds of Sal tree), nannari root, etc.

The Chenchus have constantly faced the threat of eviction in the name of protecting the reserve, but their chances of survival outside the forest boundaries look bleak. Back in 2015, the community had faced threat from eviction in the name of a 'relocation package' announced under Project Tiger. Under this package, forest-dwellers residing inside the core/critical tiger habitat, who were willing to relocate, would have either got Rs 10 lakh per family in cash or would have been resettled by the Forest department with five acres of agricultural land, house and cash incentive. However, the Chenchus were adamant that they would not move out and were not in favour of accepting the package.

While the Chenchus alleged that they had been subjected to arm-twisting tactics by forest officials and that they would be shifted without the package, the forest officials denied any such allegations claiming that relocation was meant to be 'completely voluntary'. In July 2019, a leader of the Chenchu tribe claimed that his village had never heard back on whether their claim under FRA had been successful, and feared that the Supreme Court would order their eviction. The tribal leader said, "The forest department want to kick us out of the forest in the name of protecting animals. But we believe the forest is our mother. We say the tiger is our brother. We protect the forest, we won't let anyone come to disturb the forest in any way."⁵¹

At the same time, Chenchus have been facing threat from the possibility of uranium mining in the tiger reserve, which they fear would result in their displacement from the forest. There have also been instances of clashes between the forest officials and tribals in ATR. The Lambadas, who are also a Scheduled Tribe, are predominantly based in Andhra Pradesh, but they also reside in the periphery of ATR.

⁵⁰ Amrabad Tiger Reserve: An Eden under threat- Down to Earth - July 09, 2019 - <https://www.downtoearth.org.in/blog/india/amrabad-tiger-reserve-an-eden-under-threat-65524>

⁵¹ Millions of indigenous forest-dwelling Indians face 'world's biggest eviction' in name of conservation - Independent - July 23, 2019 - <https://www.independent.co.uk/news/world/asia/india-indigenous-people-supreme-court-adivasis-tribals-eviction-fra-a9017961.html>

In March 2021, a violent clash happened between members of the Lambada community and forest department officials, where at least four people were seriously injured.⁵² The Chenchu community had also come together to prevent any efforts of surveys related to proposed uranium mining in ATR, details of which have been provided later in the case study.

Threats faced by ATR from Infrastructure Projects

1. Threat from Uranium Mining

Back in the early 2000s, there was a proposal by Uranium Corporation of India (UCIL), a public sector undertaking under the Department of Atomic Energy (DAE) for an operational Peddagatu-Lambapur uranium mining site, 1.6 km from the Nagarjuna reservoir. Keeping aside an intense public protest against the project, mandatory clearances were given to the project. However, later yielding to electoral promises, the ruling party did not start the mining project. Meanwhile, UCIL continued to search for uranium ore, first in Kadapa district and later in ATR.⁵³

However, forest officials did not give a favourable report and raised important concerns regarding the damage that could be caused due to the exploration and further mining of uranium. The Field Director, Amrabad Tiger Reserve Circle, in a Field Inspection Report⁵⁴ submitted in July 2018 had refused to recommend the uranium project, as the area proposed for survey and exploration of uranium was within ATR.

The Field Director stressed in the report that mining should not be allowed in ATR and stated categorically that, “if the mining activity is permitted, it will cause habitat fragmentation and disturbance to wildlife resulting in wastage of all efforts made over the years to restore wildlife and improve habitat in the core area (of the tiger reserve).”

The Field Director’s report also observed that the user agency (UCIL) had proposed the drilling of around 4,000 bores for exploration using machines. The Field Director noted:

“The terrain is mostly hilly and undulating and no existing roads are there. The user agency has claimed that the tree felling will not be there, but in my opinion, the user agency will disturb the existing vegetation in order to take inside the machinery for boring purpose. The vegetation is quite thick and the disturbance to the habitat will be immense even for exploration purpose. The user agency has not spelt out the exact location of the bores thereby making it difficult to appreciate that no trees will be sacrificed in the process.”

It was quite surprising how UCIL could have claimed that the exploration process would not cause any harm to the vegetation while undertaking such a massive exercise. The report also highlighted that the environmental impacts of mining would include erosion, sinkhole formation, biodiversity loss, soil contamination, and groundwater and surface water pollution caused by chemicals from mining processes.

⁵² Four injured in clash between forest officials and tribals in Amrabad - Times of India - March 28, 2021- <https://timesofindia.indiatimes.com/city/hyderabad/four-injured-in-clash-between-forest-officials-and-tribals-in-amrabad/articleshow/81732351.cms>

⁵³ Amrabad Tiger Reserve: An Eden under threat- Down to Earth - July 09, 2019 - <https://www.downtoearth.org.in/blog/wildlife-biodiversity/amrabad-tiger-reserve-an-eden-under-threat-65524>

⁵⁴ Field Inspection Report 2016 - Field Director - Amrabad Tiger Reserve Circle - http://forestsclearance.nic.in/writereaddata/0_0_24_Jul_2018_162222277_siteinspect_InspectionCF.pdf

Similarly, the Site Inspection Report submitted by the DFO, Wildlife Management, Nagarjunasagar strongly raised objections against any survey work related to mining to be carried out in ATR as this would have adversely affected the flora and fauna. The report categorically stated:

“The flora and fauna will be adversely effected and lot of disturbance caused for wildlife if exploration take place. Exploration also leads to movement of vehicles and people which causes disturbance to Wildlife. This investigation and exploration is hazardous to the Wild Life and Forest wealth in the sanctuary. In view of above the permission to the block 3 & 4 in proposed Nidugul Reserve Forests, Nagarjunasagar Division, Amrabad Tiger Reserve is not be recommended and alternate area may be selected for the National interest.”⁵⁵

However, not paying heed to the concerns raised in the report by the Field Director, it was reported that the Forest Advisory Committee (FAC), an expert panel on forests of the MoEFCC had recommended in-principle approval in May 2019 for a proposal for survey and exploration of uranium over 83 sq km in ATR.⁵⁶ In the minutes of the meeting, it was stated that although certain deficiencies were noted in the proposal, the “in-principle approval” was given on the grounds that “the proposal is of critical importance from national perspective”, while adding a caveat that the approval is subject to submission of all required documents and added that, “after receipt of the same, the complete proposal may be placed before the Competent Authority for approval.”⁵⁷ The FAC was ready to jeopardize the future of ATR by stating that uranium mining had an importance from the “national perspective”, despite knowing the damages such a project could have caused.

The push by the Department of Atomic Energy for Uranium Mining in ATR

Further, in the documents submitted to the FAC seeking approval, the DAE had emphasized that in order to meet energy demands to sustain high economic growth, uranium has become a “critical and immediately needed commodity” to generate nuclear power. The document highlighted that the demand for augmenting uranium resources and locating new uranium deposits was urgently needed to harness electricity through nuclear power, keeping in mind the target of achieving 40,000 MW of nuclear power by 2030. As of September 2021, the installed nuclear capacity in India stood at 6,780 MW.⁵⁸

The DAE had its own justification in selecting ATR as a site for exploration for uranium mining. In its documents, the DAE had explained that in the search for uranium, among various deposit types, “the high grade and large tonnage Proterozoic Unconformity type of uranium deposits are by far, the most attractive.” The department further said,

“In India, uranium deposit, discovered till now, is either of low grade or of low tonnage or of both low grade and low tonnage. Review of all the areas of ongoing investigations indicates that the northern part of Cuddapah basin in Telangana is the most promising and potential area in the country for locating high grade, large tonnage uranium deposits. Proposed forest land is one of the prime target for exploration of unconformity-related uranium-deposits in India.”

⁵⁵ Field inspection note of Sri P. Balaswamy, SFS, Divisional Forest Officer (WLM) Achampet - June 2016 - http://forestsclearance.nic.in/writereaddata/0_0_24_Jul_2018_161052230_siteinspect_InspectionAl_1.pdf

⁵⁶ India’s national animal loses to national interest – Mongabay - July 05, 2019 - <https://india.mongabay.com/2019/07/indias-national-animal-loses-to-national-interest/>

⁵⁷ Recommendations in the Meeting of Forest Advisory Committee (FAC) - May 22, 2019 - http://forestsclearance.nic.in/writereaddata/FAC_Minutes/61114122121711.pdf

⁵⁸ All India Installed Capacity (in MW) of Power Stations- September 30, 2021 - https://cea.nic.in/wp-content/uploads/installed/2021/09/installed_capacity.pdf

For the DAE, the choice of site for uranium mining has been purely driven by the prospects of extracting high grade uranium to meet its respective targets, showing utter disregard for efforts towards nature conservation in a biodiversity hotspot.

Opposition to Uranium Mining in ATR

The plans for uranium mining met intense opposition from the Struggle Committee Against Uranium Mining, which brought together 63 organizations, including political parties, environmental activists, birders, and wildlife enthusiasts, formed to take forward the ‘Save Nallamalla Campaign’. Further, as reported in September 2019, the Chenchu tribals residing in ATR united to protest against uranium mining in ATR. The tribals had taken the matter in their own hands too. The Chenchus, helped by members of the Struggle Committee, had prevented the entry of a team of UCIL that was going to do a recce of the Padra, Maredupalli, Devarakonda and Kambajpalli areas. Around that time, the tribals also prevented another similar attempt by a team from entering the forest area.⁵⁹ According to a local tribal leader, there were close to 12,000 tribals residing in the forests in 56 habitations – i.e. 28 gram panchayats and 28 habitations who strongly opposed the proposed mining. Meanwhile, another news report mentioned that the uranium mining project would cause displacement of over 70,000 people, predominantly Scheduled Tribes, residing in 42 villages within ATR.⁶⁰

The Chenchu community feared that even the drilling for exploration purpose would cause water and land contamination and expressed their resolve that they strongly opposed the project and would not allow anyone to enter. A member of the Struggle Committee had raised concerns that mining activity would cause disturbance to wildlife and would lead to the destruction of the pristine forest which has been protected well over the years.

As the opposition intensified, the state chief minister gave assurances addressing the assembly that the state government would not accord permission for uranium mining in the Nallamalla forest.⁶¹ In the same month, several film celebrities from Telangana came forward to lend their voice to the ‘Save Nallamalla Campaign’ and opposition parties in the state came together to pressurize the ruling government to pass a resolution in the assembly that mining would not be supported in the state.⁶²

Two years later, in September 2021, the Telangana government was informed by the MoEFCC that a decision was taken by FAC in August 2021 to close the proposal for uranium mining, as neither the state government nor the State Board of Wildlife had recommended the proposal.⁶³

While the Amrabad Tiger Reserve does not face any immediate threat from uranium mining per se, considering India’s eagerness to scale up nuclear power generation and the extremely limited availability of a mineral like uranium, it is to be seen till how long the plans for uranium mining are deferred and whether tigers and other wildlife, along with forest dwellers, would be given more weightage over tapping the precious resource.

⁵⁹ Andhra Pradesh: Tribals join fight against proposed uranium mining in Nallamala forest - The Indian Express - September 14, 2019 - <https://indianexpress.com/article/cities/hyderabad/tribals-join-fight-against-proposed-uranium-mining-in-nallamala-forests-5994303/>

⁶⁰ Left parties oppose Uranium mining in Amrabad reserve - The Hindu - July 29, 2019 -

<https://www.thehindu.com/news/cities/Hyderabad/left-parties-oppose-uranium-mining-in-amrabad-reserve/article28740728.ece>

⁶¹ 'Will not give permission for Uranium mining in Nallamala forest': Telangana CM KCR - The News Minute - September 16, 2019 - <https://www.thenewsminute.com/article/will-not-give-permission-uranium-mining-nallamala-forest-telangana-cm-kcr-108959>

⁶² All – party meet cries halt to uranium mining in State - The Hindu - September 30, 2019 -

<https://www.thehindu.com/news/national/andhra-pradesh/all-party-meet-cries-halt-to-uranium-mining-in-state/article29551014.ece>

⁶³ Centre drops proposal for uranium mining in Telangana forests amid stir - Hindustan Times -

September 22, 2021 - <https://www.hindustantimes.com/india-news/centre-drops-proposal-for-uranium-mining-in-telangana-forests-amid-stir-101632249316297.html>

2. Threats from Highway Expansion

Like other Protected Areas across the country facing threats from the addition or expansion of linear infrastructure projects, lately ATR has also been witnessing the push for a similar onslaught.

It was reported in September 2019 that the Telangana Forest Department was against the cutting of around 15,000 trees for the expansion of a national highway passing through Amrabad Tiger Reserve.⁶⁴ Around that time, the NHAI had started marking trees that were likely to be chopped off for the sake of expansion of the road. However, forest officials had raised the concern that any such project in the tiger reserve would decrease the carbon sink and would adversely affect wildlife. They decided to write a strong report as the highway expansion would have led to an increase in vehicle frequency and speeding. Further, animals faced the threat of accidents as they cross the road during daytime too, and there were reports of death animals like spotted deer, nilgai and sambar in road mishaps.

Later, in January 2020 it was reported that the MoRTH had sought wildlife clearance requiring diversion of 48.83 hectares of forest land for expansion of National Highway-765 passing through ATR, which connects Hyderabad to Thokapally via Srisailam.⁶⁵ Out of 48.83 hectares, 46.8 hectares fell in the Amrabad forest division and 1.9 hectares fell in the Achampet division. In the justification submitted with the application for wildlife clearance, the MoRTH had stated that the highway was not up to the standard of a National Highway, the expansion would help in easing the traffic, and that the road would connect to Srisailam, a pilgrimage destination. According to the proposal, the highway was to be widened to 11 metres from 4 metres between Mannanur to Farahabad and from 0 metres to 12 metres between Farahabad to Eagalapenta.

Further, as the proposal involved wildlife clearance of an area less than 50 hectares, a Biodiversity Impact Assessment report would not be required to be submitted. The plans for expansion were being pushed despite the MoRTH having stated the previous year that all possible efforts would be made to avoid any road alignment through national parks and wildlife sanctuaries, even if a longer route/bypass had to be taken instead.

In the same month, a couple of weeks later, it was also reported that the Standing Committee of the NBWL had given a nod for a proposal for road widening of a section of National Highway-565 from Nakrekal to Nagarjunasagar passing through through the core area of ATR.⁶⁶ The proposal for widening of around one kilometer of the national highway from single lane to double lane had been proposed by the National Highways division of the Roads and Buildings (R&B) Department of the Telangana government. This green signal given by the NBWL was a matter of concern as the NTCA had recommended against it. However, a condition was laid down by the NBWL that the stretch of 0.5 km of the highway must be a flyover for the safety of wildlife, as stated in the minutes of the 56th meeting of the NBWL Standing Committee held in December 2019.⁶⁷

⁶⁴ Telangana forest dept against chopping 15,000 trees in Amrabad Tiger Reserve for highway -Times of India - September 16, 2019 - <https://timesofindia.indiatimes.com/city/hyderabad/t-forest-dept-against-chopping-15k-trees-in-tiger-reserve-for-highway/articleshow/71141994.cms>

⁶⁵ Highway widening to eat into Amrabad Tiger Reserve - New India Express - January 04, 2020 -

<https://www.newindianexpress.com/states/teelangana/2020/jan/04/highway-widening-to-eat-into-amrabad-tiger-reserve--2084746.html>

⁶⁶ Highway widening in Telangana's Amrabad Tiger Reserve gets nod - New India Express - January 24, 2020 -

<https://www.newindianexpress.com/states/teelangana/2020/jan/23/highway-widening-in-teelanganas-amrabad-tiger-reserve-gets-nod-2093368.html>

⁶⁷ Ministry of Environment, Forest and Climate Change - January 21, 2021 -

http://forestclearance.nic.in/writereaddata/Order_and_Release/11122125412111Minutes_of_56th_Meeting_17_12_2019.pdf

The meeting minutes also mentioned that the proposal was first granted clearance by the Telangana State Board of Wildlife in 2016. It was also mentioned that the State Chief Wildlife Warden had recommended the proposal without imposing any conditions.

However, the NTCA was against the project and recommended that the “Status Quo should be maintained for the Nakrekal – Nagarjunasagar section NH-565 passing through the Amrabad Tiger Reserve in consonance with the recommendations of sub-committee on roads inside protected areas.” In its justification for road widening, the R&B NH Division had said that the stretch to be widened was an important connection between NH-65 and NH-71, in the states of Telangana and Andhra Pradesh. It further said, “Widening and improvement of this section of NH-565 will improve the connectivity in terms of smooth and safe traffic flow, reduced vehicle operating cost and reduced travel time”. The justification for widening the road clearly laid emphasis on the economic gains coming out of such highway expansion than weighing the detrimental costs it would have in terms of increase in human interference, reduced free movement of animals and higher chances of accidents of wildlife.

An online petition by the name ‘Save Amrabad Tiger Reserve’ was launched by the Forest and Wildlife Protection Society and Hyderabad-based environment activists in January 2020, opposing the widening of NH-565 and declaring the proposal void. The petition raised the concern that “a road or flyover that passes the core area will cause fragmentation and degradation of habitat and disturb wildlife which will lead to a bleak future for tigers in the country.”⁶⁸

3. Miscellaneous Threats

It was reported in February 2020 that the tourism department had undertaken the construction of a glass-bottomed cantilevered walkway at the Farhabad View Point. The construction of the walkway involved digging of borewell rigs which was driving wild animals towards the huts of Chenchus living in the Farhabad area of the forest, because of which the Chenchus had tried to oppose the project. They also raised questions as to why big projects were being allowed inside ATR when the Forest Department does not allow tribals to do any additional construction.⁶⁹

Conclusion

Amrabad Tiger Reserve holds a special ecological importance for Telangana state, along with being home to largest number of tigers in the state. This is probably the only tiger reserve in the country to have a large amount of uranium reserves, which puts ATR under a constantly looming threat. Being a rare natural resource and holding critical importance for meeting India’s ambitions for reaching its targets for nuclear power generation, it would need constant monitoring to ensure that this reserve is not sacrificed in the name of achieving developmental goals, even though currently the state and central governments have assured that mining will not go through. Linear projects related to upgradation and expansion of highways also need a critical evaluation in terms of the damage such projects cause to flora and fauna along with the cumulative adverse effects of increased traffic within ATR. The issues faced by the Chenchu tribe should also not be overlooked, as they had been sharing a symbiotic relationship with the forests for centuries and should not be seen as encroachers by the Forest Department.

⁶⁸ Call for 'Save Amrabad Tiger Reserve' from human interference - Dailyhunt - 2020 - <https://m.dailyhunt.in/news/india/english/newsmeter-epaper-newsmeng/call+for+save+amrabad+tiger+reserve+from+human+interference-newsid-n162649684>

⁶⁹ Tribal trouble for Telangana’s tourism plan in tiger reserve - Deccan Chronicle - April 11, 2022 - <https://www.deccanchronicle.com/nation/current-affairs/180220/tribal-trouble-for-telanganas-tourism-plan-in-tiger-reserve.html>

Background of the Kaziranga Tiger Reserve

The Kaziranga Tiger Reserve (KTR) in Assam came into existence in August, 2007,⁷¹ after the Steering Committee on Project Tiger recommended new tiger reserve areas in its meeting on January 23, 2003 so as to increase the total area of Project Tiger from 37,761 sq km to 50,000 sq km during the 10th 5-Year (2002-2007). Spread across a little more than 1,173 sq km⁷², the KTR achieved the highest density of tigers in the world, i.e., 32.64 tigers per 100 sq km, in 2010.⁷³ KTR had 121 tigers in 2018.⁷⁴ When it was notified in 2007, the core area of the tiger reserve comprised of 482 sq km while 548 sq km was notified as the buffer zone.⁷⁵ The tiger reserve is an extension of the Kaziranga National Park (KNP), which is spread over 914 sq km⁷⁶ covering four districts, which includes Golaghat, Nagaon, Sonitpur and Karbi Anglong.

Flanked by the Karbi Hills on the south, a significant portion of the Kaziranga National Park and Tiger Reserve (KNPTR) rests on the alluvial floodplains along the south bank of Brahmaputra River in Central Assam. Itself a kaleidoscope of grassland, forests and water bodies, KNP is drained by several smaller tributaries and streams emerging from the Karbi Hills, besides the Brahmaputra.

The park is a habitat for many threatened mammals and endemic as well as migratory birds. It is the largest habitat of the Great Indian Rhinoceros (*Rhinoceros unicornis*), and is also home to the Wild Asian Buffalo (*Bubalus arnee*), the Indian Elephant (*Elephas maximus indicus*), the Eastern Swamp Deer (*Rucervus duvaucelii ranjitsinhi*) and the Bengal Tiger (*Panthera tigris tigris*). These animals are considered as the ‘Big Five’ of Kaziranga and remain the focus of several conservation efforts.

The park lies at the junction of the Australasia and Indo-Asian flyways used by migratory birds. With 558 bird species, it is an important bird area. Its water bodies that attract avian visitors from across the world are home to the critically endangered Ganges River Dolphin (*Platanista gangetica*), softshell turtles, pangolins, otters and other smaller amphibians and fishes.

Geographical Importance of Kaziranga

KTR is one of the two important tiger conservation spaces in the entire North-eastern region. It comprises of KNP and some of its ‘additions’ as the core area, while 44 sq km of the Burachapori Sanctuary in Sonitpur district and 70 sq km of the Laokhowa National Park in Nagaon district downstream along the Brahmaputra serve as buffer zones. Experts believe that the tiger population in this landscape has evolutionary significance as it shares its gene pool with south-eastern Asian tiger populations and represents the entry point of tigers into the Indian sub-continent.⁷⁷

⁷⁰ Anupam Chakravarty is an independent journalist based in Assam. He writes on environmental politics related to developmental projects.

⁷¹ “Report Regarding Rampant Mining In Karbi Anglong Hills Adjoining Kaziranga Tiger Reserve, Assam”, April 6, 2018. Authored by P.S. Somashekar, Inspector General of Forests

⁷² Notification No. FRW-6/2007/23, Government of Assam dated August 3, 2007.

⁷³ Press Release by Aaranyak and Assam Forest Department, April 29, 2010

⁷⁴ “Connecting Tiger Populations for Long-term Conservation.” Pages 242 to 245, National Tiger Conservation Authority & Wildlife Institute of India, Dehradun, 2014, Authored by Q. Qureshi, S. Saini, P. Basu, R. Gopal, R. Raza, Y. Jhala

⁷⁵ Notification No. FRW-6/2007/23, Government of Assam dated August 3, 2007.

⁷⁶ Interview with Kaziranga Park Director, P. Sivakumar by Apurva Ballav Goswami, August 14, 2020

⁷⁷ “Connecting Tiger Populations for Long-term Conservation.” Pages 242 to 245, National Tiger Conservation Authority & Wildlife Institute of India, Dehradun, 2014, Authored by Q. Qureshi, S. Saini, P. Basu, R. Gopal, R. Raza, Y. Jhala

KNPTR's unique geographical position connects the tiger reserve to at least four tiger corridors identified by the NTCA. Out of the four corridors linking Kaziranga, the Kaziranga-Karbi Anglong corridor is one of the most important. It is crucial to maintain Kaziranga's ecosystem and is a refuge to the faunal population during the annual floods.⁷⁸ The name "Kaziranga" itself comes from Karbi, a language spoken by the Karbi community, a scheduled tribe. "Kajir" is believed to be the name of a woman ruler from the Karbi community while 'Ronghang' is a common Karbi family name. With the arrival of the colonial British rule and tea plantations, the Karbi community's claim over Kaziranga significantly diminished.

In 1908, after an area of 90 sq miles was declared as a reserve forest, a census of livestock showed that 2,278 buffaloes and cattle were grazing in the grassland habitat of Kaziranga. In 2005, more than 50,000 dairy farms or khuties with hundreds of thousands of cattle existed on the fringes of KNP.

The Karbi Anglong-Kaziranga linkage for the movement of wild animals is threatened by the growth in linear infrastructure and the destruction of hilly tracts by monocultures such as tea and rubber plantation, and mining, besides the continuing erosion by the Brahmaputra and its tributaries. For over two decades, unchecked infrastructural development, violations of the buffer zone around the park and illegal mining have become central issues related to the conservation of the tiger reserve.

Kaziranga and its People

The park is now surrounded by 110 villages, with more than 2,60,000 people living close to the periphery engaged in agricultural or allied activities.⁷⁹ The increasing population has become a concern for KNP authorities in the fringe areas, as they often cite instances of rhinoceros poaching and squarely blame the locals – a position that continues as a legacy of foresters from the British era. Locals, however, feel the burden of conservation on their own shoulders, with growing instances of human-wildlife conflict and losing land to KNP's expansion.

KNP is spread across four districts of central Assam. Residents mostly belong to Scheduled Tribes such as Mising and Karbi, Adivasi communities attached to tea plantations mainly comprising of Santhals, Mundas and Oraons, Scheduled Caste communities called Koiborto who depend on rivers, and Nepali and Muslim grazing communities. A socio-economic survey,⁸⁰ conducted by KNP authorities themselves, revealed that 85 percent of the families around the park are landless and marginal. The study found these families are most vulnerable to floods and droughts.

Legal Provisions protecting the Kaziranga Tiger Reserve

Legal provisions to protect and conserve Kaziranga emerged due to game hunting pursued by the British government. Laws like the Assam Forest Regulation, 1891, similar in nature to the Indian Forest Act, 1927, empowered the forest department to regulate access to classified forests and forest produce.⁸¹

Kaziranga was declared as a reserve forest in 1908 and as a game sanctuary in 1916. The Wild Birds and Animals Protection Act, 1912 and later the the Assam Rhinoceros Preservation Act, 1954 restricted hunting of the rhinoceros. Kaziranga was declared a wildlife sanctuary in 1950.

⁷⁸ Debadeityo Sinha, The Success Story of Kaziranga's Tigers – Unpacking the Dichotomy, Vidhi Centre For Legal Policy, 2 April 2020. <https://vidhilegalpolicy.in/blog/the-success-story-of-kazirangas-tigers-unpacking-the-dichotomy/>

⁷⁹ CEC Report No. 6 of 2019 in Application No 1431 in Writ Petition (C) No. 202, 1995, dated March 1, 2019.

⁸⁰ "Detailed Project Report on Management of Ecosystem of Kaziranga National Park by Creating Climate Resilient Livelihood for Vulnerable Communities through Organic Farming and Pond Based Pisciculture for National Adaptation Fund on Climate Change", Year 2016, Authored by Director of Kaziranga National Park

⁸¹ Arup Jyoti Saikia, "The Kaziranga National Park: Dynamics of Social and Political History", Conservation and Society, 113-129 (2009).



Fig. 1: Locals collecting firewood from outside the fringes of Kaziranga National Park and Tiger Reserve along National Highway 37 (Asian Highway 1).

(Photo Credits: Anupam Chakravarty)

The Assam National Parks Act, 1968 paved the way for declaring the Kaziranga wildlife sanctuary as a national park in January 1974 over an extent of 430 sq km.

While the WLPA and FCA gave more powers to foresters across the country to govern protected areas, illegal wildlife trade grew in Assam in the 1980s and 1990s. After the NTCA declared KTR in 2007, the Assam government found itself in a tight spot due to increasing poaching cases. As a result, Assam started taking steps which would eventually bring about a militarized model

of conservation for the park. The central as- well as Assam government took the following legal measures to control and regulate the park:

1. Implementing the Assam Forest Protection Force Act, 1986 that creates the Assam Forest Protection Force for the protection of forests, forest produce and wildlife in Assam.
2. In 2009, through an amendment to the Wildlife Protection Act of 1972, Assam increased the sentence for second or subsequent offence of poaching to a minimum of seven years and maximum of life imprisonment, and a fine of Rs. 75,000.
3. In July 2010, the Government of Assam, exercising powers under Section 197(3) of the Code of Criminal Procedure, 1973, declared that forest officers, ranging from game watchers to the Principal Chief Conservator of Forest, as well as other Assam Forest Protection Force personnel, would have immunity from prosecution without prior sanction of the State Government, particularly in cases allegedly involving the unnecessary or excessive use of firearms.⁸²

Missing ESZ

KNP is surrounded by 28 notified forests and PAs. Its ESZ has not been finalized yet, but the Assam government approved a fresh draft proposal for submission to the MoEFCC in March 2022, the third attempt after previous proposals submitted in 2009 and 2015 were rejected.⁸³ The Assam government had prepared ESZ proposals for three national parks in 2009, including KNPTR. These proposals had plans for regulating various developmental and infrastructural activities around these PAs, including mining and tourism. In the case of Kaziranga, the ESZ as planned by the Assam Forest Department was zero kilometres in several places in relation to the core area of the national park.⁸⁴ Similarly, the park does not have a Tiger Conservation Plan, with the NTCA sending out threats to stop the funding of Centrally Sponsored Schemes.⁸⁵

⁸² Joëlle Smadja, A Chronicle of Law Implementation in Environmental Conflicts: The Case of Kaziranga National Park in Assam (North-East India), South Asia Multidisciplinary Academic Journal [Online], 2018; Notification No. FRW/22/2009/5, Government of Assam, dated 14.07.2010,

<http://wccb.gov.in/WriteReadData/userfiles/file/Notification/Immunity%20to%20all%20forest%20officers.pdf>

⁸³ Prabin Kalita, Cabinet nod to Kaziranga ECZ draft notification, The Times of India, March 4 2022.

<https://timesofindia.indiatimes.com/city/guwahati/cabinet-nod-to-kaziranga-ecz-draft-notification/articleshow/90407783.cms>

⁸⁴ Minutes of 41st ESZ Expert Committee Meeting for the Declaration of Eco-Sensitive Zone (ESZ) around Protected Areas (Wildlife Sanctuaries/National Parks/Tiger Reserves) & Zonal Master Plan (ZMP) through Video Conferencing (VC) held on 23-24 June, 2020.

⁸⁵ "Report Regarding Rampant Mining In Karbi Anglong Hills Adjoining Kaziranga Tiger Reserve, Assam", April 6, 2018.

Authored by P.S. Somashekar, Inspector General of Forests

Local communities are, however, wary of the creation of an ESZ. A study revealed that 18 percent of the surveyed fringe villages depend on forest produce acquired from the protected forests around KNP.⁸⁶ During a public hearing organized by the park authorities in 2015 for the ESZ, representatives of local communities made several demands, which included withdrawal of the KTR notification, allowing space for local communities to organize festivals, proper compensation for animals killed by tigers, and allowing forest dependent communities to collect traditional herbs for their rituals.

Infrastructure and Development

Due to its location, wildlife, especially tigers have been facing threats from various non-state and state actors operating infrastructure projects. The key threats can be summed up in the following way:

Threat of National Highway 37 (NH 37)

The Kaziranga-Karbi Anglong landscape is critical for the survival of wildlife. This is the only landscape that has a connecting corridor for South East Asia with rest of the country. According to a report of the CEC appointed by the Supreme Court (which was inspecting the Kaziranga and Karbi-Anglong region based upon a complaint filed by activist Rohit Choudhury) the prolonged submergence of the park during the monsoon forces animals to migrate to the elevated and forested region of the Karbi Hills, after crossing a busy 66 kilometre stretch of NH 37 (now a part of Asian Highway 1). The highway runs along the southern boundary of the core area, although it separates the Kaziranga-Karbi Anglong landscape. Due to the highway, one can easily observe the massive land changes during subsequent visits. The land use change is also visible, with people selling off their prime agricultural or grazing lands to tourist resorts, restaurants, dhabas and guest houses. People from these fringe villages are moving closer to the highway, seeking a better economic future from tourism and related commercial activities. Within a decade, smaller villages have transformed into dusty towns filled with houses located close to the highway – often on the animal corridors that connect Karbi Anglong and Kaziranga. Nh37 has become notorious among conservationists for the number of roadkills each year. A study recorded a total of 1,176 wildlife roadkills on NH37 between January and December 2019, of which 41 deaths were large mammals.⁸⁸ The study found that most number of deaths occurred during monsoon months (July-August).

A traffic estimate prepared by the park authorities pegs the number of vehicles crossing the Kaziranga section of NH37 daily at 41,000.⁸⁹ In 2014, WII, Dehradun clocked 6,326 vehicles a day during its field visits. Park authorities estimate that within five to six years, 1,00,000 vehicles may cross Kaziranga daily, further worsening human-animal conflict. The highway's presence has also altered the land use pattern, impacting forest cover.



Fig. 2: One of the busiest routes in Assam, NH 37 (Asian Highway 1) connecting Upper Assam, Manipur and even South East Asia passes through the southern boundary of Kaziranga National Park and Tiger Reserve that often leads to animal fatalities.

(Photo Credits: Anupam Chakravarty)

⁸⁶ Daisy Das, "Park, People and Biodiversity Conservation in Kaziranga National Park, India", 5(1) Space and Culture, India, 36-48 (2017).

⁸⁷ CEC Report No. 6 of 2019 in Application No 1431 in Writ Petition (C) No. 202, 1995, dated March 1, 2019.

⁸⁸ Habib, B., Saxena, A., Bhanupriya, R., Jhala, Y. V. and Rajvanshi, A., Assessment of impacts of National Highway 715 (Earlier NH 37) on wildlife passing through Kaziranga Tiger Reserve, Assam. TR. No. 2020/11, 36 (2020).

⁸⁹ Interview with Kaziranga Park Director, P. Sivakumar by Apurva Ballav Goswami, August 14, 2020

It noted a drastic increase in the areas covered by degraded forest from 7.8 sq km in 2002 to 183.3 sq km in 2013. The study identified NH-37 as a zone of escalating developmental activities for locals as well as tourists, while impacting animal corridors.



Map 1: Animal Mortality on National Highway 37

(Source: Committee for Delineation of Wildlife Corridors, 2019)

In 2019, a Committee for Delineation of Wildlife Corridors constituted by the Assam Government identified nine stretches of fragmented forest areas in KNPTR used frequently by animals to cross over to the Karbi hills.⁹¹ In these identified corridors, 3.38 sq km out of 46.64 sq km have human habitations. A total of 35,488 persons reside in these corridors in 1,088 habitation clusters comprising villages and hamlets. Cultivation, which also includes tea gardens, happens in 2,508.54 hectares in these corridors. Land titles have been issued for 615.76 hectares in these corridors. In the 66 km stretch of NH 37, 37.48 km comprise animal corridors. There are 41 schools, 149 tea gardens, 12 health centres (including two child welfare clinics), and 99 eateries and guest houses in these corridors.

In 2020, the NTCA and WII committee studying wildlife fatalities recommended the construction of overpasses/flyovers/bridges, instead of underpasses and eco-ducts, as long-term measures to safeguard wildlife movement. The Assam government has planned three flyovers in these corridors, totalling a length of 35 km, which will have underpasses and bridges for animals to cross.⁹²

⁹¹ "Report On Delineation Of Nine Animal Corridors Connecting Kaziranga National Park To Karbi-Anglong." Submitted by the Committee for Delineation of Corridors (Constituted by Govt. of Assam Vide Order No.FRS.142/2018/474 dated 04.05.2019).

⁹² 'Controversial Kaziranga elevated road project goes for public scrutiny', News report published by Eastmojo on September 4, 2021. Author: Anupam Chakravarty
<https://www.eastmojo.com/assam/2021/09/04/controversial-kaziranga-elevated-road-project-goes-for-public-scrutiny/>



Map 2: Commercial Structure Near National Highway 37

(Source: Committee for Delineation of Wildlife Corridors, 2019)

Threat from Oil Industry

Numaligarh Refinery Limited (NRL), a joint venture between Oil India Limited and Govt. of Assam, was the result of a long standing demand for crude oil refining and ownership of critical energy infrastructure -- a cause that emerged from the Assam movement. NRL started refining crude oil in 1999. Concerns over the onset of industrialisation next to a national park led the MoEFCC to use its powers under Section 3 of the EPA to declare an NDZ for a 15 km radius around the refinery, except towards the northwest, where the NDZ extends up to the eastern boundary of Kaziranga.⁹³

Situated about 20 kilometres from KNP, the refinery continues to pose a threat to the park and its surroundings despite the Numaligarh NDZ preventing any further industrial development in the area. The former Director of KNP, M.K. Yadava, in a report submitted to the Gauhati High Court on protecting the rhinoceros, stated that the NDZ in its present form is weak:⁹⁴

“If the intension of the NDZ is to protect the Kaziranga National Park and its surroundings, as mentioned in the notification, then the area covered by the coordinates of the NDZ and the “exception” clause put together only cover a small portion of the Park, as most of the Park lies to the west of the NDZ, and does not seem to be covered. The length of the Kaziranga National Park from its easternmost top point to the end of the southern boundary is more than 85 km in length, of which the NDZ covers less than 15 km on the eastern side.”

⁹³ S.O. 481(E), MoEFCC dated 05.07.1996.

⁹⁴ Detailed Report on Issues and Possible Solutions for Long Term Protection of The Greater One Horned Rhinoceros In Kaziranga National Park. By M. K. Yadava, IFS. Director Kaziranga National Park August 5, 2014.

About the “exception” towards Kaziranga, Yadava stated in the report:

“...no activities are allowed inside the National Park boundary anyway under the Wildlife (Protection) Act, 1972 making the “exception” clause redundant. Therefore, potentially a polluting industry could be set up very close to the Park and yet outside the National Park as well as the NDZ, thereby nullifying the very purpose why the NDZ was created in the first place.”

NRL now plans to install a parallel new crude processing capacity of 6 million metric tonnes per annum (MMTPA) to expand its capacity from 3 MMTPA to 9 MMTPA. Further, the refinery plans to install a bioethanol plant supported by the United Nations Industrial Development Organization (UNIDO) to produce 49,000 metric tonnes of ethanol annually, with associated platform chemicals. The project will also have a captive power plant to produce 20 MW of power using bamboo residue as feed. Local organizations have already protested against both the proposed expansion as well as the bioethanol project citing pollution impacts on forests and water resources that flow through KNPTR. Soneshwar Narah, an activist from the Jeepal Krishak Sramik Sangha, a local organization representing farmers and marginalized communities, was arrested from a public hearing when he made serious allegations against Oil India Limited. He alleged that the Assam Government went ahead with the project despite strong opposition to it.

Miscellaneous Threats

KNPTR also faces the following threats:

1. In order to protect the park from floods, the Assam government with the assistance of various agencies, started building embankments and highlands to protect the area. At present, there are 144 artificial highlands, with 33 such highlands added after 2017. The 33 new artificial highlands cost the Assam government around Rs 16 crore. In 2020, the Assam government sought Rs 12 crore from the Centre to build a 32-kilometre long artificial highland. Conservationists are divided over the idea of artificial highlands. KNP Director P. Sivakumar stated in an interview that artificial highlands cannot be a permanent solution to prevent the drowning of wildlife.⁹⁵ Almost 70 percent of the highlands built over the last two decades were either eroded or in a dilapidated state. Forest officials have also warned of more erosion and siltation in the grasslands critical to wildlife if KNP keeps constructing more highlands in the park. Even embankments are a cause of concern for the communities living next to the park. A new embankment project funded by the Asian Development Bank (ADB) is prolonging floods for local residents. The Kaziranga subproject embankment under the Assam Integrated Flood and Riverbank Erosion Risk Management Investment Program was approved on December 2018. The project includes a 20-km long riverbank protection project combined with five kilometres of pro-siltation measures and upgrading 13-km long flood embankments, including emergency earthworks at erosion hotspots. Locals have opposed the project.
2. The Governments of India and Assam’s plan to build more than 100 dams on the Brahmaputra River could have a considerable direct negative impact on KNP’s “Outstanding Universal Value”, one of the criteria based on which KNPTR was declared as a World Heritage Site by the United Nations Educational, Scientific and Cultural Organization (UNESCO).⁹⁶

⁹⁵ Interview with Kaziranga Park Director, P. Sivakumar by Apurva Ballav Goswami, August 14, 2020

⁹⁶ IUCN – SSC Cetacean Specialist Group - Dams - Dams and River dolphins in the Brahmaputra River - 25 October, 2010 - <https://iucn-csg.org/dams-and-river-dolphins-in-the-brahmaputra-river/>

These dams are planned in the upstream area of KNPTR in Arunachal Pradesh, which is the catchment area for the Brahmaputra River and its numerous tributaries.

- 3 The Indian Railways surveyed the Karbi Hills around KNPTR for a railway line in 1985. It proposed three underpasses 30-metre wide for animals to cross the proposed single track railway line.⁹⁷
- 4 UNESCO's initial assessment of the threats to the KNPTR treated the frequent sonic booms caused by Indian Air Force aircraft flying over the park as a potential source of disturbance to wild animals.⁹⁸
- 5 KNPTR is a part of the larger Assam-Arakan basin, which is considered a massive source of oil and gas spanning the Brahmaputra valley and extending all the way to Myanmar. Thus, it always faces the threat of hydrocarbon extraction.

Litigation

Legal cases surrounding KNPTR are mainly centered on protecting the park from various industrial and infrastructural threats such as roads and the ongoing conflict between the people living around KNPTR, KNP authorities and the Assam Forest Department. A section of conservationists, on the other hand, sought legal interventions which proved to be useful in safeguarding the landscape and ecology threatened by growing industrial activities. The landmark judgement of the Supreme Court in the *Godavarman* case,⁹⁹ which defined “forests” for the entire nation under the FCA, came handy for local conservations seeking legal relief.

Some of the landmark developments are:

1. Ban on illegal mining

The Supreme Court banned mining of boulder and related activities in the Karbi Anglong Hills in 2019 following a slew of petitions filed by wildlife activist Rohit Choudhury, as well as new construction on private land connecting the KNP with the Karbi Anglong Hills.¹⁰⁰ The case exposed that the Assam government was overlooking violations of the FCA, which had led to the large-scale expansion of mining around the KNP.



Fig. 3: A stone crushing unit in Karbi Anglong close to the Kaziranga National Park and Tiger Reserve, which was shut after the Supreme Court's directions to ban of mining and quarrying activities next to the National Park.

(Photo Credits: Anupam Chakravartty)

2. Stopping expansion of NRL

In another petition by Choudhury regarding violations of the Numaligarh NDZ, the Supreme Court upheld the demolition of a wall erected by NRL in the Deopahar Forest that had been directed by the National Green Tribunal (NGT). The Supreme Court not only asked NRL to demolish the wall but also stopped the expansion of a golf course planned by the refinery officials.

⁹⁷ Anwaruddin Chowdhury, Railway Threat to Kaziranga, *Oryx*, The International Journal of Conservation, Vol. 21(3), 161- 163, July 1987

⁹⁸ PR Sinha and Dr. VB Sinha, UNESCO-IUCN Enhancing Our Heritage Project: Monitoring and Managing for Success in Natural World Heritage Sites - Technical Report No. 4 - Kaziranga National Park World Heritage Site - August 2005 - <https://whc.unesco.org/document/6958>

⁹⁹ TN Godavarman Thirumulpad v. Union of India, (1997) 2 SCC 267

¹⁰⁰ TN Godavarman Thirumulpad v. Union of India, Writ Petition (Civil) No. 202 of 1995, order dated 12.04.2019 (Supreme Court).

As a result of this litigation, Deopahar was declared as a reserve forest, which is a critical part of the Kaziranga wildlife landscape.¹⁰¹

3. Preventing road kills on NH 37

Yet another petition by Chowdhury was instrumental in the NGT ordering heavy penalties on motorists violating speed limits while driving through the 66 km stretch of NH 37. The NGT had also observed that shops and dhabas within 100m of the edge of the highway would be liable to be demolished.¹⁰²

4. Gauhati High Court ordering evictions

The Gauhati High Court has taken suo motu cognizance of the increasing number of poaching cases and has also legitimized new additions of land to the park. Based on KNP authorities' demand for more land for the park, the High Court in this case, heard alongside connected matters, ordered evictions from areas which were to be added to park. The Gauhati High Court also did not consider any community's request to be considered as a forest dweller and have their rights settled before the concerned lands were added to the KNP, holding that there was no evidence that the petitioners before the Court were from Scheduled Tribes or forest dwelling communities.¹⁰³

Procedural Gaps in Giving Clearances

The cases mentioned above show how various kinds of industrial activities threaten KNPTR. In the case related to violation of the Numaligarh NDZ,¹⁰⁴ local activists had argued that several quarries, stone crushers and brick kilns were operating without any environment clearance. Later, the Karbi Anglong Autonomous Council (KAAC) claimed that the quarries and stone crushers operating around KNPTR had environmental clearances – a claim which was later rejected by the NGT as well as the Supreme Court, while banning mining completely.

The Karbi Anglong-Kaziranga landscape is critical for the survival of KNPTR. Starting from 1996, several letters had been sent by KNP authorities as well as the forest department to their counterparts in Karbi Anglong. It was also in 1996 that the KAAC came into being under the Sixth Schedule of the Indian Constitution after a long people-led movement. On paper, the autonomous council members are empowered to form laws to protect their resources and the people. The Supreme Court and NGT cases reveal that increasingly, a tribal autonomous council was being used to justify rampant mining near a wildlife habitat.

When the CEC under the Supreme Court's direction, and later the NTCA, visited the area, they were shocked to find numerous quarries and stone crushers less than 500 metres from the core area of the park. The CEC stated before the Supreme Court that most of the quarries were situated inside a 10 km radius around KNPTR. The CEC found that although the KAAC could make laws under the Sixth Schedule for forests as well as building and sanctioning roads and infrastructure within the council, mining permits have to be issued by the Assam Government. Not just permits, but even mining plans are to be approved by the Director of Mining and Geology, Government of Assam.

¹⁰¹ TN Godavarman Thirumulpad v. Union of India, Writ Petition (Civil) No. 202 of 1995, order dated 12.04.2019 (Supreme Court).

¹⁰² Rohit Choudhury v. Union of India, Misc. App. No. 787/2015 & 1006/2015 in O.A. No. 38/2011, order dated 24.08.2016 (NGT Principal Bench). Confirmed by the Supreme Court in order dated 18.01.2019 in Numaligarh Refinery Limited v. Rohit Choudhury (Diary No. 41203/2018).

¹⁰³ Rohit Choudhury v. Union of India, OA No. 174 of 2013, orders dated 19.01.2016 and 17.05.2017 (NGT Principal Bench).

In Re Kaziranga National Park v Union of India, PIL No. 66/2012, judgment dated 09.10.2015 (Gauhati High Court).

¹⁰⁴ Rohit Choudhury v. Union of India, O.A. No. 38/2011.

Depending on the type of mineral/material involved in the mining, the environmental clearance is issued by the District Environment Impact Assessment Authority (DEIAA)/ State Environment Impact Assessment Authority (SEIAA).¹⁰⁵ The CEC found that mining in Karbi Anglong was carried out by powerful interests, often by a powerful trading class in Assam. In May 2018, a group of people even stopped the CEC from inspecting a mine in the area. The CEC stated that Karbi Anglong forest officers issued “mining permits in which separate mining sites are allotted to each project of a given department resulting in allocation of multiple mining permits to the same department/contractor leading to large extent of virgin lands in the foothills getting destroyed”. Besides, the stone quarries did not have any fixed boundaries while they used and blocked several streams and smaller rivers that join the Brahmaputra River at KNP. The KAAC however maintained that all the mines were situated in revenue lands until the Supreme Court imposed a ban.

Forced Evictions and Displacement

Kaziranga has been a site of conflict with the communities living next to it since 1924, when the first protest was organized against the British notifying the area as a game reserve. With the announcement of the additions to the PA in the late 1980s, grazing communities started challenging KNP authorities, and for the first time, approached local courts.

When the sixth addition was announced in 1999, locals began to organize themselves and by 2006, petitions were filed to protect people’s land and homesteads. To make the matter more complex, certain elements someone poisoned a tigress and her cubs in 2007,¹⁰⁶ widening the rift between locals and KNP authorities. The 2015 judgement by the Gauhati High Court discussed above gave precedence to wildlife over the communities living next to KNP.¹⁰⁷ The High Court justified the expansion of KNP in 2015 and ordered evictions, which continues to impact local communities. Relying on arguments made by xenophobic leaders and the increase in poaching, the Gauhati High Court dismissed claims over land by the people living on the periphery of KNP, deeming most of them as encroachers and viewing locals as responsible for poaching. Meanwhile, the state government flagrantly violated the FRA by not appointing any district or state level committees to include the claims of people living in protected areas such as KNPTR.

With the increasing number of Rhinoceros poaching cases, the Gauhati HC dismissed the petitions of the locals deeming most of them as encroachers. In 2016, in a bid to remove all encroachments, the Assam government used police force, as a result of which two persons including a young woman were killed in a stampede in Banderdubi under the Bagori Range that falls in Nagaon district. Close to 300 families from Banderdubi and Deosur were evicted.¹⁰⁸ The Gauhati High Court had also previously ordered local police to verify the credentials of locals as Indian citizens before carrying out evictions.¹⁰⁹

In 2020, the High Court following up on its 2015 order asked the Golaghat district administration to also evict nearly 600 families from Haldibari and Sildubi, which fell under the third and fifth addition to the park.¹¹⁰

¹⁰⁵ CEC Report No. 6 of 2019 in Application No 1431 in Writ Petition (C) No. 202, 1995, dated March 1, 2019.

¹⁰⁶ Amarjyoti Borah, “Kaziranga loses 10 tigers”, Down to Earth, April 15, 2009.

<https://www.downtoearth.org.in/news/kaziranga-loses-10-tigers-3213>

¹⁰⁷ In Re Kaziranga National Park v Union of India, PIL No. 66/2012, judgment dated 09.10.2015 (Gauhati High Court).

¹⁰⁸ “Two killed in police firing during eviction in Kaziranga”, The Hindu, September 19 2016.

<https://www.thehindu.com/news/national/other-states/Two-killed-in-police-firing-during-eviction-near-Kaziranga/article14988468.ece>

¹⁰⁹ “HC tells govt to check identity of Kaziranga park encroachers”, The Times of India, November 4 2014.

<https://timesofindia.indiatimes.com/city/guwahati/hc-tells-govt-to-check-identity-of-kaziranga-park-encroachers/articleshow/45027250.cms>

¹¹⁰ Anup Dutta, Eviction notices for illegal settlers in Kaziranga National Park, The Times of India, October 8, 2020.

<https://timesofindia.indiatimes.com/city/guwahati/eviction-notices-for-illegal-settlers-in-kaziranga-national-park/articleshow/78551270.cms>

While the district administration claimed that the eviction happened in a phased manner, locals had to destroy their own homes.¹¹¹ Locals in villages like Borbil close to Kohora range are wary that a similar fate awaits for them.

In 2020, authorities announced the seventh, eighth and ninth additions to the KNP.¹¹² These would also include riverine islands on the east and parts of the northern bank of the Brahmaputra, affecting more than 50 villages. Residents have organized several protests against these additions as the communities depend on the riverine landscape for farming and fishing. In 2021, the KNP announced the tenth addition to the park, for which it plans to acquire about 4.52 sq km more near the Brahmaputra's north bank.¹¹³

Impacts on Nearby Communities

Being located in a densely populated area (500 persons per sq km), people living on the periphery of KNP often suffer a lot due to human and animal conflict. During monsoons, animals seeking refuge on higher ground often end up seeking shelter on the raised platforms built by the communities, while in harvest season, farmers have to stay vigilant around their maturing paddy or vegetables. Tigers often prey on livestock, while elephants, wild boars, rhinos and deer feed on the crops. The unwritten law for many of the farming communities is to leave a portion of their produce for elephants, which is a source of pride for the locals. However, several peasants have died while protecting their crops.



Fig. 4: Adivasi tea pickers in a tea garden situated on an animal corridor connecting Kaziranga and Karbi Anglong landscapes.

(Photo Credits: Anupam Chakravarty)

It was only in 2018 that the MoEFCC enhanced the compensation for death and permanent incapacitation from Rs 2 lakh to Rs 5 lakh, while the amount for grievous injuries was increased from Rs 60,000 to Rs 2 lakh. For every cow or buffalo killed by a tiger from KNPTR, the owner is paid Rs 3,750 per dead animal.¹¹⁴ Another study of 10 fringe villages impacted by human-tiger conflict showed that only 6.8 percent of people received compensation of any kind, even as 77.6 percent households amongst the surveyed had

suffered livestock and property damages due to wild animals.¹¹⁵ An ongoing study has underlined the process of claiming compensation in KNP as lengthy and cumbersome.

Local activists are concerned about the increased militarization in the park. They maintain that while across the world, participative conservation models like community-run nature reserves have been found to be effective, Kaziranga is using a militarized approach, such as a shoot-at-sight policy for anyone trespassing inside the park, even as it is the locals who sacrifice the most for wildlife.

¹¹¹ Arunabh Saikia, "As Kaziranga National Park spreads, residents tear down their homes before they are evicted", Scroll, November 20, 2020. <https://scroll.in/article/977999/as-kaziranga-national-park-spreads-local-residents-tear-down-their-homes-before-they-are-evicted>

¹¹² Utpal Parashar, Over 3,000 hectares added to Kaziranga National Park and Tiger Reserve in Assam, Hindustan Times, September 3, 2020. <https://www.hindustantimes.com/india-news/over-3-000-hectares-added-to-kaziranga-national-park-and-tiger-reserve-in-assam/story-OH5j05pw7dq5PxTz0VuTM.html>

¹¹³ Anup Dutta, Assam: Kaziranga National Park gets 452 sq km more as tenth addition, The Times of India, November 10, 2021. <https://timesofindia.indiatimes.com/city/guwahati/assam-kaziranga-national-park-gets-452-sq-km-more-as-tenth-addition/articleshow/87618359.cms>

¹¹⁴ Tanmoy Bhaduri, There's no end to miseries of man-animal conflict victims in Assam, East Mojo, February 28, 2019. <https://www.eastmojo.com/in-depth/2019/02/28/theres-no-end-to-miseries-of-man-animal-conflict-victims-in-assam/>

¹¹⁵ Daisy Das, "Park, People and Biodiversity Conservation in Kaziranga National Park, India", 5(1) Space and Culture, India, 36-48 (2017).

National and International Financial Institutions Involved in Infrastructure/Developmental Projects

1. NH 37 (NH715): A series of flyovers, overpasses and underpasses by the Assam Public Works Department (PWD) to be constructed over a length of approximately 35 km in total, across 66 km of the 356 km long NH 37 (NH 715 or Asian Highway 1). Total cost: Rs 2,625 crore (tentative).¹¹⁶
2. Kaziranga Dyke Project under the Assam Integrated Flood and Riverbank Erosion Risk Management Investment Program supported by a loan from the ADB. Total cost: US\$ 82.34 million (US \$60.16 million ADB loan, \$22.18 million Assam Government share).¹¹⁷
3. NRL Bioethanol project in association with Chempolis, a Finland based company with support from UNIDO. Total cost: US \$2.98 million (US\$ 1.24 million is UNIDO contribution)¹¹⁸



Fig. 5: An embankment funded by the ADB has become a bone of contention between communities on the fringe villages of KNPTR and agencies constructing its embankment due to land related issues.

(Photo Credits: Anupam Chakravartty)

Success of Civil Society Interventions

1. Consistent follow-ups by activists through litigation have been useful in saving KNP in general and KTR in particular, especially from large-scale illegal mining and industrial development activity around the park.
2. Spontaneous movements like the ones led by the Jeepal Krishak Sramik Sangha against an exploratory seismic survey by Alphageo Private Limited, a company based in Hyderabad on behalf of Oil India Limited, a Public Sector Undertaking inside the core area of KNP have also occurred. As the protests intensified, the Golaghat district administration cancelled the survey and filed a police case against the company for fraud.

Conclusion

With a long conservation history followed by movements to save it, Kaziranga has emerged as an important tiger habitat. Its natural heritage, however, is vulnerable to the push for more infrastructure around it. The connectivity of Kaziranga-Karbi Anglong remains the central issue for the habitat. Alongside animals, the park also supports thousands of families and communities. Their concerns are central too. Industrial and large infrastructural projects pose a similar threat to the people of Kaziranga as they do to wildlife. Facing such threats, people from the periphery of the park have started voicing their concerns. As people assert their voice for a conservation agenda, handing this agenda over to the community instead of militarising the conservation space would benefit both humans and wildlife.

¹¹⁶ Anupam Chakravartty, Controversial Kaziranga elevated road project goes for public scrutiny, Eastmojo, September 4, 2021.

<https://www.eastmojo.com/assam/2021/09/04/controversial-kaziranga-elevated-road-project-goes-for-public-scrutiny/>

¹¹⁷ Eleanora Fanari, ADB Embankment subproject in the Brahmaputra river of Kaziranga, Assam, India, EJ Atlas, October 4, 2019.

<https://ejatlas.org/conflict/adb-embankment-subproject-in-the-brahmaputra-river-of-kaziranga-assam>

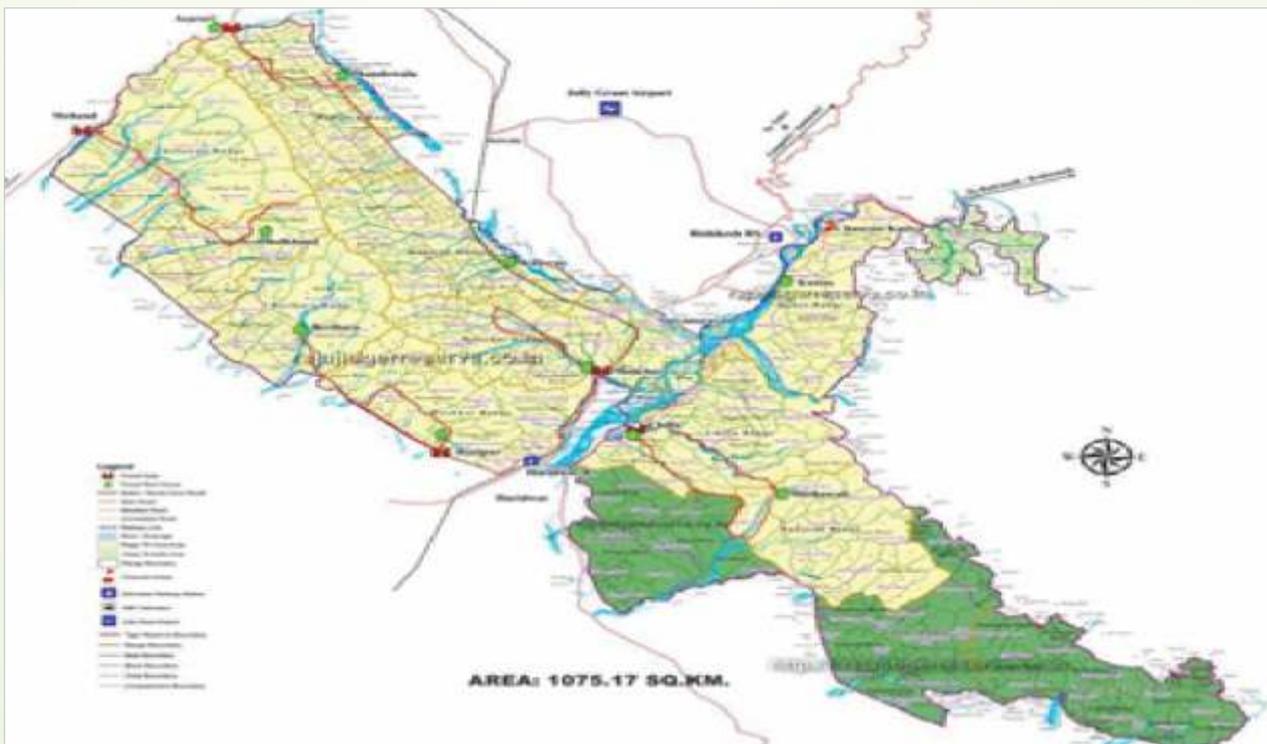
¹¹⁸ Final Draft, Project Development Document, UNIDO, dated March 21, 2018.

Introduction

The Central government, on April 15, 2015,¹²⁰ awarded Rajaji National Park the status of a tiger reserve, making it the 48th tiger reserve in the country and the second of its kind in Uttarakhand State. Over the years, Rajaji Tiger Reserve has emerged as the battleground where the State's colonial developmental conservation practice continues to threaten wildlife and forest dependent communities. The state of Uttarakhand has not only uprooted thousands of Van Gujjars in the name of wildlife conservation, but has also allowed roads and developmental interventions inimical to wildlife and forests. Although laws like the FRA and WLPA and various guidelines like the NTCA guidelines issued in 2012¹²¹ recognize the role of communities in conservation and provide them legal protections and rights, the state apparatus practicing exclusionary conservation politics continues to act in violation of forest rights.

Geographical Overview

Spread over Dehradun, Haridwar and Pauri Garhwal districts, the tiger reserve stretches across an area of 1075.17 sq km. The core area of the reserve comprises the whole extent i.e. 819.54 sq km of Rajaji National Park (RNP). The buffer zone comprises 255.63 sq km of the Laldhang and Kotdwar forest ranges of Lansdowne forest division and the Shyampur forest range of the Haridwar Forest Division.¹²²



Map 1: Tourist Map of Rajaji Tiger Reserve

(Source: rajajitigerreserve.co.in)

¹¹⁹ Aditi Vajpeyi is based out of Himachal Pradesh and engages with research, art and activism in work and practice.

As an independent researcher they have been working and writing on issues related to ecological and social justice, conservation and forest rights.

¹²⁰ Rajaji Tiger Reserve Notification, No. 130/X-2-201519(1)2013, Government of Uttarakhand, dated April 15, 2015.

¹²¹ NTCA Guidelines for Project Tiger - October 15, 2012 - <https://ntca.gov.in/assets/uploads/guidelines/Gazette-08-11-12.pdf>

¹²² Rajaji Tiger Reserve Notification.

It is situated between the Shivalik hills and Rawayan River, with the river Ganges running through its heart. In eastern part of the reserve lie the Chilla and Ghori Ranges while the northern part of the reserve contains the Laxmanjhula Beat of the Ghori Range. Towards the south of the reserve is the Shyampur Range. The western part of the reserve is surrounded by the Ramgarh, Kansrao, Motichur, Haridwar, Dolkhand and Chillawali ranges.

Ecological Importance

Owing to the diverse altitudinal ranges and presence of the river Ganga, the area holds critical ecological importance and is a biodiversity hotspot housing the highly endangered Asian elephant and tiger. At Present Rajaji Tiger Reserve is home to 37 tigers which includes two tigresses. Home to 50 species of mammals including the Himalayan black bear, sloth bear, civet, hyena, marten, leopard, jackal, goral (mountain goat) etc., the area also houses three species of deer- sambar, spotted deer (cheetal) and barking deer (kakar). The reserve also holds about 28 species of serpents, 12 species of turtles, 9 species of lizards, 10 species of toads/frogs and 49 species of fish. With over 300 species of birds, including both migrant and resident birds, the reserve is also a crucial birding site in the country. Along with being one of the most diverse wildlife habitats, the area also comprises a diverse forest ecosystem which includes tropical moist and dry deciduous mixed forests, khair-sisso forests, and alluvial savannah woodlands.¹²³ The extended area of the reserve also houses the last remaining primordial Terai marshland of the state called Jhilmil Jheel. This area of 3783.5 ha is home to the state's last surviving herd of swamp deer or Barasingha and was declared a conservation reserve in 2005.

Van Gujjars: An Ecologically Critical Existence

The area of Rajaji Tiger Reserve is also home to the Van Gujjars, a Muslim pastoral community, whose life and livelihood have been intrinsically woven around the forests and the surrounding lands. They live with herds of buffaloes and their livelihood depends majorly on the production and sale of milk and milk products. With the beginning of summer, the community along with their herds migrate to the bugyals (grasslands) located in the upper Himalayas for grazing and at the end of monsoon they return to



Fig. 1: Village of Van Gujjars inside RNP.

(Credits and Source: Meer Hamza, resident RNP)

their hut settlements (deras) in the Shivalik foothills. The community shares a sustainable, sacred and symbiotic relationship with forests and wildlife. Along with Van Gujjars, the landscape is also home to four Taungya Villages and people from other Pahari communities.¹²⁴

Legal Provisions Protecting Rajaji National Park

The first notification for Rajaji National Park was issued in 1983 under the WLPA, while the final notification was issued only in 2013. The reason for such a long delay was largely due to the non-settlement of rights of the forest dwelling communities inhabiting the area and because the proposal for a tiger reserve was submitted only in 2010.

¹²³ Rajaji Tiger Reserve- A Unique Repository of Biodiversity in Uttarakhand, India - ENVIS Centre on Himalayan Ecology - Vol. 27 – 2019 - <http://gbpihedenviis.nic.in/ENVIS%20Bullitin/ENVIS%20Bulletin,%20Vol.27,2019/2%20Akash.pdf>

¹²⁴ Taungya villages consist of people who were settled long back by F.D to serve as a labor force for the plantation and other departmental activities. The taungya have also been dependent upon forests for cultivation, making baan and living. Taungyas have also been affected by the Rajaji Tiger Reserve.

RNP nestles two prestigious wildlife conservation projects - Project Elephant (leading to the notification of the Shivalik Elephant Reserve in 2002) and Project Tiger (that led to the declaration of Rajaji Tiger Reserve in 2015).¹²⁵ An additional area of up to 10 km around the boundary of Rajaji National Park and Rajaji Tiger Reserve in the Dehradun, Haridwar and Pauri districts of Uttarakhand was proposed to be notified as the ESZ in 2018 by the MoEFCC, but the final notification has not yet been issued.¹²⁶ A State level governing body was formed as per NTCA guidelines issued in 2007 that works closely with the Forest Department and under the Chief Wildlife Warden of Uttarakhand.¹²⁷ The Government of Uttarakhand, for FY 2021-22, received a sum of Rs. 7.35 crore from the MoEFCC through the NTCA for the upkeep of Rajaji Tiger Reserve.¹²⁸ Along with the WLPA and NTCA guidelines, the FRA is decisive in defining the critical role of communities in conservation.

Developmental Projects and its Impacts

Despite being declared a Protected Area in 1983, the reserve has constantly been witnessing state-led developmental interventions. National Highway (NH) 58, NH 72 and the Haridwar- Dehradun railway line are the major projects that cut through the reserve, bifurcating it in the eastern and western parts. The Chilla-Motichur corridor is the shortest route to travel from east to west. But the widening of NH 58 into four lanes has severely choked wildlife movement across the Motichur–Chilla, Motichur–Gohri and Motichur–Kansrao–Barkot wildlife corridors. This has resulted in massive impacts on the freedom of movement and local population distribution of tigers and elephants.¹²⁹

In 2009, the NHAI undertook before the Supreme Court that it would widen a flyover on the Chilla-Motichur elephant corridor to accommodate increased traffic flows. In January 2019, the NGT while hearing a petition filed by the Centre for Wildlife and Environment Litigation took note of this order, which had still not been complied with, and directed the NHAI to complete the project within 12 months. Additionally, NGT had earlier categorically stated that the tiger population is undergoing local extinction due to the callousness of NHAI and MOEFCC.¹³⁰ The construction of four flyovers (each ~0.5 km long) at different animal crossing sites in the Motichur–Kansrao and Motichur–Chilla corridors still remains incomplete, thereby leaving the western part of the reserve unapproachable to wildlife.^{131 132}

Rajaji has only two tigresses, which are isolated and bounded to the western part because of the highway. The concentration of tigers in the eastern part and its skewed distribution in Rajaji has damaged their free genetic exchange, thereby impacting the long term survival of tigers and other coexisting species in the area.

¹²⁵ Rajaji National Park: A Biodiversity-rich Landscape in the Lap of River Ganga - The Energy And Resources Institute (TERI) - May 12, 2021 - <https://www.teriin.org/article/rajaji-national-park>

¹²⁶ Rajaji Tiger Reserve Draft ESZ Notification, SO 2031(E), MoEFCC, dated 21.05.2018.

¹²⁷ NTCA (Tiger Conservation Foundation) Guidelines, 2007 -

https://ntca.gov.in/assets/uploads/notification/NTCA/Tiger_Conservation_Foundation_Guidelines.pdf

¹²⁸ Letter dated September 15, 2021 regarding 'Centrally Sponsored Plan Scheme 'Project Tiger' Administrative Approval for funds release to Rajaji Tiger Reserve, Uttarakhand during 2021-22 -reg' - https://ntca.gov.in/assets/uploads/APO/sanction_orders/2021/Rajaji_APO2021-22_order.pdf

¹²⁹ Rajaji National Park: In Uttarakhand, a tiger reserve is divided by infrastructure projects - FirstPost - June 06, 2019 -

<https://www.firstpost.com/long-reads/rajaji-national-park-in-uttarakhand-a-tiger-reserve-is-divided-by-infrastructure-projects-6755611.html>

¹³⁰ Centre for Wildlife and Environment Litigation v. Union of India, OA NO. 920/2018, order dated 18.01.2019 (NGT Principal Bench).

¹³¹ Elephant underpass in Rajaji hanging for 9 yrs, NGT orders NHAI to deposit Rs 2 cr - The Times of India - January 18, 2019 -

<https://timesofindia.indiatimes.com/city/dehradun/elephant-underpass-in-rajaji-hanging-for-9-yrs-ngt-orders-nhai-to-deposit-rs-2-cr/articleshow/67593263.cms>

¹³² First highway with wildlife protection corridor! Delhi-Dehradun Expressway will cut travel time to 2.5 hours - Financial Express - February 12, 2021 -

<https://www.financialexpress.com/infrastructure/roadways/first-highway-with-wildlife-protection-corridor-delhi-dehradun-expressway-will-cut-travel-time-to-2-5-hours/2193513/>

Recently, a male tiger from Jim Corbett National Park was trans-located to the western part of the reserve to ensure genetic exchanges and secure future tiger generations. Initial efforts to trans-locate tigers failed, with either the tigers running away or the department unable to monitor and track them. These ineffective and desperate measures under the existing circumstances indicate that the natural tiger landscape and its free movement stand fragmented and confined inside the Rajaji Tiger Reserve.¹³³

Along with these, the reserve also houses the Chilla Hydroelectric power station in its eastern part. Over the years, it has restricted the access of elephants to the river and reduced elephant congregations. The emergence of industries and developmental projects around the area has also put immense pressure on the reserves' landscape. Just at the boundary of the reserve, near Jhilmil Jheel, sits a Bisleri Bottling plant. This has caused unregulated extraction of water from the marshland, thereby impacting the prime habitats of swamp deer in the area. It has also resulted in the receding of the groundwater table in the area, consequently endangering the wetland habitat. The electric fencing of the lake and the construction of check dams at the exit point of drainage from the wetland to River Ganga has impacted both the water regime and the swamp deer movement in and around.¹³⁴

The state is also seeing the expansion and transformation of Jolly Grant Airport (located in the same districts as the reserves) to an international stature, for which land search and acquisition is undergoing. The area also holds a lot of construction debris dumping sites.

Road to Destruction or Development?

Uttarakhand has been pushing for the construction of the 11.5-km-long Laldheng-Chillarkhal forest road between Garhwal and Kumaon to shorten travel time. But this road cuts through the reserve forest area of Rajaji Tiger Reserve. A 4.5 km stretch of this road is planned from Chamaria Bend to Siggadi Sot, which is the only ecological corridor between Jim Corbett National Park and Rajaji Tiger Reserve. Although this stretch has existed as a kaccha pathway since 1980, the proposal for improving its strength by black topping was submitted only in 2018.¹³⁵

In June 2019,¹³⁶ based on an interim report prepared by the CEC,¹³⁷ the Supreme Court directed that further construction in the project be stopped, given that there were several violations of the FCA, and neither the advice of the NTCA nor clearance from the NBWL Standing Committee had been taken for the project.¹³⁸ In July 2019, the CEC after inspecting the area, reported that the construction of the road was in violation of environmental laws. In July 2019, the Chief Conservator of Forest submitted before the court that “not even an inch widening of the road” would be made.¹³⁹

¹³³ First highway with wildlife protection corridor! Delhi-Dehradun Expressway will cut travel time to 2.5 hours - Financial Express - February 12, 2021 -

<https://www.financialexpress.com/infrastructure/roadways/first-highway-with-wildlife-protection-corridor-delhi-dehradun-expressway-will-cut-travel-time-to-2-5-hours/2193513/>

¹³⁴ Tiger translocation to resume from Corbett to Rajaji in Uttarakhand - Hindustan Times - September 29, 2021 -

<https://www.hindustantimes.com/cities/dehradun-news/tiger-translocated-to-resume-from-corbett-to-rajaji-101632904640499.html>

¹³⁵ Jhilmil Jhil Conservation Reserve - Wildlife Institute of India - <https://wii.gov.in/nmcg/protected-areas-along-ganga/jhilmil-jhil-conservation-reserve>

¹³⁶ Responding to contentious approvals being readily granted to the road, Bhanu Bansal of the Centre for Wildlife and Environmental Litigation, raised the matter in 2019 before the NGT and Supreme Court. The petitions highlighted how the Uttarakhand's Chief Wildlife Warden continues to seek exemptions from forest clearances and remains in non-agreement with the mitigation measures suggested by NTCA and NBWL.

¹³⁷ CEC Reports No.16 and 21 of 2019. The CEC reports were prepared in response to a petition filed by Rohit Choudhury who is a wildlife activist. The plea demanded for fixing responsibility on officials who without requisite approvals and clearances allowed illegal construction works and dismantling of roads, bridges, culverts. It also pleaded for issuing directions to the Uttarakhand government to pay exemplary ecological costs/fines for damaging the critical ecological corridor that connects Rajaji with Corbett Tiger Reserve.

¹³⁸ TN Godavarman Thirumulpad v. Union of India, WP (C) No. 202/1995, order dated 21.06.2019 (Supreme Court).

¹³⁹ TN Godavarman Thirumulpad v. Union of India, WP (C) No. 202/1995, order dated 19.07.2019 (Supreme Court).

In its final order on the issue a few days later, the Supreme Court reiterated that no road development activity could be undertaken in Rajaji Tiger Reserve without statutory approvals under Section 38 of the WLPA.¹⁴⁰

The NTCA thereafter asked WII Dehradun to study the project and provide suggestions, who strongly recommended that the status quo be maintained on the stretch between Chamaria Bend and Sigaddi Sot. As per wildlife experts, black topping must be avoided in ecologically sensitive routes as it will invite heavy and high speeding traffic, thereby obstructing free wildlife movement. It may be noted that the Dhananjay Mohan Committee in 2014 had also suggested that a 7.5 km-long flyover be constructed in a phase-wise manner to facilitate unrestricted movement of animals.¹⁴¹

In June 2020, the state received the green light for the road from the NBWL and NTCA¹⁴² with approval based on three riders by NTCA: the Uttarakhand government must acquire forest clearance from the MoEFCC; the length of the underpass should be 705 m; and the height of should be the underpass 8 m. These measures are based on the “Eco Friendly Measures to Mitigate Impacts from Linear Infrastructures on Wildlife Eco Friendly Measures to Mitigate Impacts from Linear Infrastructures on Wildlife”¹⁴³ issued by the WII that provide comprehensive measures to facilitate habitat connectivity and smooth movement of wildlife.

In July 2020, disregarding these provisions, the state government presented a modified proposal denying the need for any forest clearance and reducing the length of underpass to 470 m and its height to a mere 5m, due to geological conditions. The NBWL rejected the proposal in October citing “high wildlife population density”. But according to wildlife experts, these measures are insufficient for smooth movement of wildlife and in all probability detrimental to them.

Yet, in November 2020, the State Wildlife Board in a meeting headed by the State Forest Minister sanctioned the project.¹⁴⁴ Commenting about feasibility and financial concerns, the minister was reported saying, “the state government’s proposal suggests constructing the road will cost the exchequer Rs. 11 crore, while the Centre’s would cost it Rs. 80 crore.”

Ironically, the state government released Rs. 2 crore on March 31, 2021 for the road project without the approval of the NBWL and NTCA.¹⁴⁵

¹⁴⁰ TN Godavarman Thirumulpad v. Union of India, WP (C) No. 202/1995, order dated 29.07.2019 (Supreme Court); No forest clearance, but U'khand builds road that cuts through Rajaji-CTR corridor - The Times of India - October 17, 2021 - <https://timesofindia.indiatimes.com/city/dehradun/no-forest-clearance-but-ukhand-builds-road-that-cuts-through-rajaji-ctr-corridor/articleshow/87078837.cms>

¹⁴¹ Laldhang-Chillarkhal road should have a 7.5 km-long flyover, say activists - The Times of India - December 26, 2019 - <https://timesofindia.indiatimes.com/city/dehradun/laldhang-chillarkhal-road-should-have-a-7-5-km-long-flyover-say-activists/articleshow/72971235.cms>

¹⁴² Although NTCA sidestepped WII recommendations and forwarded the project stating that a 100-metre-long underpass, after every one kilometre road, will be built on the stretch. Extending the length of underpass to 150 metres, the NBWL also approved the project making the total length of the underpasses on the Laldhang-Chillarkhal road be 705 m with a height of 8 m.

¹⁴³ WII (2016) Eco Friendly Measures to Mitigate Impacts from Linear Infrastructures on Wildlife, Wildlife Institute of India, Dehradun India. Access at: http://moef.gov.in/wp-content/uploads/2019/07/eco_friendly_measures_mitigate_impacts_linear_infra_wildlife_compressed.pdf

¹⁴⁴ U'khand wildlife board approves contentious Laldhang-Chillarkhal road passing through buffer zone of Rajaji Tiger Reserve - The Times of India - November 26, 2020 - <https://timesofindia.indiatimes.com/city/dehradun/ukhand-wildlife-board-approves-contentious-laldhang-chillarkhal-road-passing-through-buffer-zone-of-rajaji-tiger-reserve/articleshow/79414648.cms>

¹⁴⁵ Uttarakhand govt releases Rs 2 crore for contentious Laldhang-Chillarkhal road - The Times of India - April 02, 2021 - <https://timesofindia.indiatimes.com/city/dehradun/ukhand-govt-releases-rs-2-crore-for-contentious-laldhang-chillarkhal-road/articleshow/81857111.cms>



Fig 3: Construction Activities on Laldhang Road

(Source: Change.org)

On May 28, 2021, the MoEFCC wrote to the Uttarakhand government asking the state forest department to acquire forest clearance for the project. On May 31, even the NTCA asked the government to provide a factual report on the project.¹⁴⁶

Sidestepping the legal process of clearance, on June 11, 2021, in a meeting of the Standing Committee of the NBWL, Prakash Javadekar, the Union Minister of Forest, Environment and Climate Change, sanctioned the approval for Laldhang forest motor road.¹⁴⁷

Additionally, the forest minister of Uttarakhand also stated that the length of the elevated animal passage would be 470 m with the height being only 6 m.¹⁴⁸ The NBWL-SC had reduced the height of the underpass here in this case, but the same NBWL-SC meeting had mandated a minimum height of 8 to 10 metres for the elephant underpass in the 30 km Haridwar-Nagina section of the NH-74.

Later, on September 16, the CEC had a meeting and demanded central and state governments for the details on forest clearances and total cost of road construction. The CEC had also asked for the reasons for not complying with the recommendations of NBWL, NTCA, WII and Dhananjay Mohan Committee.¹⁴⁹ The committee's question was: "What was the scientific rationale behind changing the location of the [Laldhang-Chillarkhal] road? The NBWL had approved the road from Chamaria bend to Siggadi Soth as against the Site Visit Report from March 30, 2021 which mentions an elevated road from Jaspur to Kotwali." But the procedural inquiries are too late, since as per ground testimonies and news reports, the black topping work on this road had already started. This makes the role and responsibility of the CEC questionable and highlights how these developmental projects are built in violation of any/all legal procedures.

The Laldhang road has emerged as the battleground of the state's developmental desperation, destroying one of the most critical ecological habitats. It also highlights the complexities and oddities of power hierarchies that dominate the space of protected area governance in this country. The blatant denial of statutory clearances, requisite safeguards by the state of Uttarakhand and its apathy for wildlife pushes us to reinvestigate the role of the State as guardians of conservation.

¹⁴⁶ Uttarakhand defies SC order on road through tiger corridor, contempt plea filed - Hindustan Times - June 10, 2021 - <https://www.hindustantimes.com/india-news/uttarakhand-defies-sc-order-on-road-through-tiger-corridor-contempt-plea-filed-101623329657970.html>

¹⁴⁷ SC panel to examine jumbo underpass height dip in Rajaji - The Indian Express - July 16, 2021 -

<https://indianexpress.com/article/india/sc-panel-to-examine-jumbo-underpass-height-dip-in-rajaji-7406894/>

¹⁴⁸ Uttarakhand: National wildlife board approves Laldhang-Chillarkhal road - The Times of India - June 12, 2021 -

<https://timesofindia.indiatimes.com/city/dehradun/natl-wildlife-board-approves-laldhang-chillarkhal-road/articleshow/83442468.cms>

¹⁴⁹ SC-appointed panel quizzes Centre, state over road through Corbett-Rajaji corridor - The Times of India - September 24, 2021 -

<https://timesofindia.indiatimes.com/city/dehradun/sc-appointed-panel-quizzes-centre-state-over-road-through-corbett-rajaji-corridor/articleshow/86462056.cms>

Wildlife Tourism: The New Face of Uttarakhand Development

Uttarakhand's developmental outlook not only crushes wildlife under road projects but also exploits them into revenue generating tourism services. A thorough glance at the government website of Rajaji Tiger Reserve speaks less of ecology or conservation but more of tourism, elaborating the luxurious lodging options, safaris, camping and adventurous activities. Inviting people for a 'comfortable stay in wilderness'; forest and wildlife is converted into an object of attraction and consumption but veiled behind the State's narrative of ecotourism. The tiger and elephant have emerged as the brand ambassador for the state's revenue earning machinery rather than being treated as critically endangered species that need conservation. Tourism has not only caused heavy human and vehicular traffic in such biodiversity-rich areas but also resulted in paving up of many parallel developmental interventions especially roads, construction activities, airport, etc. The desperate push for development at all costs became clear in the announcement on December 01, 2021 by the Prime Minister whereby 11 developmental projects were being launched in Uttarakhand. These projects aimed to improve road infrastructure for making travel smooth and boost tourism include the Rs. 8,500 crore Delhi-Dehradun economic corridor comprising Asia's largest elevated wildlife corridor.¹⁵⁰ The corridor and the tunneling taking place for it near Dat Kali Temple are in close proximity to Rajaji Tiger Reserve, and will cause further adverse impacts on the wildlife here.

Losing Home to Conservation

Since 1983, with the declaration of these areas as National Park, the Forest Department has targeted the Van Gujjar community as encroachers, poachers and an obstacle to wildlife conservation. This has resulted in their massive evictions from their homelands. Due to the pastoral and nomadic lifestyle of the community, the Forest Department initially lacked accurate data of the Van Gujjar families residing within the park. 512 families were identified in the department's first survey of 1983. The following years saw the Van Gujjars resisting the forceful eviction efforts of the Forest Department. Meanwhile, the department maintained stringent restrictions on access to forest and charged false timber cases against many community members.

The department identified 881 new families in its second survey of 1998.¹⁵¹ By 1998, out of 260 listed families in Chillawali range, 209 families were moved to Gaidikhata village. Post the 1998 survey, the department began the relocation and resettlement (never completed) of 1,393 families to Gandighetta and Pathri ranges, promising them 1 acre of land patta and a house.

"A lot of families moved under pressure but most of them found themselves in shanty shacks at the periphery of the national park, on the banks of the Ganges, awaiting the Promised Land pattas", remembered Tarun Joshi, Convenor, Van Panchayat Sangharsh Morcha.

The above accounts prompted the remaining families to resist the forceful evictions. With the departmental harassment and evictions intensifying with time, the Van Gujjars, under the banner of Ban Gujjar Kalyan Samiti, approached the Uttarakhand High Court in 2005. They also joined the national movement against forceful evictions of forest dwelling communities and the National Campaign for Forest Rights.

¹⁵⁰ PM Modi to launch multiple development projects in Uttarakhand on December 4 - India Today - December 01, 2021 - <https://www.indiatoday.in/india/story/pm-modi-launch-multiple-development-projects-uttarakhand-dehradun-december-4-1882872-2021-12-01>

¹⁵¹ This is based on the author's interview with Meer Hamza and other Van Gujjar community members. As per them the new 881 families did not include the 512 counted during first survey. Such discrepancies occurred because of the nomadic nature of families and changing criterion by deptt. The department's callousness and infrequent counting approach during which families became nuclear and increased in numbers also contributed to this.

With the enactment of the FRA in 2006, the High Court directed the director of RNP to acknowledge the rights of the community under the statute.¹⁵² In October 2008,¹⁵³ the Van Gujjar communities protested en masse against the Park authorities for forceful evictions and demanded recognition of their forest rights. The High Court, in 2008, served the director of RNP with a contempt notice for violating previous orders by forcefully evicting and resettling the Van Gujjars outside the park. The HC also directed the Uttarakhand government to form a committee to ensure that the forest rights of Van Gujjars are settled under FRA and the process for filing claims be monitored within a period of two months.¹⁵⁴

In 2009, the department did its third survey and recorded a total of 1,610 families. Most of the families were uprooted and currently only 129 families reside inside the park, with 120 located in Gauri Range while 9 in Ramgarh Range.

Evictions have continued over the years. Litigation has also continued on the issue of eviction and rehabilitation of Van Gujjars from Protected Areas in Uttarakhand, and the Uttarakhand High Court on occasion has taken the stance that the FRA might not even be applicable to Van Gujjars in Uttarakhand, and heavily hinted at their collusion with poachers.¹⁵⁵ However, in recent years the court has also passed orders directing the protection of legal rights of Van Gujjars, especially under the FRA.¹⁵⁶

Politics of Exclusionary Conservation

“The Van Gujjars share a sacred relationship with the wildlife. Deers often can be seen in large herds around our deras. They come to take shelter from predators”, recollected Meer Hamza, President of Van Gujjar Tribal Yuva Sangathan. He further emphasized, “We need forests as much as forests need us Van Gujjars. We have been living together.” The transhumance lifestyle of Van Gujjar communities symbolises symbiotic and sustainable coexistence and reveals the critical role they play in conserving Himalayan ecology. As a matter of fact, the Forest Department’s working plans, dating back to 1952, show records of the grazing activities of the community.¹⁵⁷

But the national and global dominant discourse on conservation is built on the idea of a fortress conservation model and making wildlife areas inviolate, or free of humans. Centralized conservation practices have outrightly denied the critical role that communities have in conservation. As a result of these bureaucratic practices, the Van Gujjars across Uttarakhand continue to be labelled as encroachers, resulting in their uprooting, evictions, harassments and evident exclusion from accessing and managing forests.

It must be noted that in 1996, the Van Gujjars of RNP, with support from a local NGO called Rural Litigation and Entitlement Kendra, proposed a Community Forest Management Plan for Protected Areas to forest and RNP authorities. The plan proposed the active participation of Van Gujjars in the management and conservation of forests, by linking the survival and sustainability of forests with the sustainable lives of the Van Gujjars.

¹⁵² Ban Gujjar Kalyan Samiti v. State of Uttaranchal, WPMB No. 275 of 2006, order dated 20.6.2007 (Uttarakhand High Court).

¹⁵³ Restoration of tribal rights: Van Gujjars stage protest - The Tribune - October 25, 2008 - <https://www.tribuneindia.com/2008/20081026/dun.htm#1>

¹⁵⁴ No Rights to Live in the Forest - Van Gujjars in Rajaji National Park - Economic & Political Weekly - Vol. 49, Issue No. 1, January 04, 2014 - <https://www.epw.in/journal/2014/1/reports-states-web-exclusives/no-rights-live-forest.html>

¹⁵⁵ Himalayan Yuva Gramin Vikas Sanstha v. State of Uttarakhand, WP (PIL) No. 6 of 2012, order dated 10.08.2018 (Uttarakhand High Court).

¹⁵⁶ Think Act Rise Foundation Through Arjun Kasana v. State of Uttarakhand, WP(PIL) No. 140 of 2019, orders dated 03.09.2019, 17.08.2020, 17.03.2021 and 15.12.2021 (Uttarakhand High Court).

¹⁵⁷ Van Gujjars: A repeat of historical injustice - Down To Earth Magazine - September 17, 2018 - <https://www.downtoearth.org.in/blog/forests/van-gujjars-a-repeat-of-historical-injustice-61655>

The plan was ignored as it seemed progressive for the time and the existing provisions of the WLPA did not permit human activity in protected areas. So, the Forest Department continued practising its conservation models and community forest management remained cornered in RNP.

The amendments in the WLPA in 2006 focussed on community and tiger co-existence practice in tiger reserves. The FRA too emphasized on communities' critical role in conservation, and provides legal rights for the same with specific mention on recognizing rights of pastoral communities such as Van Gujjars.¹⁵⁸ Meer Hamza¹⁵⁹ elaborated, "At present, 800 Individual Forest Rights Claims of Van Gujjars from all over the UK and 17 Community Forest Right claims are under process at different levels. Inside RNP, in 2017 we have filed 37 IFRs from Gauri Range and 9 from Ramgarh which are still pending at SDLC". However the state apathy towards the FRA is evident from the latest Monthly Status Report on implementation of the FRA, issued by the Ministry of Tribal Affairs,¹⁶⁰ which states that out of the total of 6,665 forest rights claims received by the Uttarakhand government, 99.85% of claims were disposed of.¹⁶¹ In the subsequent absence of any training, awareness campaigns and bureaucratic interest, the Van Gujjars have struggled to become acquainted with the procedure under the FRA.

It is critical to understand that the lives of Van Gujjars are adapted to changes in seasons, ecological zones, altitudes, and mountain environments. They, being essentially dependent upon their herds of buffaloes for sustenance, rely on the availability of and access to nutritious grasslands and pastures. Such transhumant grazing practices through production and access to enriched manure has benefitted both the settled agriculturalists and the forest ecosystem for a long time. It is tragic that the state apparatus still continues to practice a colonial top-down exclusionary conservation governance in Rajaji Tiger Reserve.

Commenting on the practices of the Forest Department, Rajneesh from All India Union of Forest Working People remarks, "The department just wants to do teak plantation in RNP but plantation is lethal to forest. Teak and pine have not only wiped out grass cover but also upscaled the forest fires. There is such large-scale felling of trees for these roads & other big projects but nobody checks." The State push for monoculture teak and pine plantations continues in spite of their well-documented detrimental impacts on local ecology.

Here too, the historical knowledge, practices and experiences of Van Gujjars is denied any voice in management and conservation discussions. The cost of tiger conservation thus is borne by Van Gujjars who are subjected to atrocities and human rights violations.¹⁶² At the same time, the issue of skewed tiger population distribution in Rajaji, restrictions on free tiger and elephant movement due to developmental projects, and overemphasis on tourism raises concerns over the future of wildlife itself.

¹⁵⁸ Unlike Himachal Pradesh, the Van Gujjars in Uttarakhand and U.P have not been awarded tribal status but classified under Other Backward Class (OBC). This has resulted in the community being categorized as Other Traditional Forest Dwellers (OTFD) under FRA. OTFDs under FRA are required to provide two proofs of the occupation on the land by three generations (75 years) in that area. Since the Van Gujjars are a nomadic community, producing such proofs is impossible and although MoTA allows testimony from an elder as an acceptable proof, the bureaucracy refuses to accept it and reject claims.

¹⁵⁹ Meer is from one of the families that has not left RNP and still resides inside in Kunao Village of Gauri Range.

¹⁶⁰ MoTA is the Ministry of Tribal Affairs and it's the nodal agency for implementing FRA.

¹⁶¹ Monthly Status Report by MoTA can be accessed here: <https://tribal.nic.in/FRA/data/MPRJan2020.pdf>

¹⁶² Van Gujjars: People of the forest or nowhere? - Mongabay - May 28, 2021 -

<https://india.mongabay.com/2021/05/van-gujjars-people-of-the-forest-or-nowhere/>

Conservation Forgotten in Play of Power and Politics

Recent moves of the Uttarakhand government evidently highlight how the state's decisions continue to threaten wildlife and the forest and mountain ecosystems. In November 2020, during the 16th meeting of the State Wildlife Board, headed by the Uttarakhand Chief Minister, the board decided to recommend the de-notification of the Shivalik Elephant Reserve for allowing the expansion of Jolly Grant Airport. Importantly, the reserve is located to the south of the airport whereas towards the north is the settlement of families displaced by the Tehri dam.

The MoEFCC in its response letter to the State government's application for prior permission for diversion of forest land under the FCA had clearly suggested that alternative sites for the proposed airport expansion be explored, emphasizing that the reserve area holds "High Conservation Value" and any diversion will result in "fragmentation of the riverside forests which is situated between the existing runway and the river".¹⁶³ The expansion of the airport in the reserve area will also result in the cutting of more than 10,000 trees.¹⁶⁴ Ironically, a PIL on increasing elephant deaths had raised the issue of de-notification of the elephant reserve before the Uttarakhand High Court, which gave an interim stay on the state board's recommendation on January 8, 2021.¹⁶⁵ Yet the state government, bypassing the WLPA, the FCA and the court's orders, de-notified the reserve on the same day. This de-notification was also stayed by the High Court noting that there was nothing to show that the state government had complied with Section 2 of the FCA by obtaining the central government's prior permission to de-reserve a reserve forest and divert forest land.¹⁶⁶

The Uttarakhand Forest Department, in September of 2021 also announced that it received a sum of Rs. 39 crore under the Compensatory Afforestation Fund Management and Planning Authority from the MoEFCC for a man-wildlife conflict mitigation project. The money is to be majorly used for building barriers—in the form of elephant-proof trenches and a 280 kilometre long fencing—to prevent wildlife from entering residential spaces.

In another instance, around June 2021, Uttarakhand's Forest and Environment minister had announced that the Corbett and Rajaji Tiger Reserves will now be open round the year for tourists, which otherwise remained closed from 30th June to 15th November. As reported, in a letter dated 3rd September, the Chief Wildlife Warden of Uttarakhand had asked the director of Rajaji Tiger Reserve to open the area from Satyanarayan to Kansro, a critical tiger habitat in Rajaji Tiger Reserve to tourists for the whole year.¹⁶⁷ Since this is the prime mating season for wildlife especially elephants, opening the reserve for the state's profit shows the flagrant indifference the state has for wildlife.¹⁶⁸ The NTCA, in a recent letter dated 6 October had asked the Chief Wildlife Warden to cease all kinds of tourist activities in the core and critical habitat zones, with immediate effect.¹⁶⁹

¹⁶³ Letter dated 09.10.2020, MoEFCC (Forest Conservation Division) to Additional Secretary (Forest), Uttarakhand Forest Department.

¹⁶⁴ When 'Development' Marches Through Himalayan Forests - Bloomberg Quint - December 27, 2020 -

<https://www.bloombergquint.com/opinion/uttarakhand-denotification-when-development-marches-through-himalayan-forests>

¹⁶⁵ Reena Paul v. State of Uttarakhand, WP (PIL) No. 5 of 2021, order dated 08.01.2021 (Uttarakhand High Court); Uttarakhand Govt Bypasses Modi Govt to Denotify Elephant Reserve - NewsClick - January 16, 2021 - <https://www.newsclick.in/Uttarakhand-Govt-Bypasses-Modi-Govt-Denotify-Elephant-Reserve>

¹⁶⁶ Reena Paul v. State of Uttarakhand, WP (PIL) No. 5 of 2021, order dated 11.01.2021 (Uttarakhand High Court).

¹⁶⁷ NTCA seeks status report on opening part of Rajaji Tiger Reserve for tourists - Hindustan Times - September 09, 2021 - <https://www.hindustantimes.com/cities/dehradun-news/ntca-seeks-status-report-on-opening-part-of-rajaji-tiger-reserve-for-tourists-101631190353667.html>

¹⁶⁸ A Tiger Shouldn't Have To Earn Its Keep - Bloomberg Quint - July 29, 2021 - <https://www.bloombergquint.com/opinion/a-tiger-shouldnt-have-to-earn-its-keep>

¹⁶⁹ Conservation Body Bans Tourist Activities In Core Zone Of Uttarakhand's Rajaji Tiger Reserve - NDTV - October 14, 2021 - <https://www.ndtv.com/india-news/conservation-body-bans-tourist-activities-in-core-zone-of-uttarakhands-rajaji-tiger-reserve-2575520>

This was reiterated in a recent directive where the NTCA banned tourist activities in all tiger reserves without approved Tiger Conservation Plans under the WLPA that would help to determine the maximum daily number of people allowed without affecting the ecology and wildlife.¹⁷⁰ It is also in violation of the guidelines issued by NTCA in 2016 that ban the movement of tourists during monsoon keeping in mind factors like the breeding period of wildlife, especially, tigers, tourist safety, and the need for repair of forest roads, etc.¹⁷¹ The National Wildlife Action Plan 2017-2031 also clearly specifies that in case of a conflict between tourism and conservation in wildlife areas, conservation prevails.¹⁷²

The state government's attitude and conservation approaches are thus alarming, as already more than 170 elephants have died in Uttarakhand in the past 5 years with the rate of two dozen deaths per year.¹⁷³ On 10 February, 2018, the NGT directed the MoEFCC and NBWL to look into measures suggested in a WII report that laid down measures to mitigate the impact of linear infrastructure on wildlife, in the context of the four-laning of the Nagina-Kashipur section of NH 74.¹⁷⁴ The WII report highlighted how 222 wild animals of various taxa were killed in 2016-17 due to the buzzing traffic within the 30 kilometre patch of NH 74 passing through the Haridwar forest division.

The same state that uproots the Van Gujjars in the name of protecting wildlife, takes decisions that will damage critical wildlife habitats. Wildlife, especially elephants, require vast and free areas for movement, but improper management by RNP officials has wiped out free wide spaces, choked corridors, built roads and pushed wildlife into surrounding human habitats, increasing local human wildlife conflicts.

Conclusion

The state government's developmental projects are raiding Himalayan forests, causing detrimental impacts to its critical dependents: both wildlife and the Van Gujjars. In Uttarakhand, where more than 71% of area is recorded as forest land and the population is dependent upon forests, the implementation of the FRA has been laggard. Over the last few years, in the name of wildlife conservation, approximately 1,390 families have been uprooted from RNP, relocated (not rehabilitated) in shanties and shacks or left to survive in one-room makeshift huts on the river bank. Meanwhile, the state apparatus profits by transforming the tiger and wildlife into a state tourism project and means to revenue. On the one hand, grazing routes and access of Van Gujjars to the forest is restricted and their lifestyle alleged as destructive to wildlife, and on the other hand, the state government gives a free pass to big developmental projects and linear developmental activities inside the reserve. The state is violating all legal procedures in protecting the critically endangered wildlife to pursue building roads, not only making its idea of conservation questionable but also underscoring the prejudiced feudal mindset of protected area governance in the country.

¹⁷⁰ Shivani Azad, Tourism banned in core tiger reserve zones sans conservation plan - The Times of India – March 4, 2022 - <https://timesofindia.indiatimes.com/city/dehradun/tourism-banned-in-core-tiger-reserve-zones-sans-conservation-plan/articleshow/89978122.cms>

¹⁷¹ Letter F. No. 15-1(7)/2015-NTCA dated 18.08.2015.

¹⁷² National Wildlife Action Plan 2017-2031, Chapter 10, Management of Tourism in Wildlife Areas.

¹⁷³ 170 elephants died in Uttarakhand in five years, nearly two dozen this year - The Times of India - November 23, 2020 - <https://timesofindia.indiatimes.com/city/dehradun/170-elephants-died-in-uttarakhand-in-5-years-nearly-2-dozen-this-year/articleshow/79356500.cms>

¹⁷⁴ Gaurav Kumar Bansal v. Union of India, OA No. 511/218, order dated 10.08.2018 (NGT Principal Bench); NGT tells Centre to take note of animal deaths on highway in Uttarakhand - Hindustan Times - August 10, 2018 - <https://www.hindustantimes.com/dehradun/ngt-tells-centre-to-take-note-of-animal-deaths-on-highway-in-uttarakhand/story-8gN4fzLb58PgJEsChrZpAK.html>

The story of Rajaji Tiger Reserve is that of negligence of law and procedures, denial of rights, coercion, brutal displacement, and human rights violations. State apathy towards wildlife and Van Gujjars is leading to both being isolated and forced into separate uncertain artificial ecosystems. In Rajaji Tiger Reserve, where the government plays conservation values as per its convenience, wildlife remain deprived of their free movement, surviving on remnants thrown by the state. The Uttarakhand government must take cognizance of the FRA and recognize the role of the Van Gujjar community in wildlife conservation. Unless the shift from developmental conservation to a collaborative, bottom-up, and community based approach of conservation is made, the wildlife will remain endangered inside Protected Areas.

Protecting Tiger Reserve vs. Making Way for Inter-state Travel

A Case Study on Bandipur Tiger Reserve

By Fateha Firdaus¹⁷⁵

Introduction

Bandipur National Park and Tiger Reserve is located across two districts of southern Karnataka, namely Gundlupet Taluk of Chamarajanagar district, and Nanjangud and H.D. Kote Taluks of Mysore district. The national park lies between latitudes 11°35'34" and 11°55'02", and longitudes of 76°12'17" and 76°51'32".¹⁷⁶ This unique national park is located at the tri-junction of Karnataka, Kerala and Tamil Nadu. Kabini, Moyar and Nugu are the perennial rivers that flow through this national park.

In February 1941, the Venugopala Wildlife Park was established and in 1985, the area under the national park was enlarged to cover an area of about 874.20 sq km and was renamed to Bandipur National Park. In 1973, the national park was included in Project Tiger.¹⁷⁷ Bandipur Tiger Reserve is one of the first nine tiger reserves to be established in the country.

At present, after the subsequent addition of the adjacent reserve forest area into the national park over the years, the ENVIS Centre on Wildlife and Protected Areas in May 2021 had noted that the Bandipur Tiger Reserve covers about 1,456.3 sq km. The protected area comprises about 872.24 sq km core area or critical tiger habitat area and 584.06 sq km buffer zone or peripheral area.¹⁷⁸

Bandipur Tiger Reserve is home to some of the region's most endangered, vulnerable, and threatened flora and fauna. It is also an integral part of the Mysore Elephant Reserve. Tigers, Indian elephants, wild boars, porcupines, mongoose, sloth bears, Indian rock pythons, and various species of birds, amongst others, are some of the popular wildlife. Among the wide variety of flora, grasses and sandal are found abundantly. *Acacia intsia*, *Pheonix acaulis*, *Desmodium heterophyllum*, *Cassia tora*, *Zizyphus sps*, *Shorea talura*, *Azadirachta indica*, *Santalum album*, amongst others, comprise the vegetation in this area.¹⁷⁹

Bandipur Tiger Reserve is one of the protected areas under the Nilgiri Biosphere Reserve located in the Western Ghats, which also includes Wayanad Wildlife Sanctuary, Nagarahole Tiger Reserve and Mudumalai Tiger Reserve. Sathyamangalam Tiger Reserve, Cauvery Wildlife Sanctuary, BRT Tiger Reserve and MM Hills are located in the vicinity of Bandipur Tiger Reserve.

Nilgiri Biosphere Reserve

The Nilgiri Biosphere Reserve is recognised by The World Network of Biosphere Reserves, a Man and the Biosphere Programme of UNESCO. The Biosphere Reserve was also designated as a World Heritage Site by UNESCO in 2012.¹⁸⁰

¹⁷⁵ Fateha Firdaus is a student of M.A. Communication (Media Practice) of the University of Hyderabad. She is interested in writing on the intersection of the environment, gender and science.

¹⁷⁶ Bandipur Tiger Reserve, Location & Extent, Karnataka Forest Department, Government of Karnataka.

[https://aranya.gov.in/aranyacms/\(S\(eossb43e30so3yaf4qm2gohk\)\)/English/TigerReserves.aspx](https://aranya.gov.in/aranyacms/(S(eossb43e30so3yaf4qm2gohk))/English/TigerReserves.aspx)

¹⁷⁷ Bandipur Tiger Reserve, Introduction, Karnataka Forest Department, Government of Karnataka.

[https://aranya.gov.in/aranyacms/\(S\(eossb43e30so3yaf4qm2gohk\)\)/English/TigerReserves.aspx](https://aranya.gov.in/aranyacms/(S(eossb43e30so3yaf4qm2gohk))/English/TigerReserves.aspx)

¹⁷⁸ Bandipur Tiger Reserve Notification No. FEE 299 FWL 2007, Government of Karnataka, dated 20.12.2007; Bandipur Tiger Reserve Buffer Zone Notification No. FEE 136 FWL 2008, Government of Karnataka, dated 31.08.2010; Tiger Reserves, Tiger Reserves of India, May 2021, ENVIS Centre on Wildlife & Protected Areas. http://wiienvis.nic.in/database/trd_8222.aspx

¹⁷⁹ Bandipur ESZ Notification, S.O. 2364(E), MoEFCC, dated 04.10.2012, pp. 24-25.

¹⁸⁰ Nilgiri Biosphere Reserve, India, UNESCO <https://en.unesco.org/biosphere/aspac/nilgiri>

The Nilgiri Biosphere Reserve is the first biosphere reserve in India, established in 1986. It includes 5,520 sq km of the area of which 1,240 sq km is the core area and 4,280 sq km is the buffer zone. The Biosphere Reserve presents a unique mix of ecosystems: Montane sholas, grasslands, semi-evergreen forests, tropical evergreen forests, thorn forests, moist deciduous forests and dry deciduous forests.¹⁸¹ This region is also home to several threatened and endemic species of flora and fauna.



Fig. 1: The Welcome Entrance from Karnataka side to the Bandipur Tiger Reserve (Title: Bandipur Tiger Reserve Karnataka Source: https://commons.wikimedia.org/wiki/File:Bandipur_Tiger_Reserve_Karnataka.jpg Creator: Vinaysalimath License: Licensed under the [Creative Commons Attribution-Share Alike 4.0 International license](https://creativecommons.org/licenses/by-sa/4.0/))

Number of Tigers in the Tiger Reserve

The report ‘Status of Tigers, Co-predators, and Prey in India - 2018’ released in 2020 highlighted that Bandipur Tiger Reserve had the third-largest population of tigers in the country with 126 tigers and the tiger density was 7.7 tigers per 100 sq km.¹⁸² In January 2021, S R Natesh, the Bandipur Project Tiger director, had informed Deccan Herald that the number of tigers had increased to 173.¹⁸³

Core Zone, Buffer Zone and ESZ

An area of 584.06 sq km. was notified in August 2010 as the buffer zone of the Bandipur Tiger Reserve. The buffer zone consists of 118 villages in the taluks of Nanjangud and H.D. Kote in Mysore district and Gundlupet and Chamarajanagar taluks in Chamarajanagar district. It is spread over an area of 465.79 sq km, 118.27 sq km of notified Reserved Forests and about 31.77 sq km of revenue lands.¹⁸⁴

The ESZ of Bandipur Tiger Reserve was notified in October 2012 covering a geographical area of 597.45 sq km which included 123 villages. Its radius from the park boundary varies between 0-7.78 km.¹⁸⁵

State Laws Protecting the Bandipur Tiger Reserve

Bandipur Tiger Reserve is spread over three states, namely Karnataka, Kerala and Tamil Nadu. Therefore, state-level laws are essential for the conservation of the protected areas and the forest-dwelling communities.

- i. The Karnataka Forest Rules, 1969¹⁸⁶ outline the management of reserved forests, village forests, and private forests along with the allowed and prohibited activities within the forests.
- ii. The Kerala Forest Act, 1961¹⁸⁷ outlines the management and protection of forests in Kerala and the trade of forest produce into or from the state.

¹⁸¹ Nilgiri Biosphere Reserve, Ecological Characteristics, India, UNESCO <https://en.unesco.org/biosphere/aspac/nilgiri>

¹⁸² Kumar, R. Krishna, “Tiger headcount in Karnataka highest in Bandipur, Nagarahole”, The Hindu, 28 July 2020 <https://www.thehindu.com/news/national/karnataka/tiger-headcount-in-karnataka-highest-in-bandipur-nagarahole/article32215896.ece>

¹⁸³ V, Ranjith K, “Number of wild animals goes up in Bandipur Tiger Reserve”, Deccan Herald, Gundlupet, 9 January, 2021, <https://www.deccanherald.com/state/karnataka-districts/number-of-wild-animals-goes-up-in-bandipur-tiger-reserve-937224.html>

¹⁸⁴ Bandipur Buffer Zone Notification, No. FEE 136 FWL 2008, Government of Karnataka, dated 31.08.2010.

¹⁸⁵ Bandipur ESZ Notification, S.O. 2364(E), MoEFCC, dated 04.10.2012.

¹⁸⁶ Karnataka Forest Rules 1969, 1 March 1969, Karnataka Forest Department, Government of Karnataka.

¹⁸⁷ Kerala Forest Act, 1961 (Act 4 of 1962), Kerala Forests and Wildlife Department, Government of Karnataka.

- iii. The Tamil Nadu Forest Act, 1882¹⁸⁸ outlines rights of occupancy and ownership, provisions of pasture and to forest produce, the constitution of Forest Courts and the power of the government to redefine the areas of the reserved forests.



Fig 2: Wild Elephants spotted inside Bandipur National Park (2016)

(Title: Bandipur National Park, Karnataka, Wild Elephants
Source: https://commons.wikimedia.org/wiki/File:Bandipur_National_Park,_Karnataka,_Wild_Elephants.jpg
Creator: Abhijeet1011
License: Licensed under the [Creative Commons Attribution-Share Alike 4.0 International](https://creativecommons.org/licenses/by-sa/4.0/) license)

Human Settlements in and around the Tiger Reserve

Currently, the buffer zone of the reserve consists of 118 villages, in Nanjangud and H.D. Kote taluks in Mysore district, and Gundlupet and Chamarajanagar taluks in Chamarajanagar district. The ESZ consists of 123 villages in total. Earlier, it had been estimated that close to 6,000 families had moved out of Bandipur National Park and Rajiv Gandhi National Park (Nagarhole) when these areas were declared national parks.¹⁸⁹ As per claims by a social worker from a local NGO, close to 3,000 tribal families were forcefully evicted between

1970 and 1973 but they had not received any rehabilitation package. However, the forest officials claim that the families which had been displaced from Bandipur after its declaration as a national park and due to the construction of the Kabini reservoir earlier had been rehabilitated.¹⁹⁰ On the northern fringes of the tiger reserve there are more than 15 villages consisting of Adivasi settlements, which consists of people from the Soliga, Jenu Kuruba and Betta Kuruba tribes.¹⁹¹ These communities used to reside inside the forests, but they were relocated 30-40 years ago when it was decided that Bandipur reserve would be converted into a national park.

Infrastructure/Development Projects Affecting the Tiger Reserve and Their Impacts

Two National Highways - NH 766 (previously known as NH 212) and NH 181 (previously known as NH 67) cut through Bandipur Tiger Reserve. The two highways split the habitat of several endangered species and disrupts their movement to the other adjoining protected areas. Both these routes are an important link between Tamil Nadu, Kerala and Karnataka.

i. Elevated Corridors on National Highway 766

About 19.7 km of the 272-kilometre-long National Highway 766 connecting Karnataka and Kerala passes through the core zone of the Bandipur Tiger Reserve and 4.5 km of its buffer zone.¹⁹² The highway also passes through the Wayanad National Park. The road connecting Kollegal to Kozhikode via Mysuru is an important link for commuters and has existed for more than two centuries. In 1989, it was declared as a national highway, National Highway

¹⁸⁸ Tamil Nadu Forest Act, Act No. V of 1882, Forest Department, Government of Tamil Nadu.

¹⁸⁹ Eviction Fear - Frontline Magazine - February 26, 2010 - <https://frontline.thehindu.com/other/article30179369.ece>

¹⁹⁰ Concern over plan to rehabilitate tribal families displaced from Nagarhole - The Hindu - R. Krishna Kumar - <https://www.thehindu.com/news/national/karnataka/concern-over-plan-to-rehabilitate-tribal-families-displaced-from-nagarhole/article19596539.ece>

¹⁹¹ 'My children won't know about the forests': The fight for Adivasi rights in Bandipur - The News Minute - August 2019 - <https://www.thenewsminute.com/article/my-children-won-t-know-about-forests-fight-adivasi-rights-bandipur-108044>

¹⁹² "Bandipur night traffic ban: Alternative road inspected", The Hindu, 9 September 2019,

<https://www.thehindu.com/news/national/karnataka/bandipur-night-traffic-ban-alternative-road-inspected/article29369890.ece>

212, and then was renamed National Highway 766.¹⁹³

The construction of an elevated corridor of 1 km length and 15 m width was proposed by the Kerala government. It was envisioned to consist of five elevated roads.¹⁹⁴

A night ban of traffic was introduced in 2009 as a precautionary measure to avoid the death of the wild animals due to speeding vehicles, especially at night, and to avoid disrupting their behaviour biology.¹⁹⁵ According to Bandipur Tiger Reserve officials, 93 wildlife deaths were reported between 2004 and 2009 before the night ban was imposed. However, since the ban came into effect, between 2010 and 2018, the number of road kills came down to 34.¹⁹⁶ This highlights how such night bans in the protected areas play a crucial role in preserving wildlife.

ii. Expansion of National Highway 181

NH 181 is an important road that connects to Ooty and its neighbouring areas. The NHAI has proposed to the MoEFCC to expand the existing highway. The NHAI intends to expand 13.2 km of the highway that lies between Melukamanahalli to Kekkanahalla. For this purpose, it requires about 24 acres of the land of the Bandipur Tiger Reserve.¹⁹⁷ In the interest of wildlife and ecological protection, in 2009, the Chamarajanagar Deputy Commissioner issued a directive to restrict the movement of vehicles on the highway from 9 PM to 6 AM.¹⁹⁸ Emergency vehicles and 16 State Transport buses were exempted from this ban.¹⁹⁹



Fig 3: A road inside Bandipur National Park

(Title: Bandipur National park road
Source: https://commons.wikimedia.org/wiki/File:Bandipur_National_park_road.jpg
Creator: Aditya945
License: Licensed under the Creative Commons Attribution-Share Alike 4.0 International license)

¹⁹³ Philip, Shaju, “Why Wayanad is protesting permanent closure of highway through Bandipur Tiger Reserve”, The Indian Express, 3 October 2019,

<https://indianexpress.com/article/explained/highway-versus-forest-kerala-karnataka-highway-traffic-ban-6049679/>

¹⁹⁴ Abraham, Korah, “Kerala CM approves fund for flyovers in Bandipur-Wayanad route, activists oppose”, The News Minute, 4 December 2018,

<https://www.thenewsminute.com/article/kerala-cm-approves-fund-flyovers-bandipur-wayanad-route-activists-oppose-92722>

¹⁹⁵ Philip, Shaju, “Why Wayanad is protesting permanent closure of highway through Bandipur Tiger Reserve”, The Indian Express, 3 October 2019,

<https://indianexpress.com/article/explained/highway-versus-forest-kerala-karnataka-highway-traffic-ban-6049679/>

¹⁹⁶ Wildlife Activists hail SC decision upholding ‘Night Traffic Ban’ through Bandipur Tiger Reserve - Simplicity - August 08, 2019 - <https://simplicity.in/coimbatore/english/news/56715/Wildlife-Activists-hail-SC-decision-upholding-amp039Night-Traffic-Banamp039-through-Bandipur-Tiger-Reserve>

¹⁹⁷ Thakur, Aksheev, “NHAI seeks diversion of forest land in Bandipur Tiger Reserve”, The Indian Express, 26 August 2021.

<https://indianexpress.com/article/cities/bangalore/nhai-seeks-diversion-of-forest-land-in-bandipur-tiger-reserve-7470076/>

¹⁹⁸ Lifting of Night Traffic Ban through Bandipur National Park, Lok Sabha Unstarred Question No. 5423, Answered on 25 July 2019, Lok Sabha, Parliament of India

<http://164.100.24.220/loksabhaquestions/annex/171/AU5423.pdf>

¹⁹⁹ Manoj, E. M., “Night travel ban on NH-766 a bone of contention”, The Hindu, 18 November 2019

<https://www.thehindu.com/news/national/kerala/night-travel-ban-on-nh-766-a-bone-of-contention/article30004654>

Documentation of Social and Environmental Violations

A. Litigation

On the other hand, this highway is an important route that connects the two states for commute and trade. Therefore, the ban was lifted after a petition was filed before the Deputy Commissioner. Subsequently, conservationists moved the Karnataka High Court to challenge the lifting of the ban. In 2010, the court reinstated the ban by an interim order. It also directed the state government to improve the conditions of alternate roads.²⁰⁰

Meanwhile, in 2010, a Special Leave Petition was filed in the Supreme Court by the Transport Department of Kerala. In August 2019, the apex court directed a status quo on the ban of traffic at night. Moreover, the Supreme Court directed the NHAI to suggest an alternative route to NH 766, so that the highway could be shut down permanently thereafter.²⁰¹

B. Violations of Environmental Clearances and Procedural gaps

i. National Highway 181

According to media reports, wildlife activists in Karnataka have claimed that NHAI's application claimed that no EIA was required for this project.^{202,203} However, the Bandipur National Park ESZ notification explicitly mentions that proper EIA and mitigation measures are required for road widening in the ESZ.²⁰⁴

It may also be noted that the report Recommendations of the Sub-Committee on Guidelines for Roads in Protected Areas has recommended to maintain the status quo for roads passing through National Parks and Core Critical Tiger Habitats. Although repairing of roads is permitted, it has not permitted widening or upgradation of such roads.²⁰⁵

C. Impacts on communities living nearby

The alternative road connecting Mananthavady-Kutta-Gonikoppal will increase the travel distance by 43 km for those travelling to Mysuru from Kalpetta. Thus, it was said to increase the cost of travel.²⁰⁶

Financiers of Infrastructure and Developmental Projects

- i. An alternative road to NH 766 connecting Mananthavady and Gonikoppal via Kutta and was developed by the Karnataka Government at the cost of Rs. 75 crore.²⁰⁷
- ii. In November 2018, Pinarayi Vijayan, the Chief Minister of Kerala, announced that the state government had already sanctioned money to construct elevated corridors through the Bandipur Tiger Reserve.

²⁰⁰ P K Fravesh v. State of Karnataka, WP Nos. 26621-29 OF 2009, order dated 09.03.2010 (Karnataka High Court).

²⁰¹ State of Kerala v. Srinivasa Babu, SLP (C) No. 13838/2010, order dated 07.08.2019 (Supreme Court).

²⁰² Thakur, Aksheev, "NHAI seeks diversion of forest land in Bandipur Tiger Reserve", The Indian Express, 26 August 2021.

<https://indianexpress.com/article/cities/bangalore/nhai-seeks-diversion-of-forest-land-in-bandipur-tiger-reserve-7470076/>

²⁰³ "Greens oppose NHAI plan to expand highway in Karnataka's Bandipur Tiger Reserve", The Times of India, 25 August 2021

<https://timesofindia.indiatimes.com/city/bengaluru/greens-oppose-nhai-plan-to-expand-highway-in-bandipur/articleshow/85605484.cms>

²⁰⁴ Section 3, Bandipur National Park ESZ, p. 30

²⁰⁵ Recommendations of the Sub-Committee on Guidelines for Roads in Protected Areas, Ministry of Environment, Forest and Climate Change, p:4,

<http://moef.gov.in/wp-content/uploads/2018/03/wl-141113.pdf>

²⁰⁶ Manoj, E. M., "Night travel ban on NH-766 a bone of contention", The Hindu, 18 November 2019

<https://www.thehindu.com/news/national/kerala/night-travel-ban-on-nh-766-a-bone-of-contention/article30004654>

²⁰⁷ Manoj, E. M., "Night travel ban on NH-766 a bone of contention", The Hindu, 18 November 2019

<https://www.thehindu.com/news/national/kerala/night-travel-ban-on-nh-766-a-bone-of-contention/article30004654>

He had also stated that the state government is willing to bear 50% of the cost.²⁰⁸ However, the Centre ruled out the possibility of constructing the elevated road after a few exchange of letters with the Chief Minister of Kerala.²⁰⁹

Protests and Campaigns for protecting the specific Tiger Reserve

Wildlife activists and environmentalists had hailed the Supreme Court verdict which came in August 2019 in favour of the nine-hour traffic ban during night.²¹⁰ Earlier, multiple protests had been held against the proposal of constructing elevated corridors inside Bandipur Tiger Reserve under the ‘Save Bandipur’ banner.²¹¹ For example, a protest was held in October 2018 at Maddur range check post of Bandipur Tiger Reserve by wildlife and environmental enthusiasts from Bengaluru, Mysuru, Chamarajanagar and Kodagu.²¹²

However, such efforts to save the Bandipur Tiger Reserve also faced backlash in the form of protests by people in Kerala. The Supreme Court’s verdict to close down the highway had sparked protests in Wayanad. The local people taking part in the protests feared that the alternative route to NH 766 would increase the economic burden, the time of travel and impact the tourism industry in and around Wayanad. According to reports, approximately 1.25 lakh people took part in the daily protests, most of whom are residents of towns in and around Sulthan Bathery.²¹³

Conclusion

Bandipur Tiger Reserve holds critical importance in preserving the flora and fauna of the Nilgiri Biosphere and the Western Ghats. Being one of the earliest declared tiger reserves in the country, Bandipur Tiger Reserve has been able to house a large tiger population, along with several other important species. The forest dwelling communities residing within the reserve had been relocated long back but it has been alleged that they were not rehabilitated in a proper manner. The passing of two major National Highways through the reserve has led to issues related to road kills though the night ban imposed in the reserve played a crucial role in bringing down the number of such incidents. In a classic case of human interests versus wildlife interests, the night ban had also led to intense protests by people in Wayanad, whose livelihood were getting affected. This poses some critical questions as to how to ensure a balance between preserving important species and addressing the needs of the people at the same time and what should be prioritized. It cannot be a win-win situation in every instance!

²⁰⁸ Abraham, Korah, “Kerala CM approves fund for flyovers in Bandipur-Wayanad route, activists oppose”, The News Minute, 4 December 2018

<https://www.thenewsminute.com/article/kerala-cm-approves-fund-flyovers-bandipur-wayanad-route-activists-oppose-92722>

²⁰⁹ Manoj, E. M., “Night travel ban on NH-766 a bone of contention”, The Hindu, 18 November 2019

<https://www.thehindu.com/news/national/kerala/night-travel-ban-on-nh-766-a-bone-of-contention/article30004654>

²¹⁰ Wildlife Activists hail SC decision upholding ‘Night Traffic Ban’ through Bandipur Tiger Reserve - Simplicity - August 08, 2019 - <https://simplicity.in/coimbatore/english/news/56715/Wildlife-Activists-hail-SC-decision-upholding-amp039Night-Traffic-Banamp039-through-Bandipur-Tiger-Reserve>

²¹¹ Karnataka: Relieving Activists, Centre Says No Elevated Corridors In Bandipur Tiger Reserve - The Logical Indian - January 09, 2019 - <https://thelogicalindian.com/environment/elevated-corridor-bandipur/>

²¹² Citizens campaign to save Bandipur Tiger Reserve - The Economic Times - October 26, 2018 -

<https://economictimes.indiatimes.com/news/politics-and-nation/citizens-campaign-to-save-bandipur-tiger-reserve/articleshow/66376268.cms>

²¹³ “Rahul Gandhi joins Wayanad protest over Bandipur night travel ban”, The Indian Express, 4 October 2019.

<https://indianexpress.com/article/india/rahul-gandhi-joins-wayanad-protest-against-night-traffic-ban-on-nh-766-6052994/>

When Human Needs Trump Nature Conservation

A Case Study on Panna Tiger Reserve

By Nishank & Shivani Dwivedi²¹⁴

Panna Tiger Reserve (PnTR) is the twenty second tiger reserve of India, and the fifth in Madhya Pradesh. The Panna National Park was created in 1981, and the Government of India declared it a tiger reserve under Project Tiger in 1994. It consists of areas from what was earlier the Gangau Wildlife Sanctuary, created in 1975. This PA comprises territorial forests of the North and South Panna Forest Division, to which a portion of the adjoining Chhatarpur forest division was added later. PnTR was considered as one of the best managed and maintained national parks in India by the Indian Ministry of Tourism and given the Award of Excellence in 2007.²¹⁵ In November 2020, UNESCO included the Panna Tiger Reserve in its global network of biosphere reserves acknowledging the substantial ecosystem restoration which has happened in the buffer zone.²¹⁶

Geographical Context

PnTR is located in the northern most areas of the Vindhyan range of Central India, spread over Panna and Chattarpur districts in the north of Madhya Pradesh. This is the only tiger reserve in the entire Bundhelkhand region. PnTR is bestowed with the presence of River Ken, which enters from the southern end of the reserve and traverses it for almost 55 km. The river is one of the sixteen perennial rivers of Madhya Pradesh. The lifeline of PnTR, it is the least polluted of the Yamuna's tributaries. The terrain of PnTR is characterised by extensive plateaus and gorges. The reserve has a bench topography. This can be divided into three distinct tablelands on the Panna side: the upper Talgaon Plateau, the middle Hinnauta plateau and the Ken valley. A series of undulating hills and plateaus rise on the other side of River Ken in Chattarpur district.²¹⁷ PnTR has a core area of 576.13 sq km and a buffer area of 1021.97 sq km.²¹⁸ It is situated 57 km from Khajuraho, a world heritage site known for its sculptures.

Ecological Importance

This national park has a high level of biodiversity. Deep ravines, flowing waterfalls, and thick teak forests abound in this lush green park. The site of the national park is significant because it is located at a position where the forest belt, which begins at Cape Comorin in the south and ends at the Great Gangetic Plains, is disrupted. The natural teak woods' northernmost point and the natural kardhai (*Anogeissus pendula*) woodlands' easternmost point are both in this location.

This region's vegetation is a mix of uneven terrain with scrubby vegetation and grass, rocky landscape, and hundreds of varieties of trees and shrubs. The dry steep slopes of the plateaus are covered by the khair tree (*Acacia catechu*). Bamboo associations are only seen on the slopes. The gum tree, or kullu (*Sterculia urens*) is also abundant, with good regeneration.²¹⁹ These habitats make the landscape heterogeneous.

²¹⁴ Nishank and Shivani Dwivedi are researchers working with Centre for Financial Accountability, primarily working in the area of infrastructure finance focusing on large-scale infrastructure projects and the policies governing them.

²¹⁵ Official Website of MP Tourism - <https://www.mptourism.com/panna-national-park.html>

²¹⁶ UNESCO declares Panna Tiger Reserve a biosphere reserve – Hindustan Times – November 04, 2020 -

<https://www.hindustantimes.com/india-news/unesco-declares-panna-tiger-reserve-a-biosphere-reserve/story-UeIXY6iH9nIAfvI0CRvlsM.html>

²¹⁷ Official Website of Panna Tiger Reserve - <https://www.pannatigerreserve.in/park.htm>

²¹⁸ Panna Tiger Reserve Notification, No. F-15-31-2007-X-2, Government of Madhya Pradesh, dated 24.12.2007; Brochure of Panna Tiger Reserve on the website of Forest Department of Madhya Pradesh -

<https://forest.mponline.gov.in/eBrochure/eBrochureDetails.aspx?parkid=3>

²¹⁹ Brief Note on Panna Tiger Reserve on the website of National Tiger Conservation Authority (NTCA) -

<https://ntca.gov.in/assets/uploads/briefnote/panna.pdf>



Fig. 1: River Ken flowing through Panna Tiger Reserve

(Source: <https://www.flickr.com/photos/16502785@N00/28839142770/>
Attribution: tjabeljan <https://www.flickr.com/photos/jankruihof/>
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Generic license)

This Protected Area is vital because it connects the eastern and western populations of wild animals via the Vindhyan ranges, which run from north-east to south-west. In addition to the tiger, the leopard, nilgai, chinkara, chousinga, chital, rusty spotted cat, porcupine, and sambar are also found here. River Ken is home to gharials (long-nosed crocodiles) and muggars (marsh crocodiles). There are also over 300 bird species to be found here.²²⁰ The rock cliffs with their ledges provide a good habitat for rock-nesting vultures and both resident and migratory

species of vultures can be found here. The area also supports over 10 species of reptiles, and over 50 species of fish. This includes two globally threatened Masheer species, *Tor tor* and *Tor putitora*, famous as the 'King of Freshwater Fishes of India'.

Number of Tigers in the Tiger Reserve

Between 2002 and 2009, tigers were regularly poached for eight years, which was found by a Special Investigative Team and it reached a point where there were no tigers left in PnTR. In 2007 PnTR held at least 24 tigers.²²¹ According to a news report from November 2021, there are 45 to 50 adult tigers in the reserve and 20 to 25 cubs (below the age of one year). A forest official had also informed that more than 30 tigers had moved out of PnTR in recent years to find new territories such as Chitrakoot and Bandhavgarh, which the field director of the tiger reserve mentioned as a normal process.²²²

State-level Measures Impacting the Panna Tiger Reserve and Notification of Buffer Zone

Madhya Pradesh was awarded the 'Tiger State' in 2018 for being home to the biggest population of tigers in India. That year, the number of tigers recorded in the state were 526. However, in next three years the state also earned a notorious record of witnessing the highest number of tiger deaths (40) in 2021 till mid-December, where the state's share in the fatality figure was over 30 per cent as India recorded 120 tiger deaths in that year. The government officials underscored that only 9 out of the 40 tiger deaths were suspected poaching cases. However, it should also be noted that so far Madhya Pradesh has not formed a Special Tiger Reserve Force (STRF).²²³

Taking into account the constant delays in notifying the buffer zones around tiger reserves, in 2012, the Supreme Court had directed all the states to demarcate and notify buffer zones around each of their tiger reserves.²²⁴

²²⁰ Note on Panna Tiger Reserve on the website of WWF-India - https://www.wwfindia.org/about_wwf/critical_regions/national_parks_tiger_reserves/panna_tiger_reserve/

²²¹ No more tigers in Panna, confirms Central probe team - The Indian Express - June 24, 2009 - <https://indianexpress.com/article/news-archive/web/no-more-tigers-in-panna-confirms-central-probe-team/>

²²² Over 30 Tigers Left MP's Panna Reserve in Recent Years to Find New Territory: Official - News 18 - November 02, 2021 - <https://www.news18.com/news/india/over-30-tigers-left-mps-panna-reserve-in-recent-years-to-find-new-territory-official-4394435.html>

²²³ Will Madhya Pradesh retain its 'Tiger State' tag this year? - Down To Earth Magazine - December 16, 2021 - <https://www.downtoearth.org.in/blog/wildlife-biodiversity/will-madhya-pradesh-retain-its-tiger-state-tag-this-year--80726>

²²⁴ Ajay Dubey v. National Tiger Conservation Authority, SLP (C) No. 21339/2011, order dated 3.04.2012 (Supreme Court).

However, the communities around PnTR had been opposing any notification regarding the buffer zone due to the fear of their livelihoods getting affected.²²⁵ The state's Chief Minister had publicly announced in October 2010 that PnTR would not have a buffer zone and even stated on record that "people are more important than tigers". It was also said that the declaration of the buffer zone was delayed by the state government under pressure from a strong mining mafia. In August 2012, 1002.42 sq km of area was notified as buffer zone of PnTR, which was expanded to 1021.97 sq km in July 2014.²²⁶



Fig. 2: Mother tigress with her two cubs in Panna National Park, Madhya Pradesh – June 2015

(Title: Peaceful time away from the wild hustle, 01
Source: https://commons.wikimedia.org/wiki/File:Peaceful_time_away_from_the_wild_hustle_01.jpg Creator: Mehaknoni
License: Licensed under the Creative Commons Attribution-Share Alike 4.0 International license)

Communities Impacted by the Tiger Reserve

The communities living in the forest of Panna are mostly from Raj Gond and Saur Gond tribal communities, who reside mostly in the buffer zone of PnTR.²²⁷ These communities have been living there for generations, but were asked to vacate with the area being declared a tiger reserve. The information pertaining to status of villages inside the core area of PnTR is not available in a uniform manner. In a document provided by NTCA, it was mentioned that 13 out of the 16 villages in the core area had voluntarily relocated from the core area, while there were 49 villages in the buffer area.²²⁸

However, according to the information provided in the Lok Sabha in July 2019, out of a total of 2,514 families, 983 families had been relocated from the notified core (critical tiger habitat) area since the inception of Project Tiger, while 1,531 families were still remaining inside the core area.²²⁹

Talgaon was one of the villages in the core area where the Adivasis, according to a news report, were forcibly asked to relocate in 2008-09 to make space for tigers when PnTR had lost all the tigers. These villagers mostly from the Raj Gond Adivasi community were relocated to Sarathpura hamlet, some 16 km away from their village. Most of the villagers had migrated to nearby towns in the later years. Under the norms of Section 4.9 of Project Tiger, they were supposed to get two options in the relocation package: Rs. 10 lakhs as compensation per family and taking care of the relocation on one's own, or the rehabilitation process undertaken by forest department and collector. They were never given the second option, though they claimed they had land titles and had been living there since generations. Though they had identified another location themselves for resettlement, i.e. Sarathpura, the villagers have been worrying about eviction as they do not have land titles. There were also allegations that Section 38 (V) of the WLPA was also violated as informed consent of villagers before the resettlement was not taken as mandated.²³⁰

²²⁵ Tiger Buffered - Down To Earth Magazine - May 31, 2012 - <https://www.downtoearth.org.in/coverage/tigers-buffered-38169>

²²⁶ Panna Tiger Reserve Buffer Zone Amendment Notification, No. F 15-21-2010-X-2 dated 24.07.2014.

²²⁷ The Everyday Lives Of The Residents Of Panna Tiger Reserve - India Fellow - February 01, 2020 - <https://www.indiafellow.org/blog/2020/02/the-everyday-lives-of-the-residents-of-panna-tiger-reserve/>

²²⁸ Factsheet, Panna Tiger Reserve, NTCA. <https://ntca.gov.in/assets/uploads/briefnote/panna.pdf>. It should be noted that it is not explicitly mentioned as the document was uploaded in which year and hence the information pertaining to villages has that limitation.

²²⁹ Lok Sabha Unstarred Question No. 3405 - <http://164.100.24.220/loksabhaquestions/annex/171/AU3405.pdf>

²³⁰ Forced out of the forest and into uncertainty - People's Archive of Rural India - December 12, 2018 - <https://ruralindiaonline.org/en/articles/forced-out-of-the-forest-and-into-uncertainty/>

As per a news report from July 2019, the villagers living in the buffer zone of PnTR had alleged that they had been told by the forest department that the core area of PnTR had to be expanded to accommodate the increasing number of tigers. Even though living in the buffer zone does not place any restrictions on the villagers to collect, use or sell forest produce, such activities were increasingly being restricted by the forest department, along with farming in the forest. The collected forest produce used to contribute to their income and household needs, which had diminished. The villagers had been relocated outside the forest, but illegal mining was continuing in the mining area, showing the bias of the forest department.²³¹ In another news report from August 2019, it was revealed that 27 petitions of displacement and violation of the FRA were pending before the Jabalpur High Court. There were massive irregularities found in the evacuation process of the tribals from PnTR, as tribals complained that forest officials had tried to take advantage of them.²³² The stories of displacement of the tribals living in the core and buffer area of PnTR are similar to the ones faced by the forest dwellers living in the vicinity of tiger reserves across the country and shows that often in the name of tiger conservation, the interests of the people living there for generations are sacrificed.

Threats to Panna Tiger Reserve from Infrastructure Projects

1. Threat from Ken-Betwa River Linking Project

The Ken-Betwa River Linking Project (KBLP), first conceptualized in 1980s, is the first project under the National River Linking Project for interlinking of rivers. Under this project, water from the Ken river in Madhya Pradesh will be transferred to the Betwa river in Uttar Pradesh through a canal linking the two rivers, the Lower Orr project, Kotha Barrage, and Bina complex multipurpose project. Both rivers are tributaries of the Yamuna. According to the project report, around 2,800 million cubic meters (MCM) of water will be diverted from the Ken river basin to the water deficit Betwa basin via a 73.8-meter-high dam to be constructed on the Ken at Daudhan in Chhattarpur district of Madhya Pradesh. The project makes tall claims of benefits, such as providing an annual irrigation of 10.62 lakh ha, drinking water supply to a population of about 62 lakh and generating 103 MW of hydropower and 27 MW solar power.²³³ This is the first instance of a river project being located within a tiger reserve.

However, the detrimental effects of the river-linking project have largely been overlooked due to the promised benefits and the willingness of the central and both state governments to push forward this project. This project would lead to the submergence of 6,017 hectares of forest land²³⁴ of PnTR and Ken Ghariyal Sanctuary. It is estimated that 4.6 million trees will be cut down for the project, according to a report of the Forest Advisory Committee. As per the data provided by the Ministry of Jal Shakti, 4,206 ha of area lies within the core tiger habitat of PnTR.²³⁵ Submergence of such a huge area will heavily damage the tiger reserve and will put its future at stake.

²³¹ Trapped by the Tiger - India Legal - July 28, 2019 -

<https://www.indialegalive.com/commercial-news/states-news/mp-assembly-speaker-trapped-by-the-tiger-india-legal/>

²³² We Have Been Betrayed and Looted, Say Tribals Evicted From Panna Tiger Reserve - NewsClick - August 10, 2019 -

<https://www.newsclick.in/Tiger-Reserve-Madhya-Pradesh-Tribal-Villages-Suffer>

²³³ Union Cabinet approves funding of Ken-Betwa rivers interlinking project - Business Standard - December 09, 2021 -

https://www.business-standard.com/article/current-affairs/union-cabinet-approves-funding-of-ken-betwa-rivers-interlinking-project-121120801460_1.html

²³⁴ UP, MP seal Ken-Betwa linking project deal; environmentalists flag concerns - Hindustan Times - March 22, 2021 -

<https://www.hindustantimes.com/india-news/up-mp-seal-ken-betwa-linking-project-deal-environmentalists-flag-concerns-101616415830773.html>

²³⁵ Ken-Betwa River Inter-Linking Project - Press Information Bureau - December 12, 2019 -

<https://pib.gov.in/PressReleasePage.aspx?PRID=1596262>

The cost of KBLP was estimated at Rs 35,111.24 crore at 2017-18 prices according to its Comprehensive Detailed Project Report. However, according to a government's press release in December 2021, the total cost of the project was assessed at Rs 44,605 crore at 2020-21 price levels.²³⁶

Issues with Clearances for the project

The wildlife clearance for the project was first discussed during the 37th meeting of the NBWL's Standing Committee in February 2016 based on a proposal submitted by the National Water Development Agency (NWDA). It was decided that a (sub) committee comprising of experts including two members of the Standing Committee would conduct a site visit and submit a report. The report was submitted in May 2016 and in the 39th Meeting²³⁷ of the NBWL in August 2016, the project was recommended for clearance.

In 2017, environmental activists challenged this wildlife clearance by filing appeals before the NGT as well as applications before the CEC appointed by the Supreme Court in the Godavarman case. The Supreme Court ultimately directed the CEC to investigate the matter²³⁸ (which led the NGT to suspend its hearing of the case).²³⁹ After investigating the matter for roughly two years, the CEC submitted its report in August 2019. The report raised various concerns and covered in great detail issues such as the violation of rules in granting wildlife clearance, the probable increase in the cost of the project, and the impact of deforestation on the reserve and its biodiversity.²⁴⁰

The CEC made this key observation in the report:

“...there is a wide divergence in the observations made by the (sub) Committee constituted by the SC NBWL and the recommendations on mitigative measures ultimately made by the SC NBWL. In fact, the SC NBWL has not given due consideration to the critical observations of the Committee of SC NBWL while considering the proposal for wildlife clearance submitted by NWDA.”

The report also highlighted that the project proponents had not explored the alternatives to the mega hydel project and NWDA had not explored and stated categorically:

“The primary objective of the KBLP of providing irrigation facilities and alleviating poverty can be achieved through alternative method of water conservation / harvesting at local level and that too at much cheaper cost.”

The CEC also questioned the economic viability of the report highlighting that the cost of implementation of certain mitigation measures had not been worked out:

“...the addition of ecological cost of implementation of the Landscape Management Plan (for tiger) and species recovery programme for vultures and Ghariyal when considered the Cost Benefit ratio may make the project economically unviable.”

²³⁶ Year End Review: Department Of Water Resources, River Development & Ganga Rejuvenation, Ministry Of Jal Shakti - Press Information Bureau - December 31, 2021 - <https://pib.gov.in/PressReleasePage.aspx?PRID=1786616>

²³⁷ Minutes of 39th Meeting of Standing Committee of NBWL - Ministry of Environment, Forest and Climate Change - September 19, 2016 - http://forestsclearance.nic.in/writereaddata/Order_and_Release/39.pdf

²³⁸ TN Godavarman Thirumulpad v. Union of India, WP (C) No. 202/1995, order dated 14.08.2018 (Supreme Court); Dheeraj Mishra, Ignoring Damming SC Panel Report, Modi Govt Kickstarts Work on Ken-Betwa Link Project- The Wire - July 18, 2021 - <https://thewire.in/environment/rti-centre-sc-cec-report-ken-betwa-link-project>

²³⁹ Himanshu Thakkar v. Union of India and Conservation Action Trust v. Union of India, Appeal Nos. 33 and 34 of 2017, order dated 12.10.2018 (NGT Principal Bench).

²⁴⁰ CEC Report No. 23 of 2019 dated 30.08.2019 -

<http://cecindia.nic.in/wp-content/uploads/2019/09/Report-No-23-of-2019-in-IA-No-26893-27160-of-2018.pdf>

The CEC further stated:

“The SC NBWL has considered the impact of the project only in terms of tiger habitat and not taken into account the entire flora and fauna and the unique ecosystem ignoring the fact that the project is located within the core of the National Park. The very objective of declaration of this unique ecosystem with special morphological significance and unique biodiversity as national park to ensure operation of laws of nature including natural evolution unhindered by human intervention will be defeated and will result in complete breakdown of the evolutionary process of millions of years.”

The CEC also observed:

“SC NBWL while giving clearance to this project has not taken into account the decision of this Hon’ble court in IA No. 100 in WP (C) No. 337 of 1995 with IA No. 3452 wherein it is held that our approach should be eco-centric and not anthropocentric and we must apply the “species best interest standard” as all species have equal right to exist on earth.”

It should also be noted that KBLP had got wildlife, environment and preliminary forest clearances on the grounds that no units of a proposed 78-MW powerhouse would be constructed. In the forest clearance²⁴¹ issued in April 2017 it was stated that “The (Forest Advisory) Committee is of the opinion that the proposed Powerhouse, which have the capacity of 78 MW, shall not be constructed in the forest area to be diverted. This is based on the strong technical conviction that it will create permanent, irreversible disturbance to the tiger habitat in PTR.”

Ignoring all the concerns raised by various government bodies and environmentalists, an agreement was signed in March 2021 between

the Union Minister of Jal Shakti and the Chief Ministers of Madhya Pradesh and Uttar Pradesh to implement the river interlinking project.²⁴² According to an article from December 2021, the final forest clearance for the project is awaited. Further, many of the conditions set down by the Forest Advisory Committee under the MoEFCC for Stage I forest clearance have not been met.²⁴³

Environmental activists have questioned the legality of the cabinet’s decision stating that it is illegal for the cabinet to approve a project which is yet to get forest, environmental, and wildlife clearances. It is beyond doubt that if the river linking project goes through, PnTR will be sacrificed at the altar of development, an irrevocable loss that would not just impact the tiger habitat but also damage the biodiversity which should be preserved at all costs.



Fig. 3: The Indian Vulture (*Gyps indicus*) sitting on a tree inside Panna Tiger Reserve - December 2018

(Title: Indian Vulture on a Tree

Source: https://commons.wikimedia.org/wiki/File:Indian_Vulture_on_a_Tree.jpg

Creator: Vishal Sharma

License: Licensed under the [Creative Commons Attribution-Share Alike 4.0 International](https://creativecommons.org/licenses/by-sa/4.0/) license)

²⁴¹ Proposal of diversion of 6017.00 ha of forest land in favour of Rashtriya Jal Vikas Abhikaran for development of Ken-Betwa Link Project placed before Forest Advisory Committee (FAC) in 2017 -

http://forestsclearance.nic.in/writereaddata/AdditionalInformation/AddInfoSought/0_0_411241252121318492016.pdf

²⁴² Year End Review: Department Of Water Resources, River Development & Ganga Rejuvenation, Ministry Of Jal Shakti - Press Information Bureau - December 31, 2021 - <https://pib.gov.in/PressReleasePage.aspx?PRID=1786616>

²⁴³ Ken-Betwa Interlink Means ‘Bundelkhand Will Suffer for Decades to Come’ - The Wire - December 10, 2021 - <https://science.thewire.in/environment/ken-betwa-interlink-means-bundelkhand-will-suffer-for-decades-to-come/>

2. Threat from Majhgawan Diamond Mine within Panna Tiger Reserve

The Majhgawan mine is the only diamond mine in the country with more than 74 hectares of mechanized mining in the Gangau sanctuary, which is part of PnTR. The diamond project has a capacity of mining 84,000 carats of diamond per annum. Over 13 lakh carats of diamond have been mined and it is estimated that roughly 8 lakh carats of diamond deposit still exist in the mine.²⁴⁴ The diamond project was started way back in 1959 but the mining project ran into issues related to environmental clearances when the WLPA came into existence.



Fig. 4: Majhgawan Diamond Mines in Panna - July 2019

(Title: Majhgawan Diamond Mines in Panna, MP, India, Asia's only Diamond mine.

Source: https://commons.wikimedia.org/wiki/File:Majhgawan_Diamond_Mines_in_Panna,_MP,_India,_Asia%E2%80%99s_only_Diamond_mine._Is_is_a_centre_of_a_Volcano_that_erupted_millions_of_years_ago.jpg

Creator: Ajay Sud

License: Licensed under the [Creative Commons Attribution-Share Alike 4.0 International license](https://creativecommons.org/licenses/by-sa/4.0/))

The Madhya Pradesh State Wildlife Protection Board had given mining clearance in 2005 to National Mineral Development Corporation (NMDC), the government-owned company operating the diamond mine, with the condition that it should phase out its operations by 2020. Later, in 2006, in a report on the Panna mine, the CEC appointed by the Supreme Court remarked that it was undesirable to allow indefinite mining within protected areas and asked for a deadline for closure.²⁴⁵ Between 2005 and 2014, the diamond mine was closed thrice due to issues related to environmental clearances, with the longest period of being closed down between August 2005 and June 2009.²⁴⁶

In 2008, an environment impact monitoring panel was set up by the Supreme Court, which had its first meeting in June 2011. In 2012, the SC-appointed committee had visited PnTR to inspect diamond mines and deliberate on the closure plan. The second meeting happened in October 2014 where NMDC was asked by the monitoring committee to shut down the diamond mines by June 30, 2016. The chairman of the committee stated in the meeting, “NDMC is yet to come up with a closure schedule. We have deliberated extensively on the negative impact of mining on the tiger reserve.”²⁴⁷ Later, in March 2015, NDMC decided to approach the Supreme Court to seek permission to mine upto 2020, the extra time period which the company wanted to add some more profits along with exploring other mines in Madhya Pradesh.²⁴⁸

NDMC stopped its operations from January 01, 2021 after its environmental clearance ended on December 31, 2020.²⁴⁹ As per a news report from August 2021, the mining operations at NMDC

²⁴⁴ Panna diamond mine will not be closed: Madhya Pradesh CM Shivraj Singh Chouhan - The Times of India - January 05, 2021 - <https://timesofindia.indiatimes.com/city/bhopal/panna-diamond-mine-will-not-be-closed-cm/articleshow/80102563.cms>

²⁴⁵ CEC Report dated 04.07.2006 in IA No. 1485 of 2005 filed by NMDC for permission to carry out mining activities at the Diamond Mining Project at Majhgawan village, Panna district.

²⁴⁶ Close diamond mining in Panna tiger reserve by 2017: Panel - Hindustan Times - September 22, 2014 -

<https://www.hindustantimes.com/bhopal/close-diamond-mining-in-panna-tiger-reserve-by-2017-panel/story-IBazHSvKyoOlk01XEvt6jL.html>

²⁴⁷ SC panel asks NMDC to shut Panna diamond mines by 2016 - The Times of India - October 02, 2014 -

<https://timesofindia.indiatimes.com/india/sc-panel-asks-nmdc-to-shut-panna-diamond-mines-by-2016/articleshow/44079583.cms>

²⁴⁸ NMDC set to move SC for mining diamonds in Panna - The Times of India - March 11, 2015 -

<https://timesofindia.indiatimes.com/business/india-business/nmdc-set-to-move-sc-for-mining-diamonds-in-panna/articleshow/46523879.cms>

²⁴⁹ Panna diamond mines will not be closed, says Madhya Pradesh CM Shivraj Singh Chouhan - The Times of India - January 04, 2021 - <https://timesofindia.indiatimes.com/city/bhopal/panna-diamond-mines-will-not-be-closed-says-madhya-pradesh-cm-shivraj-singh-chouhan/articleshow/80098976.cms>

remained stalled as environmental clearance was awaited. The State Wildlife Board had given clearance to the NMDC mine in January 2021 and the Central Wildlife Board gave the clearance in March 2021, but the matter has been pending before a Supreme Court-appointed panel.²⁵⁰

Apart from the NMDC operated mine, there are a large number of diamond mines with shallow mining operations being carried out inside the protected area of the forest in Pahadikheda region, where Baghinriver flows. The forest department has been conducting raids to curb such mining within PTnR.²⁵¹ There are thousands of workers and hundreds of mine owners involved in diamond mining in Panna.

Local activists have raised concerns that a mining ban is not the solution due to issues around transition and alternate livelihoods, as there are no other employment options in the region. Additionally, it has been suggested that the government should utilize the District Mineral Fund to generate employment in the region. It should also be taken into account that the mines also generate indirect employment for hundreds of local dwellers who will be severely affected by mine closure, which could force people to resort to illegal mining and lead to an increase in wildlife and forest crimes.

3. Threat from Bunder Diamond Mining Project

The proposed Bunder diamond block falls in Chhatrapur division of Madhya Pradesh, covering 364 hectares in the protected Buxwaha forests. It has been estimated that the block has 34 million carats of rough diamonds.²⁵² The project had been secured by Essel Mining and Industries Limited, owned by Aditya Birla Group. According to the company's website, the company has plans to develop a fully mechanized opencast mine and state of the art processing plant for recovery of diamonds with an investment of around Rs 2,500 crore. The company has also highlighted that the project, once operational, has the potential to become one of the largest diamond mines in the Asian region. According to the latest information available as of December 2021, the company has targeted the execution of the mining lease by the end of the financial year 2022.²⁵³

Essel Mining and Industries Limited had won a bid for this project worth Rs 55,000 crore in 2019.²⁵⁴ However, it is not that Essel Mining is the first company venturing into this diamond mining project. Back in 2006, Rio Tinto Exploration India Private Limited, an Australian mining giant was granted a prospecting licence by the Madhya Pradesh government for exploring diamond mining in the Buxwaha region. But even back then the project had faced intense opposition over ecological concerns. Later, in 2017, the company decided to not go ahead with the project and exited the project.

In the pre-feasibility report submitted by Essel Mining to the environment ministry, it has been mentioned that, "There are no wildlife sanctuaries, national parks, Tiger Reserves, Elephant Corridors, eco-sensitive areas within the 10 km radius of the mining lease area.

²⁵⁰ Diamond excavation plummets in Madhya Pradesh's Panna - Hindustan Times - August 26, 2021 -

<https://www.hindustantimes.com/india-news/diamond-excavation-plummets-in-madhya-pradesh-s-panna-101629960740972.html>

²⁵¹ MP: Raids on Illegal diamond mines near Panna tiger reserve buffer zone - The Times of India - February 08, 2020 -

<https://timesofindia.indiatimes.com/city/bhopal/mp-raids-on-illegal-diamond-mines-near-panna-tiger-reserve-buffer-zone/articleshow/74031127.cms>

²⁵² In Madhya Pradesh's Buxwaha forest, a diamond mine could claim two lakh trees - Scroll.in - June 09, 2021 -

<https://scroll.in/article/996817/in-madhya-pradeshs-buxwaha-forest-a-diamond-mine-could-claim-two-lakh-trees>

²⁵³ Essel Mining & Industries Limited - Bunder Diamond Block - <https://www.esselmining.com/division/bunder-diamond-block/overview.html>

²⁵⁴ Birla Group wins bid for Chhatrapur diamond mine; Madhya Pradesh to fetch 41.55% revenue of sale price -

The Times of India - December 11, 2019 - <https://timesofindia.indiatimes.com/business/india-business/birla-group-wins-chhatrapur-diamond-mine-mp-to-fetch-41-55-revenue-of-sale-price/articleshow/72480683.cms>

The nearest National Park/Sanctuary is Panna Tiger Reserve (PTR) with its buffer zone at 19.03 km.²⁵⁵ However, apart from the concern of environmental damage due to felling of trees and use of excess water for diamond mining in the proximity of PnTR, the Bunderdiamond block also holds importance for PnTR, as both the felling of trees and the diamond mining project would destroy the connecting tiger corridor between Panna Tiger Reserve and Nauradehi sanctuary and nearby forests, which cannot be overlooked.²⁵⁶

The project has faced stiff opposition from environmentalists and local people as it could lead to the felling of over 2.15 lakh trees.²⁵⁷ Additionally, petitions have been moved before the Supreme Court, the Madhya Pradesh High Court as well as the NGT seeking a stay on the project.²⁵⁸ The NGT in an interim order in June 2021 stayed the felling of trees without the grant of forest clearance.²⁵⁹ In October 2021, the Madhya Pradesh High Court also stayed the mining and any other construction activity in Buxwaha in an interim order.²⁶⁰

4. Threat from Majhgaon Medium Irrigation Project

The Majhgaon medium irrigation project would have submerged 78.6 hectare of buffer area of Panna Tiger Reserve and would have required a total of 426.7 hectare of forest land. The project was given in-principal approval by the Forest Advisory Committee of the environment ministry in March 2018 on the ground that the clearance for use of forest within the reserve's buffer will be conditional on the grant of wildlife clearance by NBWL.²⁶¹ A couple of months later, in May 2018 it emerged that NBWL had given a clearance to this irrigation project.²⁶²

It was claimed that the project would provide irrigation to 13,600 hectare in Panna district. Along with this, it would also provide 40 MCM of water for the (now shelved) Barethi Super Thermal Power Plant and 2 MCM water for domestic use. The project caused displacement of 40 families from the forest land falling in the reserve and 11 families from the North Panna forest division. While giving the approval, NTCA had asked that the state government would have to provide monetary compensation for the potential impact on wildlife dispersal. It was recommended that Rs. 10 crores should be paid to PnTR and Rs. 8 crores to Ken Gharial Sanctuary. This irrigation project was approved despite the fact that PnTR was already losing roughly 6,000 hectares of land for the Ken-Betwa Linking Project. There is not enough information whether alternatives were explored by the state government so that this project could be avoided.

²⁵⁵ Pre-Feasibility Report for Proposed Bunder Diamond Block -

<http://environmentclearance.nic.in/DownloadPfdFile.aspx?FileName=U3w4HfpPEL+mMPSc9kETxTUyZbka7xztrj1fGz121hdysDCCeddaWRLnJo818j98tCvLhVsDd5NE2iwxtoxLPOvTxhskF++NN/OuQOKEqq+/RtRSIyNYDTj54MSFzsB&FilePath=93ZZBm8LWEXfg+HAIQix2fE2t8z/pgnoBhDIYdZCxxmG8GlihX6H9UP1HygCn3pCkAF2zPFXFQNqA4krKa1Aw==>

²⁵⁶ Diamond Digging To Destroy Tiger Corridor In Bundelkhand - The Wildlife India - June 21, 2021 -

<https://www.thewildlifeindia.com/2021/06/Diamond-Digging-To-Destroy-Tiger-Corridor-In-Bundelkhand%20%20.html>

²⁵⁷ Application for Mining Proposal in Bunder Coal Block for Forest Clearance with Proposal No.: MP-0101/2020 -

http://forestsclearance.nic.in/PartIIReport_A.aspx?pid=FP/MP/MIN/45288/2020

²⁵⁸ Vivek Trivedi, NGT Stays Felling of Trees in MP's Buxwaha Forest Amid Public Uproar - News 18 - 2 July 2021

<https://www.news18.com/news/india/ngt-stays-felling-of-trees-in-mps-buxwaha-forest-amid-public-uproar-3916556.html>

²⁵⁹ Dr. P. G. Najpande v. The Secretary, MoEFCC, OA Nos. 34 and 35 of 2021, order dated 30.06.2021 (NGT Central Zone).

²⁶⁰ NagrikUpphokta Margdarshak Manch v. Union of India, WP No. 12124/2021, order dated 26.10.2021 (Madhya Pradesh High Court); Vivek Trivedi, Diamond Mining Project in Buxwaha Forest Stayed, MP High Court Says Stone-Age Rock Paintings Can't be Destroyed - News 18 - 26 October 2021 <https://www.news18.com/news/india/diamond-mining-project-in-buxwaha-forest-stayed-mp-high-court-says-stone-age-rock-paintings-cant-be-destroyed-4367927.html>

²⁶¹ Centre 'clears' dam in Madhya Pradesh tiger reserve - DNA - March 26, 2018 -

<https://www.dnaindia.com/india/report-centre-clears-dam-in-madhya-pradesh-tiger-reserve-2597744>

²⁶² Panna Tiger Reserve to lose forest for irrigation project - DNA - May 02, 2018 -

<https://www.dnaindia.com/india/report-panna-tiger-reserve-to-lose-forest-for-irrigation-project-2610613>

5. Threats from Highway Expansion

According to the minutes of the 42nd Meeting of NBWL held in May 2017, a proposal for diversion of 39.75 ha of forest land from Nauradehi Wildlife Sanctuary was recommended for wildlife clearance for widening of NH-12 from 2-lane to 4-lane by the NBWL's Standing Committee. This proposal was earlier considered by the NBWL-SC in the 40th meeting held in January 2017.²⁶³ Nauradehi Sanctuary was part of the area proposed to be added to PnTR in lieu of the diverted area for Ken-Betwa Link Canal. The Standing Committee recommended the proposal along with proposed mitigation measures and conditions prescribed by the NTCA and the State Chief Wildlife Warden considering "the public utility of the project" and citing the "national importance of this infrastructure project". The mitigation measures included suggestions such as animal underpasses, chain link fencing to reduce the chances of road accidents killing animals, and artificial water bodies or ponds at intervals on either side of the road to discourage animals for crossing the road for water. These measures also came with the strange logic that "widening of road will reduce the traffic congestion and density of vehicle on the road, which indirectly give the feeling of less vehicles in that area", which ignored the fact that widening of highways eventually leads to a higher amount of traffic, combined with the average speed of vehicles going up leading to more road accidents of animals. A former member of NBWL had raised concerns regarding the forest diversion saying that losing the 'core area' of the reserve cannot be compensated in any manner and that the Nauradehi Wildlife Sanctuary was not being treated as a protected area.²⁶⁴

6. Threat from NTPC's Barethi Super Thermal Power Plant

It was reported in 2014 that India's largest power company National Thermal Power Corporation (NTPC) was planning to set up a 2,640 MW Super Thermal Power Project (four units of 660 MW each) in Barethi in Chhatarpur district of Madhya Pradesh at the cost of about Rs 18,000 crore. The land requirement for the project was put at 2,481 acres.²⁶⁵ The annual coal requirement for 12 million tonnes was meant to come from Banai Coal Block of MandRaigarh located in Chhattisgarh. A response submitted by NTPC to the MoEFCC in August 2016, stated that the distance of the project site from the core zone of PnTR and the proposed ESZ was 14.24 km and 12.23 km, respectively.²⁶⁶ While the location of the proposed power plant was in line with the restrictions imposed in terms of the minimum distance (10 km) to be maintained for such projects from the protected areas, however, the sheer scale of the project would have deeply impacted PnTR. This concern was largely overlooked when suggesting the proposed location for the power plant.

In a meeting held in July 2016 by the Expert Appraisal Committee (EAC) of the environment ministry, the project proposal was discussed where the EAC deferred its decision on the proposal and asked NTPC to get wildlife clearance from NBWL taking into account the scale of the project and its proximity to PnTR and the contiguous forest.²⁶⁷

²⁶³ Minutes of 42nd Meeting of Standing Committee of NBWL - Ministry of Environment, Forest and Climate Change - May 30, 2017 - <https://parivesh.nic.in/writereaddata/Order%20and%20Release/Minutes%20of%2042%20Meeting%20of%20SC%20NBWL%20held%20on%2015.5.2017.pdf>

²⁶⁴ Forest Area proposed to be added to Panna reserve diverted for other projects - Livemint - June 06, 2017 - <https://www.livemint.com/Politics/DcIDkUvEuXAG5S7KcnArNL/Wildlife-panel-nod-to-forest-land-diversion-for-KenBetwa-pr.html>

²⁶⁵ NTPC to construct 2,640 MW power plant in Bundelkhand - Business Standard - March 02, 2014 - https://www.business-standard.com/article/pti-stories/ntpc-to-construct-2-640-mw-power-plant-in-bundelkhand-114030200707_1.html

²⁶⁶ Panel defers green nod to NTPC's Rs 17,800-crore project in Madhya Pradesh - Business Standard - July 18, 2016 - https://www.business-standard.com/article/economy-policy/panel-defers-green-nod-to-ntpc-s-rs-17-800-crore-project-in-madhya-pradesh-116071800743_1.html

²⁶⁷ Panel defers green nod to NTPC's Rs 17,800-crore project in Madhya Pradesh - Business Standard - July 18, 2016 - https://www.business-standard.com/article/economy-policy/panel-defers-green-nod-to-ntpc-s-rs-17-800-crore-project-in-madhya-pradesh-116071800743_1.html

In November 2020, it was mentioned in a media report that the project had been given a No Objection Certificate (NOC) by PnTR and NBWL. Even the Archaeological Survey of India department had given an NOC despite the project being only 24 km away from the historic Khajurao Temples.

However, the EAC did not give an NOC to the project due to which the project remained stalled.²⁶⁸ In another media report around the same time, it was revealed that the Ministry of New and Renewable Energy (MNRE) has stated in writing that the tender for the thermal power plant had been cancelled and a solar power plant of 550 MW would be installed on the 2,839 acres of land already acquired by NTPC.²⁶⁹ If the proposed power plant had proceeded as planned, it would have caused irreversible damage to PnTR not only through the massive air pollution but also the regular transportation of millions of tonnes of coal in the region.

Conclusion

Despite being home to several tigers and possessing rich biodiversity, Panna Tiger Reserve has become a classic case of the anthropocentric approach trumping over the eco-centric approach, especially with the going ahead of the Ken-Betwa River Interlinking Project. The concerns raised by environmentalists and the CEC over the KBLP have been sidelined in the name of bringing development to the Bundelkhand region without seriously exploring possible alternatives. The huge submergence of the area within PnTR due to the construction of the dam at Daudhan will lead to irreversible changes and will put a serious dent in conservation efforts. The Panna region also has to face the 'resource curse' with the area being rich in diamonds. Diamond mining within PnTR (both by NDMC and illegal mining) has already caused a lot of damage to the fragile ecosystem. However, the government needs to come up with solutions in terms of creating employment for locals rather than simply banning mining. Efforts for spearheading diamond mining in the Bunder Diamond Block will severely damage the Buxwaha protected forests, impacting the free movement of the tigers. It should also be seen in the context that felling of lakhs of trees and large-scale mining will cause impacts on the nearby reserve too, as the ecology within a given region does not function in isolation. The diversion of forest land for the Majhgaon Irrigation project and the expansion of NH-12 in Nauradehi Wildlife Sanctuary will also weaken the overall conservation efforts in PnTR.

There should not be mere lip-service in protecting tiger reserves like Panna. Authorities should be more proactive in exploring alternatives for projects. Projects like diamond mining should not be assessed from the aspect of commercial revenue alone that such projects bring to the governments, but also weighing in the long term irreversible damages. The larger question of preserving the interests of forest-dwelling communities living within and around the reserve should also take the center-stage, acknowledging their centuries-long contribution and symbiotic relationship with forests, along with generating sustainable means of employment for them. In the years to come, Panna Tiger Reserve would have stood witness to the first river interlinking project passing through a tiger reserve in the country. The future does not look promising for PnTR!

²⁶⁸ छतरपुरमेंपर्यावरणविभागकीरवीकृतिनहीं, रुकाएनटीपीसीकाकाम - NayiDuniya – November 6, 2020-

<https://www.naidunia.com/madhya-pradesh/chhatarpur-chhatarpur-news-6564587>

²⁶⁹ NTPC to set up 550 MW Solar Plant in Barethi - Patrika - October 28, 2020 -

<https://www.patrika.com/chhatarpur-news/ntpc-to-set-up-550-mw-solar-plant-in-barethi-6488144/>

Introduction

Kali Tiger Reserve is located in Uttara Kannada district in Karnataka. The tiger reserve lies between latitude 14° 57' 23.04" N; longitude 74° 15' 7.56" East and latitude 15° 9' 56.16" North; longitude 74° 43' 10.56" East, covering the taluks of Haliyal, Karwar and Joida. Besides the 339.87 sq km area of Anshi National Park, the tiger reserve includes another important protected area of the region viz., Dandeli Wildlife Sanctuary (475.02 sq km). This now forms a continuous Protected Area in the Western Ghats, as both the PAs were combined and declared as the Dandeli-Anshi Tiger Reserve in 2007, which was renamed as Kali Tiger Reserve in 2015.²⁷¹ The total area of this tiger reserve is 1345.72 sq km (Core/critical tiger habitat: 814.89 sq km and Buffer/peripheral area: 530.83 sq km).²⁷²

The name of the tiger reserve is derived from the river Kali or the Black River (the river cuts through dark volcanic rocks rendering the water black in colour) which flows through the national park and drains into the Arabian Sea. The presence of the river is crucial for the sustenance of wildlife in this unique ecosystem. Thousands of people from Uttara Kannada district and along the coast of Karwar are dependent on the Kali River for their livelihood and sustenance. The river also houses many dams built majorly to harness hydroelectricity.

Climatic conditions range between tropical to subtropical which is characteristic of the climate typical in the Western Ghats. The tiger reserve receives heavy rainfall during monsoon with high levels of humidity; summers are extremely hot and dry and winters are moderately cold. The soil type of most of the reserve is laterite by nature, which has minimum water retentive capacity making the area water scarce in summers despite heavy rains in monsoon. The tiger reserve is situated in the ecoregion of the Western Ghats marked by the presence of moist deciduous forests, evergreen rainforests and high-altitude grasslands with interspersed regions of agricultural areas. Grasslands hold prime significance for the tiger population as most of the tiger's prey are herbivores that depend on grasslands for fodder.²⁷³

The area is one of the top hotspots for biodiversity in the world. The Kali Tiger Reserve is an extraordinary habitat of Bengal tigers, black panthers and Indian elephants, amongst other large mammals like Indian bisons, sloth bears, Indian wild boars, grey langurs (Hanuman langur), grey slender lorises, etc. The tiger reserve also accounts for the presence of around 200 species of birds like the Ceylon frogmouth and the Asian fairy bluebird, and many species of hornbills like great hornbills, Malabar pied hornbills, Malabar grey hornbills, and Indian grey hornbills. The official number of tigers according to the report "Status of Tigers Copredators and Prey in India 2018" was 15, where 11 tigers were found utilizing the reserve and 4 tigers were found within the reserve.

²⁷⁰ Shrestha Chowdhury has a Master's degree in Developmental Studies from Christ University, Bangalore and is associated with TISS as a Research Officer in Forest Rights & Governance Project. Her areas of interest include urban water governance, lake ecology, forest rights, environmental and social justice.

²⁷¹ Karnataka Forest Department - KTR Dandeli Division -

[https://aranya.gov.in/aranyacms/\(S\(wftw21xn2ngqv5xqywwz3rfaq\)\)/English/FieldDivision.aspx?u15H0wzBSythdFgOxFH28A==](https://aranya.gov.in/aranyacms/(S(wftw21xn2ngqv5xqywwz3rfaq))/English/FieldDivision.aspx?u15H0wzBSythdFgOxFH28A==)

²⁷² Dandeli-Anshi Tiger Reserve Notification No. FEE 299 FWL 2007, Government of Karnataka, dated 20.12.2007.

²⁷³ Chandran, M. S., Rao, G. R., Mukri, V., Mesta, P., Ramachandra, T. V., & Series, S. C. (2012). Grasslands of Anshi-Dandeli Tiger Reserve. ENVIS Technical Report.



Fig. 1: Kali River flowing through Kali Tiger Reserve - May 2014

Source: https://commons.wikimedia.org/wiki/File:Kali_river.jpg
Creator: Amoghavarsha
License: Licensed under the [Creative Commons Attribution-Share Alike 4.0 International license](#))

The reserve is home to many human settlements in the form of villages. Some communities that live in and around the tiger reserve are Siddhis, Gavlis, Kunbis and Kumri Marathas. Siddhis are forest dwellers, Gavlis are pastoral tribes, Kumris use to practise kumri or shifting cultivation. The majority community is Kunbi, who are landowners and agriculture is their major occupation.²⁷⁴

State Laws Protecting the Tiger Reserves

In India, conservation of tigers is a shared responsibility between the Centre and the State. Initiatives like Project Tiger have been brought in and collectively implemented by the Centre and the State to increase the number of tigers in the Indian subcontinent. As per the section 38(X) of the Wildlife (Protection) Act, 1972, every state government is required to set up a Tiger Conservation Foundation (TCF) for the purpose of tiger conservation and management in the state. The objective of the foundation is to facilitate tiger reserve management, preservation of the associated biodiversity and promotion of eco-development schemes by ensuring people's participation and within the purview of national and state laws.

Description of Infrastructure & Development Projects Affecting the Tiger Reserve

1. Hubballi Ankola Railway Project

In 1997-1998, the railway ministry sanctioned a broad-gauge line to connect the town of Hubballi to the coastal town of Ankola.²⁷⁵ As per official documents, this new line was intended to transport iron and manganese ore from the Bellary-Hospet region to upcoming ports at Tadri (near Ankola) and Karwar on the west coast of Karnataka, and the existing ports of Vasco and Madgaon in Goa. This railway line would connect the west coast to the interior parts of Karnataka that remain inaccessible for five months during the monsoons. The idea was to promote socio-economic development of the region. Besides the Kali Tiger Reserve, this proposed railway project will also cut through another protected area named Bedthi Conservation Reserve.²⁷⁶

According to reports, the project would involve diversion of around 595.64 hectares of forest land, 184.6 hectares of wetland, 190 hectares of dry land²⁷⁷ and over 2 lakh trees in the Western Ghats (a UNESCO World Heritage Site) are to be felled to lay this 168 km railway line.

²⁷⁴ Chandran, M. S., Rao, G. R., Mukri, V., Mesta, P., Ramachandra, T. V., & Series, S. C. (2012). Grasslands of Anshi-Dandeli Tiger Reserve. ENVIS Technical Report.

²⁷⁵ Bhargav, P. (2020, March 27). A legal fiasco. The Deccan Herald. <https://www.deccanherald.com/opinion/main-article/a-legal-fiasco-818065.html>

²⁷⁶ The Hindu Net Desk. (2020, April 29). Hubballi-Ankola rail line: Why are environmentalists against it?. The Hindu. <https://www.thehindu.com/sci-tech/energy-and-environment/hubballi-ankola-rail-line-why-are-environmentalists-against-it/article31462718.ece?homepage=true>

²⁷⁷ Sharma, K. and Dutta, A. (2020, July 3). Court Stays Rail Project Through Western Ghats That Activists Say Isn't Needed At All. IndiaSpend. <https://www.indiaspend.com/court-stays-rail-project-through-western-ghats-that-activists-say-isnt-needed-at-all/>

The project entails the construction of 327 bridges, as well as 12 railway stations and 80 tunnels.²⁷⁸ Such infrastructure development will alter the natural landscape and cause severe damage to the ecology of Western Ghats. The railway line would cut across different types of forests, such as evergreen, semi-evergreen, moist deciduous and dry deciduous with a dense canopy. According to a site inspection report submitted to the MoEFCC, nearly 80% of the proposed line passes through dense forest. The EIA Report²⁷⁹ prepared for the project states that the alignment passes through the buffer zone of the Kali Tiger Reserve, being 6.5 km from the reserve at the closest point) and also passes through the region housing the Bedthi Conservation Reserve, and is close to the Dandeli Hornbill Conservation Reserve. The line will also shrink the habitat of tigers and elephants, restricting their movement and increasing human-animal conflict.

The project has been rejected time and again by several bodies like the Forest Advisory Committee, Central Empowered Committee, etc.²⁸⁰ The project is the subject of litigation before the Karnataka and Bombay High Courts and the Supreme Court over alleged violations of various environmental laws. Several petitions have been filed in both states of Goa and Karnataka by the Goa Foundation and the Project Vruksha Foundation, Bengaluru respectively. Presently, the National Board for Wildlife has been directed by the court to conduct a survey in order to analyse the impact of the project and present its findings in a report.²⁸¹

Violations and Procedural Gaps

- i. The project was earlier shelved by the Karnataka State Board for Wildlife in the meeting held on 9th March 2020; however, it was mysteriously overturned in its next meeting that was convened in less than a fortnight on 20th March, 2020, recommending the National wildlife Board to go ahead with the execution of the project.²⁸²
- ii. The State Board for Wildlife is a statutory committee constituted under Section 6 of the WLPA. The Chief Minister, as the chairperson of the Board, invited cabinet colleagues and an MLA with no wildlife expertise to a meeting which paved the way for wildlife clearance being given to the project. This was contrary to Rule 9 of the State Board for Wildlife Rules, 2006, which requires the chairperson to invite only persons with experience in wildlife conservation.
- iii. The Karnataka Forest Department has granted permission to South Western Railways to fell 181 trees in Haiyal territorial limits, and another 2,097 trees within the Kali Tiger Reserve.²⁸³ The tree felling permission contravenes clearance requirements under various laws and was also passed without mandated public consultations.

²⁷⁸ Chakravorty, J. (2020, March 23). Will the Hubballi Ankola Railway Project be Doomsday for the Kali Tiger reserve? The Times of India. <https://timesofindia.indiatimes.com/city/bengaluru/will-the-hubballi-ankola-railway-project-be-doomsday-for-the-kali-tiger-reserve/articleshow/74750039.cms>

²⁷⁹ CEC Report dated 03.08.2015 in Application No. 952 of 2006 filed by Parisara Samrakshana Kendra and Wilderness Club against the diversion of forest lands falling in the ecologically sensitive Western Ghats in the state of Karnataka for laying of the new 168.289 km Hubli-Ankola broad gauge railway line. <https://www.indiaspend.com/wp-content/uploads/2020/06/CEC-Report-.pdf>

²⁸⁰ Bhargav, P. (2020, March 27). A legal fiasco. The Deccan Herald. <https://www.deccanherald.com/opinion/main-article/a-legal-fiasco-818065.html>

²⁸¹ Special Correspondent (2021, December 07). Hubballi-Ankola railway project: HC asks NBWL to assess impact on wildlife. The Hindu. <https://www.thehindu.com/news/national/karnataka/hubballi-ankola-railway-project-hc-asks-nbwl-to-assess-impact-on-wildlife/article37798991.ece>

²⁸² DHNS. (2022, April 20). Hubballi-Ankola rail line: Wildlife board can get necessary approvals, says HC. The Deccan Herald. <https://www.deccanherald.com/state/top-karnataka-stories/hubballi-ankola-rail-line-wildlife-board-can-get-necessary-approvals-says-hc-1102443.html>

²⁸³ Chatterjee, M. (2021, June 30). Karnataka Okays Felling of Over 2000 Trees in Kali Tiger Reserve Without Due Process. The News Minute. <https://www.thenewsminute.com/article/karnataka-okays-felling-over-2000-trees-kali-tiger-reserve-without-due-process-151475>

2. Construction of Power Transmission Line

This involved the construction of a 400kv power transmission line running through the Western Ghats and the tiger reserve. The laying of the power transmission line is a section of the proposed power transmission network (between Chhattisgarh and Goa) directed specifically to transfer power from the energy-surplus area of Raigarh to energy-deficient parts of Goa. The project requires a diversion of 177.09 hectares of protected forest land of Kali Tiger Reserve in Karnataka for development of 72-km “right of way”. Apart from impacting the ecology of Kali Tiger Reserve, the project also affects other important wildlife corridors and habitats like Malenad-Mysore tiger landscape, Bhingarh, Radhanagari and Koyna wildlife sanctuaries of Maharashtra, and the Cotigao and Netravali wildlife sanctuaries of Goa. A complaint to the CEC and a PIL have been filed in relation to the project.

Violations and Procedural Gaps

- i. To secure various environmental and wildlife clearances, it is alleged that the project proponents broke the mega project into several smaller projects to present a scenario of low impact. A noteworthy procedural gap is the absence of any “cumulative assessment” for the project.
- ii. The project also flouts norms laid down in the Handbook of the Forest Conservation Act, 1980 and Forest Conservation Rules (Guidelines and Clarification) 2003 that require such mega grid projects to be assessed in entirety for granting forest land clearances.
- iii. There is no exact number provided for the number of trees that will be felled for the project provided by either the project proponent of the Goa Forest Department.
- iv. The project was required to complete compensatory afforestation of over 8,000 trees before the monsoon of 2020, however less than 600 had been planted till July 2020.²⁸⁴

3. Expansion of NH4/NH-4A (also known as NH-748)

This is a 153-km road that connects the industrial town of Belgaum to the state of Goa. The National Highways Authority of India (NHAI), an agency under the Central Ministry of Road Transport and Highways (MoRTH), undertook the widening of 82 km of the 153-km highway at an estimated cost of Rs 1,395 crore. The entire stretch of 82-km passes through the eco-sensitive Western Ghats out of which around 13.2 km passes through the Kali Tiger Reserve. Highways that pass through protected forest become death traps for wild animals due to vehicular traffic passing through the forest, especially at night. Wildlife movement is hindered due to the construction of multilane highways, ultimately contributing to fragmentation of population and restricting gene flow. By blocking access to potential habitats, roads, railway lines and other such infrastructure projects act as a major contributor to habitat loss. Besides these, 14 other major roads pass through the reserve. A public interest litigation was filed in the High Court of Karnataka by three petitioners who objected to the felling of trees undertaken as part of the widening project of NH-4A leading to a stay on the work since October 2019.

Violations and Procedural Gaps

- i. No wildlife or environmental clearance was taken for widening 69.07-km section of the road that fell in the state of Goa.
- ii. In 2016, the MoRTH exempted seeking environmental clearance for roads upto 100 km thereafter, the project proponents began the work without seeking required clearances, however, it was later recognized by the High Court that the road which runs through two states and has a length of over 100 km.

²⁸⁴ Nair, S. (2020, August 4). Red flags over forest stretch, power line from Raipur to Goa on pause. The Indian Express. <https://indianexpress.com/article/india/goa-forest-mollam-power-line-raipur-6538106/>

- iii. The figures for the number of trees lost is contested as NHAI estimates that nearly 22,000 trees were cut whereas it is suggested that over 1,00,000 trees were chopped to make way for the widening process.²⁸⁵

4. Railway Doubling Project

The project involves the doubling of the 353-kilometre-long railway track of the Hospet-Hubballi-Londa-Vasco Da Gama railway line between the states of Karnataka and Goa by the Rail Vikas Nigam Ltd. The Union Ministry of Railways sanctioned the project in 2010-11 and was proposed to expand the existing capacity for the transportation of coal, steel, iron and iron ore to and fro the Mormugao Port. The project is divided into two phases. Phase I covers 252 km between Hospet and Tinaighat. Phase II covers the Tinaighat-Vasco stretch. The Phase II of the project would divert 9.57 hectares of forest land in the Dandeli Wildlife Sanctuary in Karnataka, and 113.857 hectares in the Bhagwan Mahaveer Wildlife Sanctuary and Mollem National Park in Goa. The Phase II is again subdivided into two sections which are Tinaighat-Castlerock-Caranzol Railway Doubling and Castlerock-Kulem Railway Doubling for Karnataka and Goa respectively.

Violations and Procedural Gaps

- i. The project's proposal to divert Goan forest land is highly questionable. The NBWL gave its recommendation for wildlife clearance for the project on December 17, 2019 without consulting the NTCA, in violation of Section 38O(1)(g) of the WLP, without waiting for the recommendations from the state of Karnataka.
- ii. Conflicting statements were stated with regards to the need for the project and another project being undertaken in the similar area.
- iii. Karnataka Forest Department has granted tree felling permission to South Western Railways to cut 181 trees in Haiyal territorial limits and another 2,097 trees within the Kali Tiger Reserve. The tree felling permission is illegal as per Section 16 of the National Green Tribunal Act and was also passed without the mandated public consultations.²⁸⁶

A non-governmental organisation named The Goa Foundation raised the issue of the project in the Bombay High Court and in the SC with regards to the clearances awarded to the project and diversion of forest land within protected areas.²⁸⁷ Almost a year after its approval by the Standing Committee of National Board for Wildlife (SCNBWL), chaired by the then Union minister of forests Prakash Javadekar, the Supreme Court appointed Central Empowered Committee has recommended withdrawal of the project citing the colossal damage the project can have on the ecologically fragile ecosystem of the Western Ghats.²⁸⁸

²⁸⁵ Shetty, D. (2020, May 11). Building Through Forests: The Story Of A Road Widening Project In The Western Ghats. India Spend. <https://www.indiaspend.com/in-indias-biodiversity-hotspot-a-road-project-shows-the-big-damage-seemingly-small-projects-can-do/>

²⁸⁶ Chatterjee, M. (2021, June 30). Karnataka Okays Felling of Over 2000 Trees in Kali Tiger Reserve Without Due Process. The News Minute. <https://www.thenewsminute.com/article/karnataka-okays-felling-over-2000-trees-kali-tiger-reserve-without-due-process-151475>

²⁸⁷ Kukreti, I. (2021, April 19). MoEF&CC chooses minerals over biodiversity, clears rail track in Western Ghats despite red flags. Down to Earth. <https://www.downtoearth.org.in/news/wildlife-biodiversity/moef-cc-chooses-minerals-over-biodiversity-clears-rail-track-in-western-ghats-despite-red-flags-76563>

²⁸⁸ DeSouza, G. (2021, April 27). SC Appointed Panel Suggests Scrapping Railway Project In Western Ghats. The Hindustan Times. <https://www.hindustantimes.com/india-news/sc-appointed-panel-suggests-scrapping-railway-project-in-western-ghats-101619501843506.html>

5. Dams and Hydroelectric Power Projects (Dandeli Mini Hydel Project)

The onslaught on the river Kali, which is the lifeline of this unique ecosystem and cuts through the entire tiger reserve, for the purpose of development, is also depressing. Six major hydroelectric dams namely Supa, Tattihalla, Bommanalli, Kadra, Kodalalli and Kaneri have been built on this river, which is one of the shortest rivers of the Deccan region. In exchange for producing 1,200 MW of electricity, these projects have submerged over 32,000 acres of forests and displaced many villages in Uttara Kannada, jeopardising both the people and biodiversity of the region. Additionally, a seventh dam was proposed and cleared on the river in Karnataka's Global Investors Meet held on June 05, 2000 to produce 18 MW of electricity. This proposed dam would have submerged a total area 210 hectares which included 70 hectares of forest land which formed a natural corridor to large mammals of the Kali Tiger Reserve.

The project proponents secured environmental clearance for this project by producing faulty EIA reports twice over. First a plagiarised EIA and then a fraudulent EIA was submitted prepared by Ernst and Young and Tata Energy Research Institute respectively. This gross procedural gap was exposed by Environment Support Group, an NGO based in Bangalore.²⁸⁹



Fig.2: Dams on Kalinadi (River Kali)

6. Paper Mill Industry

Even though the paper mill industry runs the economy of the Dandeli town, the same industry is responsible for polluting the Kali River. The paper mills use freshwater from the river for processing purposes and discharge gallons of effluents into the river every day. Experts believe that such activity leads to imbalance in the aquatic ecosystem²⁹⁰ besides leading to large-scale conversion of forests to crops.

²⁸⁹ Dandekar, P. (2013, November 18). Story of a Free-Flowing Stretch of Kali River in Karnataka. South Asia Network on Dams, Rivers and People. <https://sandrp.in/2013/11/18/story-of-a-free-flowing-stretch-of-kali-river-in-karnataka/>
Source: <https://www.indiawaterportal.org/articles/saving-some-last-remaining-free-flowing-rivers>

²⁹⁰ Hegde, P. & Basrithaya, S. [HOPE]. (2014, October 3). Life of the Kali [Video]. YouTube. <https://www.youtube.com/watch?v=yXPkZ8tryiQ>

The paper mills release toxic effluents both in the form of waste water discharge in the Kali River and gases causing water degradation and air pollution respectively. Such activities have increased incidences of health hazards for the population of Dandeli town.

7. Kaiga Nuclear Power Plant and its Expansion

The plant operates in the Karwar area of Uttara Kannada district in Karnataka and is situated less than two kilometres away from the boundary of Kali Tiger Reserve, within its buffer zone. The plant originally had 4 units spread over 1,665 hectares of land. In 2019, it received environment clearance from the MoEFCC for setting up units 5 and 6²⁹¹ for which additional land of about 54 hectares²⁹² had to be acquired and about 8,700 trees had to be felled. Expansion of Kaiga Power Plant was subject to litigation before the NGT.

Back in the 1990s, a Kaiga Anuvidhyut Yojana Virodhi Sangharsha Samiti (KAYVSS) activist Mr. S R Pickle and former president of the Karwar Municipal Council stated that the project violates the Atomic Energy Commission's own site selection criteria, being located in the middle of a tropical rainforest. The then chief minister of Goa, Mr. Wilfred de Souza, stated that due process was not followed before conceiving the project just 22 km from the Goa-Karnataka border. He pointed out the lack of consultation with the state of Goa.²⁹³

Impacts on Communities Living Nearby

Although Nuclear Power Corporation of India Ltd (NPCIL) maintained that the plant had an insignificant impact on regional biodiversity and on River Kali, experts believe it can cause damage to the bio-sensitive region in case of a nuclear mishap and drain the already overburdened river Kali. A 2010 report by the Tata Memorial Centre had found an increase in the incidence of cancer over the past two decades in Kaiga. Experts believe that this is due to radioactive pollution from the nuclear power plant. However, the project was also given a green signal by the NTCA with certain conditions.

Financiers of Infrastructure and Developmental Projects

- i. **Hubballi Ankola Railway Project:** The cost of the project stood at Rs 483.15 crore²⁹⁴ when it was first announced around the year 1997-1998, however, delays have led to cost escalation over the years, with the cost being Rs 2,200 crores²⁹⁵ in the year 2012. Presently, the estimated cost of the project stands at Rs 3911.65 crore²⁹⁶ and is to be constructed jointly by the Central and State Government.
- ii. **Construction of Power Transmission Line:** The project was awarded by the Ministry of Power, Government of India to a Special Purpose Vehicle allotted to Sterlite Power named Goa Tamnar Transmission Project Limited. The cost of the entire mega grid project amounts to Rs 1,500-crore.²⁹⁷

²⁹¹ Aggarwal, M. (2019, October 3). MoEFCC Expert Committee Gives Wildlife Clearance for Kaiga Nuclear Plant's Expansion. The Wire. <https://thewire.in/environment/moefcc-expert-committee-gives-wildlife-clearance-for-kaiga-nuclear-plants-expansion>

²⁹² Aggarwal, M. (2019, October 3). MoEFCC Expert Committee Gives Wildlife Clearance for Kaiga Nuclear Plant's Expansion. The Wire. <https://thewire.in/environment/moefcc-expert-committee-gives-wildlife-clearance-for-kaiga-nuclear-plants-expansion>

²⁹³ Down to earth Staff. (1994, August 31). Quit Kaiga. Down To Earth. <https://www.downtoearth.org.in/news/quit-kaiga-32374>

²⁹⁴ The Hindu Net Desk. (2020, April 29). Hubballi-Ankola rail line: Why are environmentalists against it?. The Hindu. <https://www.thehindu.com/sci-tech/energy-and-environment/hubballi-ankola-rail-line-why-are-environmentalists-against-it/article31462718.ece>

²⁹⁵ Kulkarni, M. (2012, May 25). Hubli-Ankola rail line turning costly as Centre delays approval. Business Standard. https://www.business-standard.com/article/economy-policy/hubli-ankola-rail-line-turning-costly-as-centre-delays-approval-112052502020_1.html

²⁹⁶ Hubli-Ankolka – Progress of Works for the month of July 2020 - https://swr.indianrailways.gov.in/view_section.jsp?fontColor=black&backgroundColor=LIGHTSTEELBLUE&lang=0&id=0,5,1036,1041

²⁹⁷ Nair, S. (2020, August 4). Red flags over forest stretch, power line from Raipur to Goa on pause. The Indian express. <https://indianexpress.com/article/india/goa-forest-mollam-power-line-raipur-6538106/>

- iii. **Expansion of NH4/NH-4A (also known as NH-748):** The project was promoted by the NHA at an estimated cost of Rs 1,395 crore in March 2018. Later contracts worth Rs 1,395 crore were handed over by the NHA to two private companies, Ashoka Concessions Limited and DilipBuildcon Limited.²⁹⁸
- iv. **Railway Doubling Project:** Phase I of the project was to be funded by the ADB with Rs 2,127 crore.²⁹⁹
- v. **West Coast Paper Mill:** The Company is owned by LN Bangur Group.
- vi. **Kaiga Nuclear Power Plant:** The project is developed by NPCIL with an estimated total investment of Rs 2,275 crore.³⁰⁰
- vii. **Dandeli Mini Hydel Project:** The project was proposed at the cost of Rs 180 crore by the proponent M/s. Murdeshwar Power Corporation.³⁰¹

Protests and Campaigns for Protecting the Tiger Reserve

i. 1990s: Quit Kaiga Movement

Kaiga is the world's only nuclear plant that is set up in a rainforest. A protest movement called 'Quit Kaiga' was organized back in the 1990s by KAYVSS, an umbrella organisation of several environmental action groups and citizens. The movement became strategically more crucial after a 130-tonne section of the inner containment dome of the Kaiga Power plant collapsed in 1994 injuring many construction workers. The movement also received the support of the then chief minister of Goa, Mr. Wilfred de Souza.³⁰²

ii. 2003: Kali Bachao Andolan (Movement to Save the Kali)

The river Kali, considered the lifeline of both the Kali Tiger Reserve and the population of Uttara Kannada district, has been overexploited by building dams, sand mining and pollution from the paper mill industry. The seventh dam on the river, the Dandeli Mini Hydel Project, was cleared by the S.M. Krishna government in 2000. This movement was organized by Parisara Samrakshana Kendra of Uttara Kannada and Environment Support Group with local community organizations to bring attention to the apathy towards this river in the name of development.³⁰³ The proposal to build the seventh dam on the river Kali was abandoned after such protests.³⁰⁴

iii. 2019: Protest Against the Expansion of Kaiga Nuclear Power Plant

The proposal to add additional units to the Kaiga Nuclear Power Plant dates back to 2010 but garnered renewed interest when it was given clearance by the MoEFCC in the year 2019. Large-scale protests were organized by environmental activists and the local community against the expansion, which would lead to the destruction of 54 hectares of forest in the Western Ghats. The protestors also cited inadequate safety protocols in the expansion plan that might endanger the lives of local residents.³⁰⁵

²⁹⁸ Shetty, D. (2020, May 11). Building Through Forests: The Story Of A Road Widening Project In The Western Ghats. India Spend. <https://www.indiaspend.com/in-indias-biodiversity-hotspot-a-road-project-shows-the-big-damage-seemingly-small-projects-can-do/>

²⁹⁹ Kukreti, I. (2021, April 19). MoEF&CC chooses minerals over biodiversity, clears rail track in Western Ghats despite red flags. Down to Earth. <https://www.downtoearth.org.in/news/wildlife-biodiversity/moef-cc-chooses-minerals-over-biodiversity-clears-rail-track-in-western-ghats-despite-red-flags-76563>

³⁰⁰ Down to earth Staff. (1994, August 31). Quit Kaiga. Down To Earth. <https://www.downtoearth.org.in/news/quit-kaiga-32374>

³⁰¹ Sharma, R. (2006, May 19). Another dam, another row. Frontline. <https://frontline.thehindu.com/environment/article30209439.ece>

³⁰² Down to earth Staff. (1994, August 31). Quit Kaiga. Down To Earth. <https://www.downtoearth.org.in/news/quit-kaiga-32374>

³⁰³ Environment Support Group. (2007). Kali Bachao Andolan. Retrieved from <https://esgindia.org/new/campaigns/kali-bachao-andolan/>

³⁰⁴ Environment Support Group. (2003, September 23). Dandeli Dam Proposal Abandoned: Says Karnataka Industries Minister Deshpande [Press release]. <http://static.esgindia.org/campaigns/KBA/press/Dam%20abandoned.htm>

³⁰⁵ Bhat, P. (2019, November 18). Hundreds protest as Kaiga nuclear plant expansion threatens Western Ghats. The News Minute. <https://www.thenewsminute.com/article/hundreds-protest-kaiga-nuclear-plant-expansion-threatens-western-ghats-112497>

iv. 2019: ‘Save Western Ghats’ Campaign

Environmentalists, wildlife activists alongside proactive citizens protested various development projects planned in the Western Ghats under the leadership of United Conservation Movement, a non-government organization. The protests were over projects that included the expansion of the Kaiga power plant complex adjacent to Kali Tiger Reserve, the Sharavathi underground pumped storage project, and the proposed construction of a power transmission line from Karnataka to Goa through Dandeli Wildlife Sanctuary.³⁰⁶

v. 2020: Save Mollem Campaign

The three projects, namely the expansion of National Highway 4-A, construction of the transmission line, and doubling of the existing railway line were protested by both residents of Goa and Karnataka for favouring coal companies over the loss of tree cover in Western Ghats and the threat to the adjoining Kali Tiger Reserve and other Protected Areas such as Mollem National Park. These protests have also garnered the support of some major politicians both from the ruling government as well as the opposition.³⁰⁷

Conclusion

Kali Tiger Reserve is located in the biologically sensitive region of the Western Ghats, a global biodiversity hotspot and an UNESCO world heritage site. The Western Ghats including the tiger reserve is home to a wide range of animals like tiger, leopard, Indian elephant, gaur, Indian pangolin, great Indian hornbill, Castle Rock night frog and many other endemic and endangered flora and fauna. However, the fragile ecosystem of the Western Ghats has come under severe pressure owed to the number and scale of developmental and infrastructural projects being proposed and implemented in this region. Apart from loss of green cover, these projects hinder the progress made towards the conservation of the tiger by fragmenting their habitats. At a time when the world is suffering from the consequences of climate extremities and the need of the hour is to save such biodiversity-rich regions to act as carbon sinks and counter climate change, our actions speak otherwise. The immediate requirement is to assess the developmental projects from an ecological viewpoint rather than an economic perspective, to save this ecologically fragile ecosystem.

³⁰⁶ Lokesh, V. (2019, November 4). The call to ‘Save the Western Ghats’ gathers steam in city. The Times of India. <https://timesofindia.indiatimes.com/city/bengaluru/the-call-to-save-the-western-ghats-gathers-steam-in-city/articleshow/71876839.cms>

³⁰⁷ Panda, S. (2020, November 7). Protests in Goa OVER infra projects in ‘protected area’. The Sunday Guardian. <https://www.sundayguardianlive.com/news/protests-go-infra-projects-protected-area>

Surrounded by a Coal Hub, Future of a Tiger Reserve at Stake

A Case Study on Tadoba-Andhari Tiger Reserve

By Nishant Mate³⁰⁸

Introduction

Tadoba-Andhari Tiger Reserve (TATR) is the oldest and largest national park in Maharashtra and one of the oldest national parks of the country. The reserve is endowed with rich biodiversity and is considered an important wildlife habitat of the country with a growing big cat population. TATR is in a region which is a coal hub and has several industries operating in the area, which poses a threat to the survival of the wildlife population in the long run.

Geographical Context

Falling within central India, TATR is located in Chandrapur district, which lies in the far east region of Maharashtra state. The core tiger habitat area is 625.4 sq km (including 14.93 sq km non-forest area) and buffer area is 1,101.77 sq km (including 401.49 sq km non-forest area), the total area of the tiger reserve thus being 1,727.17 sq km. The core tiger habitat consists of Tadoba National Park (116.55 sq.km.) and Andhari Wildlife Sanctuary (508.25 sq.km.)³⁰⁹ Tracing back its history, an area of 116.55 sq. km was first demarcated as a sanctuary in 1935 to protect wild animals. Two decades later, it was declared as Tadoba National Park in 1955. In 1986, the Andhari Wildlife Sanctuary was created in the adjacent forests with an area of 508.85 sq. km. In 1995, the two protected areas were merged and incorporated under Project Tiger to form the current Tadoba-Andhari Tiger Reserve.³¹⁰ Tadoba National Park derives its name from the local tribal God "Taru", whereas Andhari Wildlife Sanctuary gets its name from Andhari River flowing through the forests.³¹¹ TATR covers four tehsils namely Chandrapur, Bhadrawati, Chimur and Warora.

Ecological Importance

The reserve is predominantly a southern tropical dry deciduous forest, with dense woodlands that comprise about 87% of the protected area.³¹² The reserve boasts of a large number of species of trees and plants and wildlife. Teak is the predominant tree species in the area. The other major tree species found in the reserve are bija, dhaoda, ain, bamboo, halad, salai, semal, tendu, mahumadhuca and palas. Additionally, species like mango, jamun and arjun are found along the moist areas. There are a total of 667 species of flowering plants. Notably, Bamboo is spread over 40% of the habitat. The reserve is also home to various species of wildlife and notable faunal species which include tiger, leopard, sloth bear, wild dog, chital, gaur and sambar. Apart from this, 280 species of birds, 54 species of reptiles, 11 species of amphibians and 84 species of fishes are found in this habitat.³¹³ Tadoba Lake is also home to a large number of marsh crocodiles.

³⁰⁸ Nishant Mate has worked with several social movements in various capacities and is currently an Assistant Professor at College of Social Work, Kamptee, Nagpur.

³⁰⁹ Brief Note on TATR on the website of National Tiger Conservation Authority (NTCA) - <https://ntca.gov.in/assets/uploads/briefnote/tatr.pdf>

³¹⁰ A story of conservation refugees: vulnerability and coping strategies - May 08, 2011 - <https://umsusdev.org/wp-content/uploads/2019/11/Ghate.pdf>

³¹¹ Maharashtra demands postage stamp on Tadoba Tiger Reserve - The Times of India - April 19, 2016 - <https://timesofindia.indiatimes.com/city/mumbai/maharashtra-demands-postage-stamp-on-tadoba-tiger-reserve/articleshow/51899621.cms>

³¹² Flora in Tadoba National Park - <https://www.tadobanationalpark.in/flora-in-tadoba.html>

³¹³ Brief Note on TATR on the website of National Tiger Conservation Authority (NTCA) - <https://ntca.gov.in/assets/uploads/briefnote/tatr.pdf>

Number of Tigers in TATR

According to a report released jointly by the Maharashtra Forest Department and the WII in May 2020, TATR and its buffer areas were estimated to have 115 tigers and 151 leopards. This was the first instance when leopard estimation was also done. According to the report, the minimum tiger number increased from 81 in 2018 to 88 in 2019. At the same time, estimated tiger numbers increased from 86 in 2018 to 115 in 2019, a jump of 25, with a standard error of 12 tigers. The number of estimated tigers increased due to scanning of a larger area. In 2018, an area of 1,310 sq km was surveyed while in 2019 it was increased to 1,682 sq km.³¹⁴ The number of tigers in TATR had risen from 53 in the 2006 census to 69 in the 2010 census.³¹⁵



Fig. 1: A Tigress walks on the road of TATR

(Title: PantheratigristigrisTidoba 20150306

Source: https://en.wikipedia.org/wiki/File:Panthera_tigris_tigris_Tidoba_20150306.jpg

Creator: Stephenekka

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Buffer Zone and Eco-Sensitive Zone of Tadoba-Andhari Tiger Reserve

The proposal to create a buffer around the core reserve of TATR was floated soon after TATR was declared a critical tiger habitat in December 2007.³¹⁶ The buffer zone of TATR was notified in May 2010 which comprised 1,101.7 sq km and included 79 villages.³¹⁷ The ESZ notification for TATR was issued in September 2019.³¹⁸ The ESZ is spread over an area of 1,346.61 sq km and includes 118 villages of Chandrapur, Bhadravati, Warora, Chimur, Sindewahi, and Mul talukas.³¹⁹ The ESZ is site-specific and covers areas 3 to 16 km from TATR boundary, which includes the buffer zone and-



Fig. 2: A Sign at Tadoba-Andhari Tiger Reserve - October 2019

(Title: India Tiger Safari Trip – Tadoba National Park

Creator: Linda De Volder <https://www.flickr.com/photos/lindadevolder/>

Source: <https://www.flickr.com/photos/lindadevolder/49032548876>

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contiguous forests beyond, which also serve as wildlife corridors. The declaration of the ESZ holds importance because it also includes controversial coal-beds in Bander (north of TATR) and Lohara (south of TATR), which has prevented any mining in the ESZ as per the EPA. The physical boundary of the Tadoba ESZ includes the boundary of Chandrapur and Nagpur forest circles in the north and the railway line between Gondia and Chanda Fort in the south. Similarly, it includes the Human river and the boundary with Chandrapur and Brahmapuri division in the east and Irai dam and its backwaters in the west.

³¹⁴ 115 tigers, 151 leopards estimated in Tadoba& buffer areas - The Times of India - May 19, 2020 -

<https://timesofindia.indiatimes.com/city/nagpur/115-tigers-151-leopards-estimated-in-tadoba-buffer-areas/articleshow/75814863.cms>

³¹⁵ Tiger population at 169 in Maharashtra - Hindustan Times - March 31, 2011 - <https://www.hindustantimes.com/mumbai/tiger-population-at-169-in-maharashtra/story-gp2mLZN3sRvbWryiYyCBbM.html>

³¹⁶ Gazette Notification No. WLS-10.07/C.R.297/F-1, Government of Maharashtra dated 27.12.2007.

³¹⁷ Gazette Notification No. WLP-10-09/CR229/F-1, Government of Maharashtra dated 05.05.2010; Buffer zone for Tadoba reserve - Down to Earth Magazine - June 15, 2010 - <https://www.downtoearth.org.in/news/buffer-zone-for-tadoba-reserve--649>

³¹⁸ S.O. 3249(E), MoEFCC dated 11.09.2019 - <https://moef.gov.in/wp-content/uploads/2018/12/tadoba-andheri.pdf>

³¹⁹ Tadoba gets eco zone over twice its own size - The Times of India - June 21, 2015 -

<https://timesofindia.indiatimes.com/city/nagpur/tadoba-gets-eco-zone-over-twice-its-own-size/articleshow/48151255.cms>

Human Settlements within TATR

625.40 sq km of TATR was notified as a Critical Tiger Habitat under the WLPA in 2007. The notified area created an inviolate space where tribal families were not supposed to live. The notified area comprised of six villages - Botezari, Jamni, Ramdegi, Kolsa, Palsagaon and Ratnalodhi, whose residents were, henceforth, not allowed to access the forest to graze cattle or use minor forest produce. The development work in the six villages had already been stopped in the year 2000 with an aim to oust the villagers.³²⁰ Since 2004, efforts had been intensified by the state to relocate the villagers. It was said by government officials that the relocation was entirely voluntary, while the villagers alleged that they had been coerced and bullied by district forest and revenue officials. One of the villages, Botezari consisting of 140 families along with 48 landless families from Kolsa, agreed to relocate and were shifted out in March 2007. However, the people from other villages were not convinced by this example. Back in 2011, it was reported that the villagers from Kolsa had alleged that they were being pressurized to relocate, but they were demanding titles to forestland under the FRA instead of relocation.³²¹ In October 2013, forest officials were given a target by the state government to relocate Palsagaon, Kolsa and Jamni villages within a few months.³²²

At a later stage, 200 families of Ramdegi were moved out in 2013, and 222 families of Jamni village were relocated in March 2014.³²³ TATR officials stated that this relocation of two villages enabled 255 hectares of additional space for tigers. The process of relocation of Palasgaon village was completed in July 2019, where a total of 117 families were shifted to the territorial Warora range close to Salori village.³²⁴ It was reported in 2020 that TATR had plans to relocate Kolsa village to the Chichpalli range in the tiger corridor between Tadoba-Kanhgaon-Kawal. In a fire incident in 2017, a massive fire outbreak gutted 29 houses in Ratnalodhi village rendering more than 100 villagers homeless. This happened at a time when the villagers were strongly opposed to relocation.³²⁵ However, at a later stage the villagers agreed to relocate in return for land and compensation. In December 2021, the Supreme Court passed an order regarding the relocation of Rantalodhi village,³²⁶ after the matter was stuck for two years due to objection raised by the Forest Advisory Committee, as the land given up by villagers was less than what was required to settle them. Through this relocation, TATR will get 175 hectares of inviolate forests, while the 244 families of Ratnalodhi village will be relocated to compartment number 14-B of Salori village, over 375 hectares of land, which is a degraded forest land surrounded by human habitation.³²⁷

³²⁰ Tadoba tiger reserve an unsafe haven - Down to Earth Magazine - May 15, 2008 -

<https://www.downtoearth.org.in/coverage/tadoba-tiger-reserve-an-unsafe-haven-4600>

³²¹ Village in Tadoba Andhari reserve wants forest titles, not relocation - Down to Earth Magazine - December 23, 2011 -

<https://www.downtoearth.org.in/news/village-in-tadoba-andhari-reserve-wants-forest-titles-not-relocation--35555>

³²² Forest officials given target to relocate 6 villages - The Times of India - October 25, 2013 -

<https://timesofindia.indiatimes.com/city/nagpur/forest-officials-given-target-to-relocate-6-villages/articleshow/24685440.cms?from=mdr>

³²³ Finally, Jamni makes way for Tadoba tigers - The Times of India - March 04, 2014 -

<https://timesofindia.indiatimes.com/city/nagpur/Finally-Jamni-makes-way-for-Tadoba-tigers/articleshow/31365480.cms>

³²⁴ Palasgaon relocated out of Tadoba core - The Times of India - July 24, 2019 -

<https://timesofindia.indiatimes.com/city/nagpur/palasmaon-relocated-out-of-tadoba-core/articleshow/70353479.cms>

³²⁵ Fire in village inside Tadoba destroys 29 houses - The Times of India - May 23, 2017

<https://timesofindia.indiatimes.com/city/nagpur/fire-in-village-inside-tadoba-destroys-29-houses/articleshow/58796365.cms>

³²⁶ TN Godavarman Thirumulpad v. Union of India, WP (C) No. 202/1995, order dated 14.12.2021 (Supreme Court).

³²⁷ SC paves way for Rantalodhi relocation, tigers get more space in Tadoba - The Times of India - December 17, 2021 -

<https://timesofindia.indiatimes.com/city/nagpur/sc-paves-way-for-rantalodhi-relocation-tigers-get-more-space-in-tadoba/articleshow/88326821.cms>

The relocation of villagers from the reserve has also paved way for more tourism inside the reserve. This has been to the extent that TATR's field director himself admitted in an exasperated manner while giving an interview to a magazine in 2018 stating, "Why are we relocating? These villagers, tribal people, have been living there for years. Their population has increased just like the population outside. It is becoming destructive for the forest, that is true, but they are not to be blamed for that. You're saying that they are a threat to the Tigers, a threat to their habitat, and removing them. Why? So that you can bring busloads of people from outside who have money and cameras so they can move around in those areas? There is no point in relocating them."³²⁸ The government's emphasis on relocating the villages from the core area of the reserve also reflects the mindset which sees the forest dependent communities as a threat to the wildlife rather than acknowledging their role in preserving the forests who have shared a symbiotic relationship with forests for centuries.

A Brief Profile about Chandrapur District

Chandrapur district with its presence of vast coal reserves is called the Black Gold City and has several coal mines in operation, along with presence of a 2,930 MW thermal power plant. The district also has large reservoirs of limestone, along with availability of iron ore. Chandrapur serves as an industrial hub with the presence of industries such as cement factories, paper mills, sponge iron plants, along with other ancillary industries.

The large extent of coal mining, along with other industries has led Chandrapur to become one of the most polluted districts of India and it is counted among the list of Critically Polluted Areas. For several years in the past decade, Chandrapur faced a moratorium of not having any new industrial units.³²⁹ The presence of TATR in proximity of this pollution hub makes it much more challenging in terms of preserving the rich and fragile eco-system. While it may be argued that there are no mining projects per se in the ESZ areas, but the air pollution problems in the region, along with heavy groundwater extraction for industrial purposes has an unavoidable impact on the wildlife of TATR, whose detrimental effects will be visible in the longer term.

Threats faced by Tadoba-Andhari Tiger Reserve from Infrastructure/Mining Projects

1. Threat from Coal Mining Projects in Chandrapur District

Chandrapur district has rich coal reserves leading to high levels of mining in the area. The state-run Western Coalfields Limited (WCL) operates 10 mines in Chandrapur – six underground mines and four open cast mines – which produce about 6 million tonnes of coal annually and most of it is supplied to Chandrapur Super Thermal Power Station and some other power plants in Maharashtra.³³⁰ According to a Greenpeace report, between the year 2000 and 2015, 2,558 hectares of forest land had been diverted for coal mining in Chandrapur district.³³¹

While there are no coal mines or thermal power plant operating inside the tiger reserve or the buffer zone, the presence of such projects in the vicinity of the reserve jeopardizes wildlife conservation, especially when it is known that such mines fall under the corridor connecting TATR to other tiger reserves, hampering free movement of tigers in the area.

³²⁸ Model Move – Frontline Magazine - 2020 - <https://frontline.thehindu.com/social-issues/article24441119.ece>

³²⁹ Chandrapur industrial area can have more units - Deccan Herald - May 30, 2016 -

<https://www.deccanherald.com/content/549397/chandrapur-industrial-area-can-have.html>

³³⁰ Western Coalfields gets green nod for Durgapur mine expansion - Economic Times - November 17, 2017 -

<https://energy.economictimes.indiatimes.com/news/coal/western-coalfields-gets-green-nod-for-durgapur-mine-expansion/61691783>

³³¹ Maharashtra: taboda tiger reserves faces coal mine threat – DNA India – Aug 30, 2015 -

<https://www.dnaindia.com/india/report-maharashtra-tadoba-tiger-reserve-faces-coal-mine-threat-2119970>

While there are no coal mines or thermal power plant operating inside the tiger reserve or the buffer zone, the presence of such projects in the vicinity of the reserve jeopardizes wildlife conservation, especially when it is known that such mines fall under the corridor connecting TATR to other tiger reserves, hampering free movement of tigers in the area. For example, the Durgapur open cast mine, run by WCL was given forest clearance in 2016 and environmental clearance for expansion in 2017, expanding its capacity from 2.3 million tonnes per annum (MTPA) to 3 MTPA, and is located a mere 12.25 km from the TATR. This mine is located on the western end of the TATR south corridor, and connects the reserve to the Chaprara wildlife sanctuary and further on to the Indravati Tiger Reserve in Chhattisgarh. Conservation measures will prove inadequate if the focus remains only on the boundaries of the Protected Areas or the buffer zones, but allowing the connecting corridors to be hampered.

Narrow Escape from Mining of Bander Coal Block

TATR narrowly escaped the threat of coal mining of the Bander coal block which is located 7-9 kms from the TATR. The Bander coal block falls in Chimur tehsil under the Brahmpuri forest division. In June 2020, the Bander block was among the 41 blocks notified by the central government for auction for coal mining. It had been estimated that roughly 1,200 hectare of forest land would have to be diverted to allow mining in this area.³³² The Bander coal block also comes in the way of the tiger corridor as it falls on the route used by the tigers to traverse from Tadoba to Bor Tiger Reserve in Wardha district and Melghat Tiger Reserve in Amravati district. Wildlife experts feared that the mining project would also lead to escalation of the man-animal conflict in the area. The announcement of auctioning gained political opposition as Maharashtra environment minister Aaditya Thackeray wrote to Prakash Javadekar, the then central environment minister, asking for stalling the auctioning of the mining of the site.³³³ Taking into consideration the opposition, a few days later the Coal Ministry withdrew the Bander mine from the list of coal blocks put up for auction.³³⁴ In the withdrawal notice, the Coal Ministry acknowledged that the Bander coal mine was included in the ESZ of TATR.

There have been previous attempts too to mine coal from the Bander coal reserves. Back in May 2009, the Bander coal block was allotted to Bander Coal Company Private Limited (BCCPL), Mumbai, a joint venture of Amar Iron & Steel, Yavatmal, Century Textiles Industries, Mumbai, and JK Cements Limited, Kanpur. There were plans by BCCPL to extract roughly 175 million tonnes of coal through open cast and underground mining. However, the permission for mining was rejected by environment ministry in 2010 after a favourable report was not given by Brahmpuri and TATR officials. Back in 1999 too, the MoEF had rejected the proposal citing adverse impacts on wildlife around Tadoba.

Threat of Coal Mining from Lohara Coal Block

Similar to the threat from the Bander coal block, in the past TATR faced the threat of coal mining due to a proposed mine at Lohara village in Chandrapur district located near TATR. The Union coal ministry had allocated a coal block in Lohara to Adani Group in 2007 for meeting its coal requirement for its proposed 1,320-MW power plant in Gondia district of Maharashtra.³³⁵

³³² Bander coal block, 7-9 kms from Tadoba, set for auction - The Times of India - June 19, 2020 -

<https://timesofindia.indiatimes.com/city/nagpur/bander-coal-block-7-9-kms-from-tadoba-set-for-auction/articleshow/76453652.cms>

³³³ Maharashtra govt says no to mining in Tadoba tiger reserve, cites environment preservation as reason - The New Indian Express - June 22, 2020 -

<https://www.newindianexpress.com/nation/2020/jun/22/maharashtra-govt-says-no-to-mining-in-tadoba-tiger-reserve-cites-environment-preservation-as-reason-2159936.html>

³³⁴ Coal Ministry withdraws Bander mine of Maharashtra from auction list of 41 coal blocks - Economic Times - July 23, 2020 -

<https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/coal-ministry-withdraws-bander-mine-of-maharashtra-from-auction-list-of-41-coal-blocks/articleshow/77127868.cms?from=mdr>

³³⁵ Power plant a poll issue in Chandrapur - Hindustan Times - October 05, 2009 -

<https://www.hindustantimes.com/india/power-plant-a-poll-issue-in-chandrapur/story-ukUFP6zrJ5giKrGN2htxL.html>

This open cast coal mine would have needed 1,750 hectares of land out of which 1,600 hectares would have been forest land. The proposed project had run into controversies because the local villagers were in favor of the project in exchange of high compensation but environmentalists and wildlife conservationists were in staunch opposition to it. In January 2010, the environment ministry denied permission to Adani Group on the grounds that it would destroy rich forests and tiger habitat.³³⁶

However, in a meeting of the Coal Ministry in March 2012, Adani Power Limited was asked to re-submit its application to the concerned state government. In the same year, a four-member committee headed by the Chandrapur range Chief Conservator of Forests (CCF) was set up to study the project proposal for diversion of forest land for the coal block. The committee disapproved of the project, observing that “Any mining lease allowed around TATR would result in isolation of TATR from the rest of the central Indian landscape, which would jeopardize the very survival of tiger in TATR. The isolation of healthy population would lead to gradual deterioration of tiger reserve” and said, “Mining and other related activities will adversely affect wildlife movements outside protected area also.”

The situation in TATR would have been much worse if mining had been allowed in Bander and Lohara coal block. TATR already faces issues due to the vast amount of coal mining happening in its proximity and becomes a classic case of 'resource curse' where the presence of natural resources is leading to a faster degradation of the area.

2. Impact of Air Pollution from Chandrapur Thermal Power Station

Chandrapur Thermal Power Station is a 2,920 MW capacity power plant located in Chandrapur, Maharashtra. Its first unit was commissioned in 1985 and the last unit was commissioned in 2016. The power plant is the second largest power plant in Maharashtra and meets 25% of the electricity needs of the state.³³⁷ The plant gets water from the Erai and Chargaon dams. Being a coal-fired power station located approx. 30 kilometers from the reserve, the power plant carries a constant threat of affecting the forests and the wildlife due to the nearby air pollution. The power plant is connected to TATR through a corridor of coal mines that are thickly covered with *Prosopis* plant species.

A complaint was filed against the power plant in November 2021 over sudden fly ash emission, which was found deposited on vehicles all over the city.³³⁸ Even earlier, concerns have been raised due to the pollution caused by the power plant. Back in 2013, complaints were raised to Maharashtra Pollution Control Board regarding repeated violations of pollution control standards by the power plant.³³⁹ The plant's oldest units, Unit Nos. 1 and 2 (commissioned in 1983 and 1984 respectively) were regularly discharging suspended particulate matter much beyond the prescribed standards. The low height of the chimneys also meant that more pollution was suffered by nearby areas. However, taking this into consideration, Unit Nos. 1 and 2 were subsequently retired in FY 2015-16.³⁴⁰ Still, the air pollution caused in the nearby areas by the power plant is a matter of concern for both the people living nearby and the environmentalists worried about the tiger reserve.

³³⁶ Adani Group denied coal mining permission near Tadoba reserve - Moneylife - January 27, 2010

<https://www.moneylife.in/article/adani-group-denied-coal-mining-permission-near-tadoba-reserve/3399.html>

³³⁷ The top 10 biggest thermal power plants in India - Power Technology - June 09, 2019 -

<https://www.power-technology.com/features/feature-the-top-10-biggest-thermal-power-plants-in-india/>

³³⁸ Fly ash shower in Chandrapur, complaint filed against CSTPS - The Times of India - November 25, 2021

<https://timesofindia.indiatimes.com/city/nagpur/fly-ash-shower-in-chandrapur-complaint-filed-against-cstps/articleshow/87897386.cms>

³³⁹ Chandrapur Super Thermal Power Station poisoned Chanda air every day in last 3 years: RTI - The Times of India - September 28, 2013

<https://timesofindia.indiatimes.com/city/nagpur/Chandrapur-Super-Thermal-Power-Station-poisoned-Chanda-air-every-day-in-last-3-years-RTI/articleshow/23176715.cms>

³⁴⁰ MSPGCL's Petition for True up of FY 2015-16 and FY 2016-17, Provisional True up for FY 2017-18 and revised projection of ARR for FY 2018-19 and FY 2019-20 - June 2018 - https://www.mahagenco.in/uploads/Pettition_MERC_case_no196/Executive%20Summary_English_22-06-2018.pdf

The Chandrapur Thermal Power Station was also in the news recently because around five tigers in Chandrapur district had made the power station area their home over four or five years.³⁴¹ According to some experts, this also happened because nearby protected areas were full and they could not hold more tigers, which was compelling the tigers to take such a refuge. This raised the concern of an increase in human-animal conflict.

3. Threat from Road Projects Cutting Through the Tiger Corridors of TATR

In November 2018, a news report was published by The Times of India titled, “String of new road projects in Maharashtra to cut off tiger corridors”.³⁴² The news report mentioned that the MoRTH had laid the foundation for several road development and repair works for 576 km in Chandrapur district worth Rs 5,356 crore, out of which roughly 100 km would have cut through tiger corridors. The new road development projects in the Tadoba landscape would have posed a big threat to Maharashtra’s tiger population, such as the expansion of the Chandrapur-Mul road from two to four lanes, falling in the ESZ of Tadoba, or building of two-lane roads such as the Hinganghat-Khadsang-Mul road, which would have cut through Ghodazari-Tadoba wildlife corridor.

Taking suo moto cognizance of this news report, in December 2018, the NGT passed an order³⁴³ directing various government authorities such as MoRTH, the Maharashtra PWD and Forest Department, the Director, Project Tiger and the MoEFCC to hold a joint meeting in the matter and submit a report. The NGT order specifically said, "The article shows that new road projects are being taken up in the State of Maharashtra which will obstruct the tiger corridors. For protection of environment and wild life, and to avoid human elephant conflict, the tiger corridors should remain undisturbed. The road projects which disturbs such tiger corridors may need to be reviewed."

4. Threat of Submergence from Proposed Dam in TATR

According to a news report published in March 2020 by Down To Earth Magazine, a dam was being proposed on the river Human (pronounced Hooman) which threatened to submerge more than 90% of a 7-km forest area.³⁴⁴ Along with the TATR buffer zone, the project also falls in the ESZ of the nearby Ghodazari Wildlife Sanctuary. If implemented, this would break the only linking corridor for the movement of tigers between TATR, Ghodazari and Umred-Karhandla wildlife sanctuaries. As the news report explains, tigers go from TATR up to Umred-Karhandla in Nagpur, further on to Nagzira tiger reserve in Bhandara and then to Navegaon National Park in Gondia, covering 100-120 km. Tigers that move eastward can reach Indravati Tiger Reserve in Chhattisgarh, while some turn southwest through the proposed Kanhargaon wildlife sanctuary and reach the Kawal Tiger Reserve in Telangana, roughly 70-80 km from TATR. The dam would block this long-range corridor for tigers and affect their natural migration. Local activists working on tiger conservation have also raised concerns that this might compel tigers to turn towards human settlements and agricultural fields and increase human-tiger conflict.

³⁴¹ A thermal power plant in Maharashtra’s Chandrapur has become home to a group of tigers - Scroll in - September 07, 2020 - <https://scroll.in/article/972257/a-thermal-power-plant-in-maharashtras-chandrapur-has-become-home-to-a-group-of-tigers>

³⁴² String of new road projects in Maharashtra to cut off tiger corridors - The Times of India - November 29, 2018 - <https://timesofindia.indiatimes.com/india/string-of-new-road-projects-in-maharashtra-to-cut-off-tiger-corridors/articleshow/66858970.cms>

³⁴³ In Re News item published in “The Times of India” Authored by Vijay Pinjarkar Titled “String of new road projects in Maha to cut off tiger corridors”, OA No. 1030/2018, order dated 20.12.2018 (NGT Principal Bench).

³⁴⁴ How Maharashtra’s dam on ‘Human’ river threatens tigers - Down to Earth Magazine - March 03, 2020 - <https://www.downtoearth.org.in/news/wildlife-biodiversity/how-maharashtra-s-dam-on-human-river-threatens-tigers-69554>

The first phase of the construction of the project was initiated in 1984-85 by Vidarbha Irrigation Development Corporation. A 247-million cubic meter capacity dam was envisaged to help in irrigating 46,117 hectares of agricultural land. From time to time, the government made many attempts to revive the project, but it remained stalled due to violations of the FCA and resistance from environmental interest groups, such as through public interest petitions.

In 2020, the project found a proponent in a local political leader from Chandrapur. In January 2020, the State Wildlife Board, wildlife NGOs and officials from the forest and irrigation departments including the principal forest secretary attended a meeting in this regard. The chief minister of Maharashtra, Uddhav Thackeray, soon announced the implementation of the project, but added that this would not be at the cost of tigers. The irrigation department was asked to explore alternatives proposed by the NTCA in 2014. These included shifting the project a few kilometers upstream, restoration of a stretch of corridor downstream, and developing lift irrigation schemes, barrages and small dams. In the interest of protecting the free movement of tigers in the region across various tiger corridors, construction of this dam should not be pursued.

5. Burdening TATR with Tourism through a Proposed Resort by MTDC:

In order to boost tourism, the Maharashtra Tourism Development Corporation (MTDC) is planning to develop a resort of five-star or above category over 62 acres of land in the buffer zone of the reserve. The estimated cost of the project is around Rs 30 crore.³⁴⁵ MTDC was allotted the land for this tourism project by the revenue department in February 2021. Officials at MTDC have argued that since not many developmental activities were happening at the location of the proposed resort, it would boost tourism along with resulting in welfare and development of adjoining villages. However, representatives from a local environmental conservation organization have raised concerns that the project being located in the buffer zone and close to the core area of TATR will create various sorts of problems and will impact the wildlife corridor from Madnapur to Navargaon to Brahmapuri. Additionally, it was alleged that the project is in violation of the WLPAs and there are multiple resorts and as similar amenities available around the reserve, there is no real need for such a project. However, the MTDC officials have ruled out any threats to the wildlife corridor or the reserve.

Concerns raised by Parliamentary Panel on infrastructure projects around TATR

In the 324th report by the Parliamentary Standing Committee on Science and Technology, Environment and Forests presented to Rajya Sabha in February 2019, the Parliamentary Standing Committee had appreciated the rise in footfall of tourists in TATR, almost doubling (i.e. from 86,577 to 1.73 lakh) between 2012-13 to 2017-18, resulting in more than tripling of revenues from Rs 1.75 crore to Rs 6.78 crore. However, at the same time, the Committee highlighted that TATR needs to be protected from the pressure which could be put by various infrastructure and irrigation projects.³⁴⁶ The report mentions:

“The Committee observes that Tadoba-Andhari Tiger Reserve has emerged as one the most important tourist destinations for wildlife lovers and enthusiasts as a result of which the revenue generation by the tiger reserve has seen a consistent increase during the last few years. The tiger reserve has also become an important source of livelihood for a large number of people in the area.

³⁴⁵ MTDC plans 5-star resort, park in 62 acre of Tadoba buffer zone - The Times of India - August 12, 2021 -

<https://timesofindia.indiatimes.com/city/nagpur/mtdc-plans-5-star-resort-park-in-62-acre-of-tadoba-buffer-zone/articleshow/85252919.cms>

³⁴⁶ Three Hundred Twenty Fourth Report - Status Of Forests In India - Department-Related Parliamentary Standing Committee On Science & Technology, Environment & Forests - February 12, 2019 - <http://www.indiaenvironmentportal.org.in/files/file/STATUS%20OF%20FORESTS%20IN%20INDIA.pdf>

In this backdrop, the Committee is constrained to note the environmental issues pertaining to the Tadoba-Andhari Tiger Reserve brought to the notice of the Committee and is of the view that these issues deserve a serious consideration.”

The Parliamentary Panel gave the following recommendations on the issues pertaining to TATR brought to the notice of the Panel:

S. No.	Issue	Recommendation
1.	An irrigation project proposed on the Human River that could cut off the tiger corridor between TATR and the Bramhapuri Forest Division that connects the Satpuda-Maikal Landscape	The Committee recommended that while establishing the irrigation project, it should be ensured that the tiger corridor that connects the Satpuda-Maikal Landscape is not cut off.
2.	The Chandrapur-Mul-Gadchiroli road and Nagpur-Umred-Nagbhid-Bramhapuri road proposed to be four-laned which could block movement in animal corridors	The Committee recommended that it should be ensured that movement in animals corridors is not restricted in the four-laning process.
3.	Presence of coal mines of Western Coalfields Limited (WCL) and a thermal power plant of Chandrapura Thermal Power Station (CTPS) along the southern border of TATR	The Committee recommended that an assessment of the impact of the mines and power plant on wildlife activity should be carried out at the earliest and remedial measures for adverse impacts be taken on priority.

In response to Parliamentary panel’s recommendations, the MoEFCC had asked the National Environmental Engineering Research Institute (NEERI), Nagpur and WII, Dehradun in September 2019 to study impacts of WCL mines and the Chandrapur Super Thermal Power Station on TATR.³⁴⁷

Conclusion

The Tadoba-Andhari Tiger Reserve plays an important role in providing a safe haven to the endangered tigers in India and has become a key tourist destination due to its thriving tiger population. Due to its natural location surrounded by rich coal reserves, there is an ever looming threat of facing more pollution, especially with the presence of Chandrapur Super Thermal Power Plant and other industries in the region. While the core area of the TATR has managed to avoid any big infrastructure projects per se, the ESZ and connecting corridors have to bear the brunt of road widening projects along with the threat from the proposed dam. The growth in tourism might be a promising factor for the forest department, which sees it as a key revenue source, but this also raises the debate as to what extent tourism should be promoted while striving for preserving the natural habitat. Similar to examples from other protected areas in the country, the interests of the forest dwelling communities have been sidelined to create inviolate spaces for the wildlife. It remains to be seen how long the mining in Bander and Lohara coal blocks remain stalled to protect the wild habitat, especially when business interests continue to constantly try to get their hands on natural resources.

³⁴⁷ NEERI, WII to study impact of mines, power plant on Tadoba - The Times of India - September 20, 2019 - <https://timesofindia.indiatimes.com/city/nagpur/neeri-wii-to-study-impact-of-mines-power-plant-on-tadoba/articleshow/71208530.cms>

Pakke: Trapped In A Corridor

A Case Study on Pakke Tiger Reserve

By Anupam Chakravarty³⁴⁸

Background of Pakke Tiger Reserve

The lush and highly diverse forests of the Pakke area got official recognition in 1966 as a reserve forest. In 1977, Pakke Reserve Forest came to be known as Como Sanctuary. Later, in 2002, a slightly larger area with River Kameng and River Pakhui or Pakke flowing through the periphery became Pakke Wildlife Sanctuary and Tiger Reserve. On February 18, 2002, an area of 861.95 sq km in the East Kameng district of Arunachal Pradesh state was brought under the Project Tiger scheme.³⁴⁹ Now, a new district of Pakke Kesang has been created by Arunachal Pradesh government where most of the Pakke Tiger Reserve (PkTR) lies.

The core area of Pakke Tiger Reserve (861.95 sq. km) includes a tourism zone of 82.5 sq. km.³⁵⁰ The reserve has a buffer zone of 515 sq. km and includes the Papum and Tenga Reserve Forests (346.25 sq. km. and 168.75 sq. km. respectively).³⁵¹ Blessed with evergreen and semi-evergreen forest types and some grassland and coniferous vegetation type in patches, only nine tigers were recorded by the authorities in the past in the PkTR. Tigers have been found to be distributed all over the reserve. In 2012, researchers identified 8 individual tigers from 58 tiger photographs. In 2010, researchers found 7 tigers (2 males and 5 females).³⁵² However, only a fraction of the core area has been explored as the altitudinal range is highly variable between 100 metres and 2400 metres above the sea level. Amongst the 103 mammal species found in PkTR, six are endangered: hog deer, Asian elephant, tiger, fishing cat, wild dog and Chinese pangolin. PkTR is home to 296 bird species including the critically endangered white rumped vulture, the endangered white winged wood duck and the vulnerable Rufous-necked hornbill.

PkTR is connected with the Nameri Tiger Reserve and Sonai-Rupai Wildlife Sanctuary in Assam in the south east through the Sessa Orchid Wildlife Sanctuary and the Eaglenest Wildlife Sanctuary. In the south, it is connected with the Kaziranga Tiger Reserve and Karbi-Anglong Hills. Towards the north, it is contiguous with Talle Valley and the Lower Subansiri forests, which are contiguous with East Siang district, and further with Namdapha Tiger Reserve in Changlang District in eastern Arunachal Pradesh, that borders Myanmar.

Importance of Pakke Tiger Reserve

Pakke Tiger Reserve lies in the heart of the Eastern Himalayan Biodiversity Hotspot. Besides the Pakhui (Pakke) and Kameng rivers that flow through the East-West periphery, five other smaller rivers drain PkTR. Ecologists consider PkTR to be a part of an ecosystem with tropical forests which is furthest from the equator in the world.³⁵³

³⁴⁸ Anupam Chakravarty is an independent journalist based in Assam. He writes on environmental politics related to developmental projects.

³⁴⁹ "Tiger Reserves of India - Pakhui Tiger Reserve", Ministry of Environment, Forests and Climate Change, June 11, 2009, Press Information Bureau. Link: <https://pib.gov.in/newsite/erelcontent.aspx?relid=49132>

³⁵⁰ "Economic Valuation of Tiger Reserves in India: Phase II. Indian Institute of Forest Management". Bhopal, India. July 2019. M. Verma and others. Link: http://www.indiaenvironmentportal.org.in/files/file/IIFM_Tiger%20Report_2019.pdf

³⁵¹ Pakke Tiger Reserve Buffer Zone, Notification No. CWL/D/21(67)/2010-11/1147-1126, Government of Arunachal Pradesh, dated 06.08.2012.

³⁵² "Valuing Ecosystem Services: A Case Study of Pakke Tiger Reserve of Arunachal Pradesh, India", Indian Institute of Forest Management, Bhopal, June 2016, Pradeep Chaudhry, Link: https://www.researchgate.net/publication/305581643_Valuing_Ecosystem_Services_A_Case_Study_of_Pakke_Tiger_Reserve_of_Arunachal_Pradesh_India

³⁵³ "How the Proposed Highway Through Pakke Tiger Reserve Could Endanger the Forest", The Wire, February 26, Nikhil Eapen, Link: <https://thewire.in/environment/seijosa-bhalikpong-highway-pakke-tiger-reserve-arunachal-pradesh-forest-wildlife>

Being connected through corridors to various forests, PkTR helps in dispersing tigers across the vast Northeastern Landscape. Combined with Orang, Nameri and Kaziranga, further south, there are about 125 tigers that move in the territory despite anthropogenic threats and fragmentation of forests. PkTR and other reserves in the neighborhood provide a stable prey base which in turn contributes to a high species dispersal (about 78 percent) rate for various endemic plant species.

PkTR also protects and conserves stock (timber and carbon) which has been valued at Rs 144.30 billion by forestry experts. A study concluded that the tiger reserve generates flow benefits worth Rs. 8,722.2 crore per year (Rs. 5.79 lakh per hectare) and stock benefits of Rs. 32,201.19 crore per year. Vital ecosystem services that emanate from this reserve include provisioning of water (Rs. 3,674.01 crore per year), carbon sequestration (Rs. 1,168.14 crore per year) and climate regulation (Rs. 20.01 crore per year).³⁵⁴

Legal Protections and Litigation over the Pakke Tiger Reserve

There are 59 documented mammal species in the tiger reserve, many of which are listed in Schedule I of the WLPA. The core area of PkTR remains completely inviolate as per Section 38W of the WLPA.

Despite such protections, several attempts have been made to violate PkTR's area by launching infrastructural projects such as roads and hydroelectric power projects by the Central as well as Arunachal Pradesh Government. The infrastructural threats will be discussed later in

this case study. However, the Divisional Forest Office, which is tasked with protecting PkTR, has been proactively opposing such projects invoking provisions of both the WLPA and FCA,³⁵⁵ such as a survey for a proposed highway that would cut through PkTR, citing Forest (Conservation) Act of 1980, which prohibits any kind of survey, investigation and exploration inside national parks and wildlife sanctuaries by any agency without the approval of NBWL and Supreme Court.

Besides statutory provisions, a circular issued by the MoRTH in 2019 has proven to be useful for protecting PkTR. The circular states that alignment of national highways passing through Protected Areas and wildlife corridors can have complex ecological impacts, and recommends that "To have minimum impact of highways on the protected eco-sensitive area, the implementing agency should consider to spare sanctuaries/National Parks at the planning stage and wherever possible take a bypass/detour."³⁵⁶



Fig 1: Sign Board in Pakke Tiger Reserve (April 2012)

(Source: [https://commons.wikimedia.org/wiki/File:Sign_in_Pakke_Tiger_Reserve_\(7210563676\).jpg](https://commons.wikimedia.org/wiki/File:Sign_in_Pakke_Tiger_Reserve_(7210563676).jpg))

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³⁵⁴ Economic Valuation of Tiger Reserves in India: Phase II. Indian Institute of Forest Management". Bhopal, India. July 2019. M. Verma and others. Link: http://www.indiaenvironmentportal.org.in/files/file/IIFM_Tiger%20Report_2019.pdf

³⁵⁵ "Khandu to review PTR road project, says Pakke a biodiversity hotspot" Arunachal Times, March 15, 2020. Tongam Rina. Link: <https://arunachaltimes.in/index.php/2020/03/15/khandu-to-review-ptr-road-project-says-pakke-a-biodiversity-hotspot/>

³⁵⁶ Circular dated 29.05.2019 issued by the MoRTH (S&R (P&B) Section), No. RW-NH-11013/02/2019-S&R(P&B), <https://forest.mizoram.gov.in/uploads/attachments/0a3e1fbcf3a9498332d81d251d504ea/posts-176-principles-to-be-adopted-while-considering-the-highway-near-or-within-wildlife-sanctisries-np.pdf>.

Earlier, in a letter to all the state governments in July 2018, the MoEFCC said all the linear infrastructure projects seeking clearance from the standing committee of the NBWL “must mandatorily contain an animal passage plan,” and proposals should not be sent to the NBWL without such a plan.³⁵⁷

In 2014, the Standing Committee of the NBWL had also formulated ‘Guidelines on Roads in Protected Areas’, which stated that new roads shall not be proposed inside National Parks and Wildlife Sanctuaries. This recommendation was communicated to the Principal Secretary (Forests) of all States and Union Territories by the Deputy Inspector General of Forests (Wildlife), MoEFCC.³⁵⁸

PkTR is also prone to deforestation especially because of its proximity to Assam and the Arunachal Pradesh border. A 2019 paper estimated that 32 sq km of forests were lost in the region between 2013 and 2017, illegal felling by the timber mafia being an important cause.³⁵⁹ Citing these concerns, a local ecologist, Jorjo Tana Tara, approached the NGT in 2019. The NGT instructed the Divisional Forest Officer (DFO), Khellong Forest Division, and the Director, Pakke Tiger Reserve to investigate the issue,³⁶⁰ which revealed that the timber mafia was using power chainsaws for felling trees within PkTR. The investigation also revealed that due to lack of manpower, forest authorities had not able to take action against the illegal timber mafia responsible for felling of trees.

In view of this, the NGT directed the state of Arunachal Pradesh to identify the hotspots of illegal tree felling and deforestation and draw an action plan to address the problem. The Tribunal also directed that a High-Level Committee headed by the Chief Secretary of Arunachal Pradesh be formed to implement the directions of the tribunal and submit a compliance report.³⁶¹

Upon the directions of the NGT, the Arunachal Pradesh government constituted a high-powered committee, which has identified several hotspots of illegal timber exploitation not just in the Pakke region but across the state. The government also told the NGT that Range Squads and Divisional Squads assisted by Mobile Squads had been formed, effectively curbing illegal logging.³⁶² Following the NGT’s orders, the East Kameng Deputy Commissioner has also banned all kinds of timber machinery in and around PkTR.³⁶³ The case is still ongoing.

Infrastructure and Development

Due to proximity with China, Arunachal Pradesh is at the forefront of India’s Act East Policy, which among other things calls for improved connectivity by building strategic roads. On the other hand, since the early 2000s, Arunachal Pradesh has been projected as a powerhouse for hydroelectricity generation. The push for roads and power generation are two factors which have posed as threats to protected areas such as PkTR.

East-West Industrial Corridor

With 83,743 sq km, Arunachal Pradesh is the 14th largest state in India, with an area comparable to the size of Austria. However, to move from one corner of the state to another, or even to reach the state capital, Itanagar, people rely on Assam. Due to mountainous terrains, dense tropical forests and deep

³⁵⁸ Circular dated 2.12.2014 issued by the MoEFCC (Wildlife Division), F. No. 6-62/2013 WL, http://forestsclearance.nic.in/DownloadPdfFile.aspx?FileName=0_0_3112012311201Undertaking_WC.pdf&FilePath=../writereaddata/Addinfo/.

³⁵⁹ “How the Proposed Highway Through Pakke Tiger Reserve Could Endanger the Forest”, The Wire, February 26, Nikhil Eapen, Link: <https://thewire.in/environment/seijosa-bhalikpong-highway-pakke-tiger-reserve-arunachal-pradesh-forest-wildlife>

³⁶⁰ Jorjo Tana Tara v. Union of India, OA No. 18 of 2019, order dated 09.04.2019 (NGT Eastern Zone).

³⁶¹ Jorjo Tana Tara v. Union of India, OA No. 18 of 2019, order dated 30.08.2019 (NGT Eastern Zone).

³⁶² Jorjo Tana Tara v. Union of India, OA No. 18 of 2019, order dated 06.01.2021 (NGT Eastern Zone).

³⁶³ Report of Illegal Timber Operation under the Seijosa Range, Office of the Divisional Forest Officer, Khellong Division, Bhalukpong, April 17, 2019, V.K. Jawal

gorges, connectivity in the state remains poor. Originally conceived in the 1990s, by 2014 the idea of a road took the shape of an industrial corridor with a two-lane highway. In 2021, the Arunachal Pradesh government announced the 966.78-kilometre-long East-West Industrial Corridor along the foothills bordering Assam.³⁶⁴

Within this corridor, Arunachal Pradesh's PWD proposed a 40-kilometre-long elevated corridor through PkTR, which has been opposed by sections of environmentalists and the Forest Department. The total length of this section through PkTR from Seijosa to Bhalukpong is about 49 kms. A Gujarat-based company bagged the contract to prepare the Detailed Project Report (DPR) for the elevated road project.³⁶⁵ Following the opposition from ecologists as well as Forest department, Arunachal Pradesh has left it to the Union government to take a final call on the elevated section that would pass through PkTR.

Forest officials and environmentalists have been able to build a strong working relationship with the local residents from 16 villages where poaching of animals, both for animal trade as well as for customary rituals was rampant.³⁶⁶ With awareness campaigns and support of the locals, forest officials have been able to set up 27 camps to patrol the area for timber smugglers and poachers.³⁶⁷ With the proposal to build an elevated road through the park, forest officials as well as conservationists feel that poaching cases and illicit timber logging might increase.

Hydroelectric Projects

Since the early 2000s, Arunachal Pradesh has been projected as a powerhouse for hydroelectricity by both the Centre and the state government. A study by the Central Electricity Authority shows that Arunachal Pradesh has a total hydropower generation potential of 57,000 MW from large dams and 1,600 MW from small and micro-hydroelectric projects.³⁶⁸ From 2007 onwards, the Government of Arunachal signed 168 MoUs with public as well as private investors.³⁶⁹ Over the years, many of these projects did not take off either due to protests citing impacts on ecology and fragile lives of several communities that live in this state or due to the remote location of the dam sites.

At present, the Arunachal Pradesh government is pursuing 70-odd hydroelectric projects (HEPs) which are disproportionately spread across eight river basins in the state. Initially 44 projects were planned in the Kameng basin alone with an installed capacity of 4898.9 MW.³⁷⁰ After a cumulative impact assessment, the MoEFCC asked Arunachal Government to drop seven projects due to their proximity to PkTR and unviable locations. At present, 37 HEPs with a total installed capacity of 2561.9 MW have been recommended by the MoEFCC which are in various stages of development.

³⁶⁴ "Arunachal Pradesh to soon take up East-West Industrial Corridor Highway project with Centre", The Financial Express, March 5, 2021, Devanjana Nag, Link: <https://www.financialexpress.com/infrastructure/roadways/arunachal-pradesh-to-soon-take-up-east-west-industrial-corridor-highway-project-with-centre-details/2207024/>

³⁶⁵ "How the Proposed Highway Through Pakke Tiger Reserve Could Endanger the Forest", The Wire, February 26, Nikhil Eapen, Link: <https://thewire.in/environment/seijosa-bhalikpong-highway-pakke-tiger-reserve-arunachal-pradesh-forest-wildlife>

³⁶⁶ "Tribal villages join hands for protection of Pakke Tiger Reserve", Wildlife Trust of India, December 7, 2021, Link: <https://www.wti.org.in/news/tribal-villages-join-hands-for-protection-of-pakke-tiger-reserve/>

³⁶⁷ "Making slow headway", Down to Earth, July 31, 2012, Nandini Velho, Link: <https://www.downtoearth.org.in/blog/making-slow-headway-38676>

³⁶⁸ Hydro Power Policy 2008, Arunachal Pradesh Government, November 19, 2008

³⁶⁹ "Immediate moratorium sought on clearances for large dams in northeast India", India Water Portal, December 14, 2010, Krishak MuktiSangramSamity (KMSS) Link: <https://www.indiawaterportal.org/articles/immediate-moratorium-sought-clearances-large-dams-northeast-india-press-release-krishak>

³⁷⁰ "Cumulative Impact Assessment & Carrying Capacity Study of Kameng River Basin Arunachal Pradesh for Development of Hydroelectric Power Projects (HEPs)-Approved Recommendation", MoEFCC (IA-I Division), July 28, 2017, F. No. J-12011/22/2013-IA-I,

The installed capacities of these dams vary from 9 MW to 1120 MW. Some of these hydroelectric projects have been opposed by the locals while environmentalists have warned about the impact on protected areas such as PkTR, which are drained rivers of Kameng basin.

The presence of hydroelectric projects in the Kameng basin is already altering PkTR's landscape. A GIS-based mapping study revealed that water bodies within and around PkTR are experiencing a decline at the rate of 200 square meters per year.³⁷¹ Researchers who studied these patterns in 2018 attribute it to the shifting of the river's course over a decade, and the dam construction in River Kameng which diverted the river to other areas. The study also revealed that the decline in dense forest in the area may also be the basis for decline in the areas under water bodies, which may have an impact over the local water cycle. The study further shows that sand deposition over PkTR has been escalating at the rate of 300 square meters annually over the last one decade. It warns that if the present rate continues, in the next one decade, the dense forest category in PkTR will shrink to 587 sq km and the open/degraded forest will rise to 248 sq km. This rapid decline of dense vegetation may result in extinction of the Bengal tiger and other endangered animals like Indian leopard, clouded leopard, the wild dog, Asiatic jackal, etc. from the reserve, due to the disturbances in their natural habitat.



Fig 2: Boundary of Pakke Tiger reserve and Papum reserve forest, East Kameng, Arunachal Pradesh, India, April 2012

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Procedural Gaps in Giving Clearances

As discussed above, roads and hydroelectric dams are two major threats to PTR. There are glaring gaps in seeking permissions for clearances to operationalize these projects where environmental laws may have been disregarded by the authorities planning such infrastructure.

East West Industrial Corridor

Of the 49-kilometre-long section between Seijosa and Bhalukpong, a 39-kilometre stretch will be passing through PkTR. According to a proposal made by a Gujarat-based company tasked with making the DPR, 160 hectares of forests inside PkTR will be diverted for construction in this section of East-West Industrial Corridor.

The existing DPR for the Seijosa-Bhalukpong section was prepared by a Gujarat-based firm, Nektor Engineers in 2018.³⁷² In that same year, when Nektor Engineers in a meeting with forest department, PWD officials and other authorities presented the DPR, Forest officials from PkTR said that the company did not consult the Forest Department before preparing the DPR. Further, the DFO and Director of PkTR said that the elevated section would violate the WLPA as well as the FCA. Later, the company said that they were not allowed to physically venture inside PkTR to prepare the DPR of the elevated section, following which they used satellite imagery to the prepare the DPR. Conservationists contested the DPR made with the help of satellite imagery saying that the entire exercise would yield inaccurate results.³⁷³

³⁷¹ "Land Cover Change Assessment of Pakke Tiger Reserve (PTR), East Kameng District of Arunachal Pradesh", Department of Geography, Rajiv Gandhi University, Arunachal Pradesh, January 2018, TashiDorjee Bap and GibjiNimasow

³⁷² "How the Proposed Highway Through Pakke Tiger Reserve Could Endanger the Forest", The Wire, February 26, Nikhil Eapen, Link: <https://thewire.in/environment/seijosa-bhalikpong-highway-pakke-tiger-reserve-arunachal-pradesh-forest-wildlife>

³⁷³ "Forest dept permits PWD to conduct survey for EWIC road through Pakke Tiger Reserve", Arunachal Times, June 11, 2021, Tongam Rina. Link: <https://arunachaltimes.in/index.php/2021/06/11/forest-dept-permits-pwd-to-conduct-survey-for-ewic-road-through-pakke-tiger-reserve/>

It has also been alleged that the elevated section of the East-West Industrial Corridor proposed through the critical tiger habitat at PkTR would cut short travel distance by only 25 km.³⁷⁴ In 2021, Arunachal Chief Minister Pema Khandu said that the government will review the project in the light of PkTR's biodiversity. The Arunachal Pradesh government now maintains that a new consultant will be appointed who will make a fresh DPR for the elevated section under the guidance of the forest department and the PTR's director.

Hydro-electric threat

A cumulative impact assessment by WAPCOS Limited in 2017 led the MoEFCC to cancel seven hydropower projects on the Kameng river out of 44 proposed dams upstream of PkTR. Expert opinions on the drying up of water resources as discussed above were not taken into consideration while approving 37 projects upstream of PkTR. Further, clearances to projects show lack of consistency on the part of the dam developers.³⁷⁵ For instance, the 420 MW Kameng River dam to be developed by a Hyderabad-based company was scrapped in 2012 as the Expert Appraisal Committee of the MoEFCC noted that submergence area of the dam would be 350 meters away from PkTR. However, Kameng I, a 1,120 MW hydroelectric project was passed by the EAC in 2007 despite the minutes of the meeting showing that a part of the submergence area is inside PkTR.

Impacts on the Communities Nearby

With efforts of the local DFO and conservationists, people from 16 villages situated in and around PkTR now assist in patrolling and managing the tiger reserve. They have also set up anti-poaching camps in 27 locations across the park.

However, in 2021, 200 forest guards, who are a part of special tiger protection force, went on a strike for non-payment of their dues by the Arunachal Pradesh government for close to six months.³⁷⁶ The forest guards mostly hail from in and around PkTR. Later, Arunachal Government released the funds. The forest guards have been appointed on a temporary basis by the PkTR authorities. Although the forest guards called off their strike, there are longstanding demands to make their positions permanent and give them pay hikes, which may trigger protests in the near future.

National and International Financial Institutions Involved in Infrastructure/Developmental Projects

1. Elevated section measuring 48.8 kilometer connecting Seijosa and Bhalukpong in the proposed East West Industrial Corridor is being developed by the Arunachal Pradesh PWD. Total cost: Rs 2,452.8 crores³⁷⁷

³⁷⁴ "How the Proposed Highway Through Pakke Tiger Reserve Could Endanger the Forest", The Wire, February 26, Nikhil Eapen, Link: <https://thewire.in/environment/seijosa-bhalikpong-highway-pakke-tiger-reserve-arunachal-pradesh-forest-wildlife>

³⁷⁵ "Dam Planning Under the Spotlight: A Guide to Dam Sanctioning in India", International Rivers, 2013, Urmi Bhattacharjee. Link: https://archive.internationalrivers.org/sites/default/files/attached-files/international_rivers_report_2013_low_res_0.pdf

³⁷⁶ "Arunachal: 200 workers at Pakke Tiger Reserve on strike, unpaid wages since December", East Mojo, June 10, 2021, Press Trust of India. Link: <https://www.eastmojo.com/news/2021/06/10/arunachal-200-workers-at-pakke-tiger-reserve-on-strike-unpaid-wages-since-december/>

³⁷⁷ "East-West Industrial Corridor plan in conflict with wildlife habitat", Arunachal Times, February 23, 2020, Tongam Rina. Link: <https://arunachaltimes.in/index.php/2020/02/23/east-west-industrial-corridor-plan-in-conflict-with-wildlife-habitat/>

2. Dam projects in the Kameng basin. Total number: 37. List of the investors: NEEPCO, M/S Mountain Fall India Pvt. Limited, M/S Patel Engineering, M/S Adishankar Power Private Limited, M/S ECI Engineering and Construction Co. Ltd, M/S Satyam (North East) Hydro Power Ltd, M/S Devi Energies Private Limited, M/S GMR Energy Ltd, M/S KSK Energy ventures, CESC Limited, M/S India Bulls Real Estate Limited, M/S Energy Development Co. Ltd, Coastal Projects Pvt. Ltd., M/S Vensar Constructions, M/S Boom Systems Private Limited, M/S SMJ Energy Private Limited, M/S Kameng Horizons Pvt Limited.³⁷⁸ Total Cost: Not available.

Success of Civil Society Interventions

Two major successes can be attributed to the conservation agenda pursued by environmentalists and conservationists:

1. The participation of 16 local village chiefs in and around PkTR to bring end to customary hunting practices, leaving the path of poaching to join the tiger protection force and maintaining close to 27 camps to act against poaching and illegal logging.
2. Activist Jorjo Tana Tara's legal battle in the NGT has led Arunachal Pradesh to identify hotspots of timber smuggling not just in and around PkTR but also across the state.

Conclusion

PkTR is not just an important tiger habitat but also a haven for rare species of orchids, trees and small animals. The forests within PkTR are important carbon sinks for the anthropogenic emissions emanating from the adjoining plain areas of Assam, which is seeing large-scale industrialization and urbanization. The water resources within PkTR sustains both wildlife and people. With such long lasting benefits, the reserve also plays host to tigers that enrich the gene pool of the Bengal Tiger and serves as a bridge between the Indian mainland and South East Asia's tiger landscapes. At the same time, it is important for a remote state like Arunachal Pradesh to have better connectivity between the diverse and smaller communities which thrive in these areas. Interestingly, the lifestyles of many of these communities are intertwined with their surroundings of rich biodiversity and abundant water resources. If these surroundings are replaced by an industrialized landscape, the impact would not just be on the forests and environment but also on the existence of these communities. Therefore, authorities planning to bring in infrastructural development in these parts must also respect and understand the interconnectedness of the communities with their surroundings.

³⁷⁸ "Cumulative Impact Assessment & Carrying Capacity Study of Kameng River Basin Arunachal Pradesh for Development of Hydroelectric Power Projects (HEPs)-Approved Recommendation", MoEFCC (IA-I Division), July 28, 2017, F. No. J-12011/22/2013-IA-I, [http://environmentclearance.nic.in/writereaddata/public_display/orders/950287017\\$Kameng%20River%20Basin%201.pdf](http://environmentclearance.nic.in/writereaddata/public_display/orders/950287017$Kameng%20River%20Basin%201.pdf)

Construction vs. Conservation

A Case Study on Mukundra Hills Tiger Reserve

By Shrestha Chowdhury³⁷⁹

Introduction

Mukundra Hills Tiger Reserve (MHTR) is part of Mukundra Hills National Park which was established in 2004 after being declared a protected area in the year 1955. It lies between 24° 38' to 25° 7' North latitudes and 75° 26' to 76° 12' East longitudes³⁸⁰ and is approximately 50 km from the city of Kota. The core area consists of the Mukundra Hills National Park, Darrah Wildlife Sanctuary, Jawahar Sagar Wildlife Sanctuary and parts of the National Chambal Ghariyal Sanctuary, from Garadia Mahadev to Jawahar Sagar Dam, while the buffer area include the forests of Kota, Chittorgarh and Jhalawar. The area was notified as a tiger reserve in the year 2013 under the WLPA and became the third tiger reserve of the state of Rajasthan after Ranthambore and Sariska.³⁸¹ The MoEFCC notified the ESZ of MHTR in December 2020. Its radius varies from 0-1 km around the park boundary.³⁸²

MHTR is spread across four districts of the Indian state of Rajasthan viz. Bundi, Kota, Jhalawar and Chittorgarh. The reserve is close to the Malva plateau and once belonged to the Maharaja of Kota who used it as a hunting ground. The reserve is called Mukundra after two mountain ranges, part of the Vindhyas, that surround the national park. Ramzan, Ahu, Kali and Chambal are the four rivers that are found in this national park. The total area³⁸³ of the reserve is approximately 759.99 sq km (core/critical tiger habitat: 417.17 sq km and buffer/peripheral area: 342.82 sq km).

The reserve has a hilly terrain which is densely wooded. There is also the presence of grasslands and many dry deciduous trees in the region. MHTR is a habitat of the Bengal tiger, the Indian wolf, the Indian leopard, the chital (spotted deer), the sambar deer, the wild boar and the nilgai. It is also inhabited by sloth bears, chinkaras and reptiles like the mugger crocodile and the gharial. The reserve also accounts for the presence of floral species like Kala Dhok or Kaladhi (*Anogeissus pendula*), Khair (*Acacia catechu*), Ber (*Zizyphus mauritiana*), Kakan (*Flacourtia indica*), Tendu (*Diospyros melanoxylon*), Gurjan (*Lannea coromandelica*), Karaya (*Sterculia urens*), Kalam (*Mitragyna parviflora*) and Gutha bor (*Zizyphus glaberrima*).³⁸⁴ MHTR serves as a natural extension of the Ranthambhore Tiger Reserve and the big cat population found here is mostly translocated from the Ranthambhore Tiger Reserve.³⁸⁵ According to the report³⁸⁶ “Status of Tigers Copredators and Prey in India 2018”, four adult tigers were found within the reserve. After two tigers and a cub died, while one tiger and two cubs went missing, the reserve is home to only one tigress named MT-4.³⁸⁷

³⁷⁹ Shrestha Chowdhury has a Master's degree in Developmental Studies from Christ University, Bangalore and is associated with TISS as a Research Officer in Forest Rights & Governance Project. Her areas of interest include urban water governance, lake ecology, forest rights, environmental and social justice.

³⁸⁰ Brief Note on Mukundra Hills Tiger Reserve - NTCA - <https://ntca.gov.in/assets/uploads/briefnote/mukundara.pdf>

³⁸¹ Drishti. (2020, February 26). Mukundra Hills Tiger Reserve. Retrieved from <https://www.drishtiiias.com/daily-updates/daily-news-analysis/mukundara-hills-tiger-reserve>

³⁸² MHTR ESZ Notification, SO 4268(E), MoEFCC, dated 25.11.2020.

³⁸³ Quazi, A. (2018, March 04). Centre approves land use change for shifting villages from Mukundra reserve in Rajasthan. Hindustan Times. <https://www.hindustantimes.com/jaipur/centre-approves-land-use-change-for-shifting-villages-from-mukundra-reserve-in-rajasthan/story-c7eloVbByobcRSiXCDZ7I.html>

³⁸⁴ Brief Note on Mukundra Hills Tiger Reserve - NTCA - <https://ntca.gov.in/assets/uploads/briefnote/mukundara.pdf>

³⁸⁵ Wildlife Destination. (2016). Mukundra Hills Tiger Reserve. Retrieved from <http://www.wildlifedestination.com/Mukundra-Hills-Tiger-Reserve.html>

³⁸⁶ Jhala, Y.V., Qureshi, Q. and Nayak, A.K. (eds) 2020. Status of tigers, copredators and prey in India, 2018. National Tiger Conservation Authority, Government of India, New Delhi, and Wildlife Institute of India, Dehradun.

³⁸⁷ Saini, S. (2020, September 30). Rajasthan's Mukundra reserve left with one injured tigress. Hindustan Times.

<https://www.hindustantimes.com/jaipur/rajasthan-s-mukundra-reserve-left-with-one-injured-tigress/story-nRMw8bV1Kth2XWX72OQdmL.html>

The reserve is home to many human settlements in the form of villages. A total of seven³⁸⁸ and fourteen villages are located in the core and buffer zone of the reserve respectively; out of which only a few have been relocated outside the reserve. The Rajasthan Forest Department had procured the approval of the Forest Advisory Committee of the Centre for relocating villagers living inside the reserve. For the purpose of relocation, 100 hectares of forestland in Lakhawa region was approved. However, people of around twelve villages have refused to relocate unless provided with adequate compensation.³⁸⁹ Strangely, the wildlife department relocated tigers from the Ranthambhore Tiger Reserve of Sawai Madhopur into MHTR without completing the relocation of the villages that lie within the core area of the reserve. This move has instilled a sense of fear amongst the villagers.³⁹⁰ This exposes the apathy of authorities towards people living inside Protected Areas as well as the mismanagement in the name of biodiversity conservation.

Infrastructure/Developmental Projects and Other Activities Affecting the Tiger Reserve

i. Eight-lane Greenfield Highway

As part of the Bharatmala Pariyojana, a 1,350 km long highway is proposed to be developed to facilitate high speed traffic movement between the cities of Delhi and Mumbai. Approximately 60 km³⁹¹ of this highway runs through the protected area of MHTR in the form of an underground passageway. After successful completion, this will be the country's first 8-lane wide tunnel. About 27 hectares of forest from within the reserve was diverted for the construction of this infrastructure project.³⁹² Additionally, it also diverts forest area from Barkalaji Reserve Forest that is a tiger corridor lying outside MHTR.

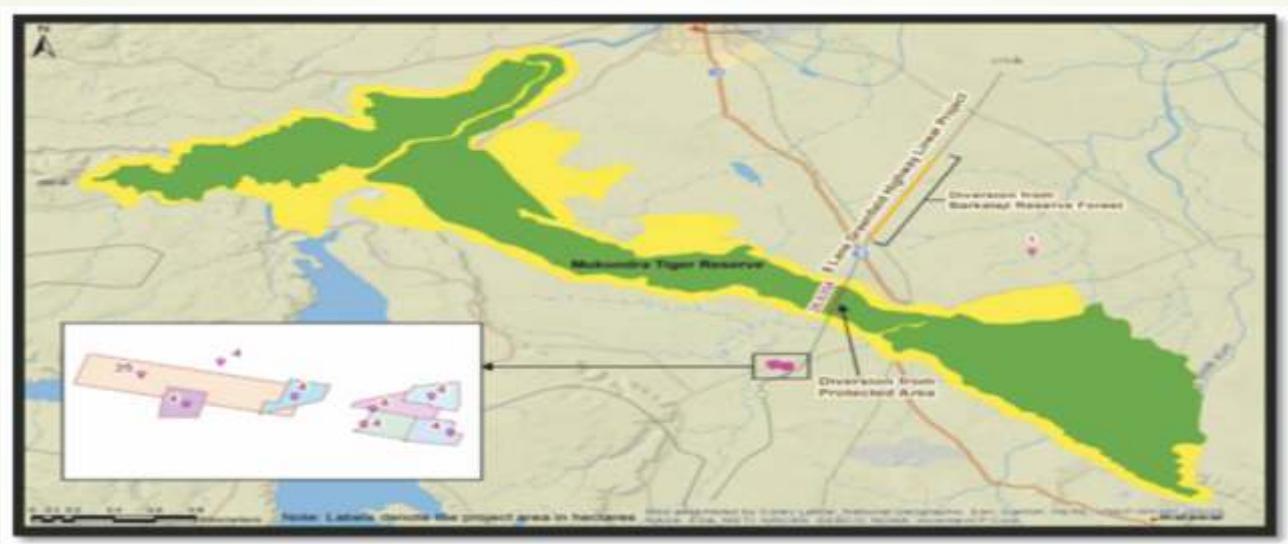


Fig 1: Diversion approved for the proposed Greenfield Highway

(Source: <https://thelifeindia.org.in/upload/files/Tiger%20day.pdf>)

³⁸⁸ TNN Staff. (2019, June 29). 7 villages located in core area of MHTR to be shifted. The Times of India.

<https://timesofindia.indiatimes.com/city/jaipur/7-villages-located-in-core-area-of-mhtr-to-be-shifted/articleshow/69998241.cms>

³⁸⁹ Quazi, A. (2018, March 04). Centre approves land use change for shifting villages from Mukundra reserve in Rajasthan.

Hindustan Times. <https://www.hindustantimes.com/jaipur/centre-approves-land-use-change-for-shifting-villages-from-mukundra-reserve-in-rajasthan/story-c7eIoVbBtyobcRSiXCDZ71.html>

³⁹⁰ HT Correspondent. (2019, May 08). After tiger relocation, fear grips Mukundra villagers. Hindustan Times.

<https://www.hindustantimes.com/jaipur/after-tiger-relocation-fear-grips-mukundra-villagers/story-TqbxwLgwbFah12HsUOXPKP.html>

³⁹¹ Livemint Staff. (2020, October 21). 60km highway to be built in Rajasthan; better movement between Delhi and Mumbai. Livemint.

<https://www.livemint.com/news/india/60km-highway-to-be-built-in-rajasthan-better-movement-between-delhi-and-mumbai-11603276731182.html>

³⁹² Pinjarkar, V. (2019, July 29). 'Tiger habitats overlooked in rush to grant nod for infra projects'. The Times of India.

<https://timesofindia.indiatimes.com/city/nagpur/tiger-habitats-overlooked-in-rush-to-grant-nod-for-infra-projects/articleshow/84840063.cms>

Although the expressway is said to have some wildlife crossings, the project came under heavy criticism from wildlife experts for not having a sufficient number of wildlife crossings even though the expressway moves through several wildlife corridors. A procedural gap that emerged was in the various site inspection reports. While the DFO, Kota mentioned the presence of rare/endangered/unique species inside and around the reserve in his site inspection report, the site inspection report submitted by the Conservator of Forest claimed that there were no rare/endangered/unique species found in the area while granting approval to the project. Another procedural gap about this project was its conception and implementation without conducting any public consultation.³⁹³

A Special Purpose Vehicle named DME Development Limited was formed by the NHAI to finance the construction and operation of the Delhi–Mumbai Expressway. The construction work was awarded in 52 packages to around 20 construction companies by the NHAI. Out of the 52 packages, 31 are under an Engineering, Procurement and Construction model, while 21 are under a Hybrid Annuity Model. The expected cost of the project is around Rs. 1 lakh crore.³⁹⁴

ii. Construction of Four-lane Road on NH 12 (New NH 52)

A four-lane road on Darah-Jhalawar-Teendhar section of NH-12 (new NH-52) of approximately 48.88 km in length was proposed by the NHAI. A Special Purpose Vehicle named Patel Darah-Jhalawar Highway Private Limited was incorporated in 2017 to construct and operate the Project. This particular project involved the diversion of 7.336 ha of forest land and axing of about 8,156 trees. Although the Environment and Social Due Diligence Report³⁹⁵ stated that the project site was around 10 km away from MHTR and hence no wildlife clearance was sought, a notification³⁹⁶ dated 19-09-2017 issued by the NHAI clearly mentioned that the project would run through MHTR. The project also got an exemption from obtaining environmental clearance and conducting EIA as the length of the project was below 100 km.

iii. Limestone Mining Projects

Out of the 26 projects approved by the Standing Committee of the NBWL during the nationwide lockdown on 7th April, 2020, nine were for limestone mining in and around MHTR. All the nine projects fall within a 10-km radius of the reserve.³⁹⁷ A total area of 54 hectares was diverted for these nine limestone mining projects from the surrounding tiger corridors.³⁹⁸

iv. Marathon Activities

The Forest Department has been conducting events like marathons inside the reserve since 2017. The route of such marathons runs through the critical habitat zone of the reserve and associated activities like preparation for the marathon and shooting of promotional videos cause disturbance to the wildlife in the reserve.

³⁹³ Bathla, N and Singh, A. (2019, October 6). The Delhi-Mumbai Expressway Is a Short-Cut to Socio-Ecological Disaster. The Wire. <https://thewire.in/environment/delhi-mumbai-expressway-nitin-gadkari-bharatmala-nhai>

³⁹⁴ Delhi–Mumbai Expressway. (2022, June 22). In Wikipedia. https://en.wikipedia.org/wiki/Delhi%E2%80%93Mumbai_Expressway

³⁹⁵ India Infrastructure Finance Company Limited. (2019). Environmental and Social Due Diligence Report. Retrieved from https://www.adb.org/sites/default/files/project-documents/47083/47083-004-sddr-en_40.pdf

³⁹⁶ Alignment Options Study - Justification Of Proposed Alignment In Mukundra Hills Tiger Reserve - September 2019 - http://forestsclearance.nic.in/writereaddata/FormA/Justification/101118123512183CNWCAlignmentoption_Study.pdf

³⁹⁷ Mehrotra, N. (2020, June 10). 26 projects approved by the Indian National Board of Wildlife on April 7th 2020. Technology for Wildlife. <https://www.techforwildlife.com/blog/2020/6/10/26-projects-approved-by-the-indian-national-board-of-wildlife-on-april-7th-2020>

³⁹⁸ Minutes of 57th Meeting of the Standing Committee of National Board for Wild Life - April 2020 - http://forestsclearance.nic.in/writereaddata/Order_and_Release/41120122312171Minutesof57thMeetingoftheStandingCommitteeofNationalBoardforWildLifeheldon07.04.2020.pdf

For the purpose of the marathon, the Forest Department allowed several activities like setting up of stages, tents, and the use of loudspeakers in the core area of the reserve, in violation of the WLPA. A complaint by wildlife activist Ajay Dubey was lodged with the NTCA, for violation of wildlife laws. As per section 28 of the Wildlife Protection Act, permission to conduct commercial events inside a sanctuary cannot be given and hence allowing such Marathon activities is violation of the law.³⁹⁹ The event was also criticised by NTCA officials, calling such activities undesirable.⁴⁰⁰

Campaigns for Protecting the Tiger Reserve

1. Say No to Cheetah campaign

MHTR was developed to serve as a disturbance-free area for tigers to breed and live. However, multiple tigers and cubs have either died or went missing from the reserve. Instead of focusing renewed attention on the tiger reintroduction programme of 2018, the state forest department has issued a technical note titled, “Assessment of Cheetah Introduction Sites and Proposed Actions, 2021” that basically talks about introducing the cheetah in MHTR. A ‘Say No To Cheetah’ campaign was started by wildlife lovers that highlighted the mismanagement of resources in tiger conservation and the lack of will to work towards solving the existing problems. It also drew attention towards the additional investment that will be required to fund the introduction of the cheetah in the reserve.⁴⁰¹

Conclusion

MHTR is important as it serves as a crucial extension for the Ranthambhore Tiger Reserve besides being the home of a range of flora and fauna. A lot of resources, time and effort have been invested in developing MHTR as a tiger habitat. However, administrative loopholes and the absence of effective monitoring mechanisms have led to the neglect of the big cat population, resulting in deaths and cases of missing tigers and cubs. The reserve is under severe pressure because of the scale and extent of developmental and infrastructural projects proposed and carried out in the region. These projects affect both the human and wildlife of the area causing catastrophic damages to the natural ecosystem. Given the fragile and dwindling status of tigers, especially in MHTR, the need is to examine developmental projects from a perspective of affecting the flora and fauna of the region rather than to usher economic development at the cost of the wildlife.

³⁹⁹ TNN Staff. (2019, October 21). Marathon on tiger turf again, Rajasthan wildlife activists furious. The Times of India.

<https://timesofindia.indiatimes.com/city/jaipur/marathon-on-tiger-turf-again-raj-wildlife-activists-furious/articleshow/71678941.cms>

⁴⁰⁰ Business Standard Staff. (2019, November 23). NTCA seeks report from Raj govt for violation of wildlife norms by marathon organisers. Business Standard. https://www.business-standard.com/article/pti-stories/ntca-seeks-report-from-raj-govt-for-violation-of-wildlife-norms-by-marathon-organisers-119112300344_1.html

⁴⁰¹ TNN Staff. (2021, September 06). Rajasthan: Wildlife lovers against Cheetah project in Mukundra Hills Tiger Reserve.

The Times of India. <https://timesofindia.indiatimes.com/city/jaipur/wildlife-lovers-against-cheetah-project-in-mukundra/articleshow/85961572.cms>

*Conservation and Customary Rights: The Explicit Double Standard in Anakkayam Hydel Power Plant and Parambikulam Tiger Reserve, Kerala*⁴⁰²

A Case Study on Parambikulam Tiger Reserve

*By Aswathy Senan*⁴⁰³

Introduction

The world is going through an unprecedented economic and health crisis since 2020 owing to the Covid-19 pandemic. The Indian government as well as many state governments, however, have ‘utilised’ the time period, to dilute/amend environmental, labour and investment laws and flagged off several projects that would cause irreversible impacts on the lives and livelihoods of the people and on the environment. This case study concentrates on the Anakkayam Hydel Electric Power Project (HEP) that is proposed to come up in Parambikulam Tiger Reserve (PrTR) situated in Palakkad and Thrissur districts, Kerala, and its potential impact on the area, its inhabitants, and ecosphere. The project was sought to be revived during the pandemic. This study examines the tiger conservation/protection initiatives by the Indian government and how sanctioning development projects in such eco-sensitive areas, in this case the HEP, is in contradiction to its vocal position on conservation. The case study argues that even though the state pretends to be concerned about the tiger population, it ignores the proactive role it needs to play in sanctioning the customary rights to forest dwellers that would benefit human-animal co-existence in the protected area. Instead, it promotes unviable and disastrous projects in such locations which are often stalled only because of the active engagement of the people in the area and civil society groups.

Parambikulam Tiger Reserve

As per the Indian State of Forest Report 2019, the Recorded Forest Area (RFA) in Kerala is 11,309 sq km all of which is reserved forest, of which 3,213.24 sq km is protected as national parks, wildlife sanctuaries and community reserves.⁴⁰⁴ A total of 15.82 hectares of forest land was diverted for non-forestry purposes under the FCA (MoEFCC, 2019) from 1 January 2015 to 5 February 2019. Declared a tiger reserve “in the interest of Conservation of Tiger”⁴⁰⁵ in 2010, Parambikulam (also known as Parambikulam Wildlife Sanctuary) has a total extent of 643.66 sq km, out of which 390.89 sq km has been declared as the core or critical tiger habitat and 252.77 sq km as the buffer zone of the tiger reserve.⁴⁰⁶ In 2021, the MoEFCC issued a draft EZ notification for PrTR, extending between zero and 10.09 kilometres.⁴⁰⁷ Parambikulam Tiger Reserve is a well-protected part of the Nelliampathy-Anamalai sub-unit of the Western Ghats⁴⁰⁸ parts which fall within the Athirappilly Grama Panchayath, with nearly 70% of the rich forest area with high biodiversity and conservation value.

The forest has a healthy population of several endangered and vulnerable fauna and animals such as the Indian elephant, Gaur, Spotted deer, Sambar, Barking deer (Muntjac) and tigers.

⁴⁰² The author is thankful to VK Geetha, Chitra Nilambur, SP Ravi and Sharat Chellor for taking the time to share relevant materials and for detailed telephonic conversation about the project. SP Ravi also gave critical feedback on the case study which is duly appreciated.

⁴⁰³ Aswathy Senan is an independent researcher and translator based out of Delhi with an interest in social movements, natural resource based struggles, gender and media.

⁴⁰⁴ ‘Kerala’. India State of Forest Report 2019. Forest Survey of India, Dehradun. 2019. pp 131-140.

⁴⁰⁵ Based on a notification issued by the Forest and Wildlife (F) Department of Government of Kerala on 16 December 2009.

⁴⁰⁶ Parambikulam Tiger Reserve Notification, No. GO (P) No. 53/2009/F&WLD, Government of Kerala dated 16th December 2009; Official Website of Parambikulam Tiger Reserve - <https://www.parambikulam.org/LearnAboutTheReserve>

⁴⁰⁷ Draft ESZ Notification SO 440(E), MoEFCC, dated 28.01.2021.

⁴⁰⁸ The Western Ghats run for 1,600 km parallel to India’s West coast, from Gujarat right down to Tamil Nadu at the tip of the subcontinent covering an area of 160,000 sq km.

The reserve is primarily inhabited by tribal groups of Kadar, Malayar, Muthuvar and Mala-malasar, who are entrusted with the work of forest management and collection and production of materials that are sold in the shops or cooperatives. Initiated under the eco-development committees (EDC)⁴⁰⁹ and Vana Samrakshana Samithis (VSS), the community members are trained to be tour guides, eco-conservationists, forest watchers (eco-tourism) and informers who track illegal activities, and safari vehicle drivers, handicraft makers with a monthly salary.



Fig. 1. Signage at Parambikulam Tiger Reserve

(Source: https://commons.wikimedia.org/wiki/File:Signage_at_Parambikulam_Tiger_Reserve.JPG)

Attribution: Parambikulam Tiger Conservation Foundation, CC BY-SA 4.0 <<https://creativecommons.org/licenses/by-sa/4.0/>>, via Wikimedia Commons)

SI No	Type	Number	Area (sq km)
1	National Parks	5	356.1550
2	Wildlife Sanctuaries	17	2855.5822
3	Community Reserve	1	1.5
Total			3213.24

Source: Official Website of Kerala Forests & Wildlife Department⁴¹⁰

Three sub-basins of the river Chalakudy are situated within the protected areas of PrTR. It consists of three reservoirs namely Parambikulam Dam, Thunacadavu Dam and Peruvarepallam Dam and shares its borders, waters and operations with Tamil Nadu. The 144 kms-long river with catchment area of 1,704 sq kms is one of the heavily utilised rivers hosting hydroelectric projects such as Poringalkuthu LB (48 MW) and Kerala Sholayar (54 MW); and irrigation schemes such as Chalakudy River Diversion Scheme.⁴¹¹ The proposed Athirapilly Hydro Electric Project,⁴¹² also in this basin, has been shelved due to timely intervention of citizens. The report by the Western Ghats Ecology Expert Panel (WGEEP Report),⁴¹³

⁴⁰⁹ The Forest Development Agencies monitors, evaluates and supervises the schemes implemented in a participative manner through the EDCs.

⁴¹⁰ Kerala Forests & Wildlife Department - Introduction - https://forest.kerala.gov.in/index.php?option=com_content&view=article&id=205&Itemid=162

⁴¹¹ Public Pressure Leads to Changes in Kerala Dam Operation - South Asia Network on Dams, Rivers and People (SANDRP) - September 28, 2013 - <https://sandrp.in/tag/chalakudy-river-hydropower-project/>

⁴¹² With an installed capacity of 163 MW, the project is planned (through Athirapilly and Vazhachal waterfalls, both tourist spots) on the Chalakkudy river in Thrissur district. It was proposed in 1979, and formally announced in 1982 by the KSEB, but has been stalled due to wide protests from the public. Opposition to the project stemmed from anticipated damage to the low-elevation riparian forests, flora and fauna in the Vazhachal forest division, Kadar tribal settlements in the region, downstream irrigation and tourism.

⁴¹³ Set up by the Ministry of Environment and Forests, the committee was set up with Madhav Gadgil as Chairman to study Western Ghats.

also known as the Gadgil Committee, highlighted the biodiversity and unique riverine forest system of the area. Three types of ESZs were proposed by the WGEEP, with Type 1 having the highest degree of protection.⁴¹⁴ It was proposed that no new dams with large-scale storage be permitted in ESZ-1, under which Athirappilly falls, and recommended that no environmental clearances be given to the hydel project. Proposing the Anakkayam Small Hydel Power Project in the same vulnerable area is nothing but a strategy to bypass the directive towards Athirappilly HEP.

Anakkayam Hydel Power Project

Anakkayam Small Hydro Electric Project (SHEP) is proposed as a tail race development of the Sholayar HEP to be implemented by Kerala State Electricity Board Limited (KSEBL)⁴¹⁵ as a Clean Development Mechanism project of United Nations Framework Convention on Climate Change (UNFCCC).⁴¹⁶ It intends to tap the water resource of Sholayar River by utilizing the tail water from Sholayar Power House before reaching the Poringalkuthu reservoir. KSEBL argues that since the HEP taps energy through a tunnel and turbine, without any additional storage or submergence, it will “not cause any submergence” (Anakkayam SHEP).

Proposed to be located in the Anakkayam sub-basin of Chalakudy basin in Pariyaram village of Mukundapuram taluk in Thrissur district, the project area lies within the buffer zone of PrTR. KSEBL states that since only 8 hectares of forest land is required for the project; it can be done with minimal disturbances to the forest dwelling community who can also be recruited as unskilled labourers during the construction period of the project. Though the project was proposed in 1978 and gained clearance from the Ministry of Environment and Forest in 1990, it was stalled due to various reasons including delay in forest land transfer. In 2013-14, the project obtained fresh Stage-I and Stage-II environmental clearances based on which KSEBL sanctioned an order to clear forest land and cut down 1,897 trees within the buffer zone which led to widespread protest.⁴¹⁷ In 2019, the project came into the limelight again when KSEBL circulated an order that detailed the timeline of the project and stated the resolution “to float a Request for proposal for the execution of the project with all requirements in terms of technical specification, guarantee, etc. on turnkey basis.”⁴¹⁸ (B.O DB No. 542/2019 (DGC/AEEV/AKYM/2014 dtd: 12.07.2019).⁴¹⁹

⁴¹⁴ The Ecologically Sensitive Zone (1) or ESZ-1 are those areas of high priority where almost all developmental activities (mining, thermal power plants, etc.) have to be restricted. This is detailed in Section 13 of the WGEEP Report.

⁴¹⁵ The Kerala State Electricity Board Limited is a government company incorporated on 14 January 2011 under the Companies Act, 1956, and started its operations as an independent company on 1 November 2013. It is responsible for the generation, transmission and distribution of power in Kerala.

⁴¹⁶ UNFCCC is an environment treaty signed on 2 June 1992 by 154 nations in order to reduce atmospheric concentrations of greenhouse gases so as to prevent dangerous anthropogenic interference with Earth's climate system.

⁴¹⁷ Cris. ‘Kerala tribals fight against cutting of trees for Anakkayam hydel project’ - The News Minute – November 26, 2020.

<https://www.thenewsminute.com/article/kerala-tribals-fight-against-cutting-trees-anakkayam-hydel-project-138496>

Perinchery, Aathira. ‘Over 1,800 rainforest trees to be axed for hydropower project near proposed Athirappilly dam’ - Mongabay - November 12, 2020 - <https://india.mongabay.com/2020/11/over-1800-rainforest-trees-to-be-axed-to-for-hydropower-project-near-athirappilly-dam/>

Philip, Shaju. Simply put: The choppy ride of the Athirappilly power project - The Indian Express - June 01, 2016 -

<https://indianexpress.com/article/explained/athirappilly-power-project-pinarayi-vijayan-kerala-hydel-power-project-2828032/>

Rajeev, EP. ‘Athirapillikkku pinnale Anakkayam. Aadhivasikal Aashankayil.’ - Kerala Kaumudi – November 08, 2020 -

<https://keralakaumudi.com/news/news.php?id=429241>

⁴¹⁸ In a turnkey project, a private investor would create a complete package from technical, financial and legal points and offer it as a product.

⁴¹⁹ ‘Anakkayam Small Hydro Electric Project (7.5 MW)- Revised Administrative Sanction- accorded- Orders issued. B. O DB No. 542/2019 (DGC/AEEV/AKYM/2014 dtd: 12.07.2019’. Kerala State Electricity Board Limited. 12 July 2019.



Fig. 2: A people's protest against Anakkayam Hydel Electric Project in front of KSEBL office

(Source: <https://www.facebook.com/Peoples-Movement-Against-Anakkayam-HEP-102295415027399>)⁴²²

While the initial proposal estimated a budget of Rs. 77.51 crore, the revised budget in 2018 came up to Rs. 139.62 crore including Rs. 61 lakh for compensatory afforestation⁴²⁰ in the place of the trees that will be cut for the project. In the second half of 2020, with the pandemic restrictions in force, the project proponent, KSEBL tried to proceed with clearing the forest. This led to a lot of uproar from the already alert citizens and environmentalists who were aware of the value of the biodiversity of the Western Ghats, which has been under heavy anthropogenic pressure.⁴²¹

The Forest Dependent Community of PrTR

Of the fourteen-settlements in Athirapilly Gram Panchayath, Kadars (classified as a Particularly Vulnerable Tribal Group or PVTG by the Government of India) are settled in eight, which also includes the 8 ha of land allotted from Vazhachal Forest Division for Anakkayam HEP in 2013. They are nature-spirit worshippers considered as endemic to the Nelliampathy – Anamali part of Western Ghats (Source: MoEF & Kerala Forest Department). They regularly go into the forest to collect a range of non-timber forest produce, such as honey, wax, and tubers and fish from the numerous streams, rivers and reservoirs of the area which is their primary means of sustenance and livelihood. The Kadar community is highly dependent on the forest for their livelihood as they live in continuous stretches of forest where their “everyday conflict is more directed towards various state mechanism” (Kalathingal 25).⁴²³

The titles for the Kadar community in PrTR were distributed in February 2014, thereby recognizing their rights over and management of the resources. This recognition of FRA claims makes the community the rightful owners of the forest, both at the individual and community levels, which make any attempt to kick-start the project without the consent of the Gram Sabhas a violation of the FRA.

The determination and recognition of customary rights of forest dependent communities as per the FRA can happen only through the participation of the government departments of Tribal Affairs, Forest and Environment, Revenue, as well as the Panchayati Raj institutions to ensure adequate representation of social, cultural, environmental, and economic concerns and opportunities (Dash 38).

⁴²⁰ Studies have shown that this kind of replanting of trees through compensatory afforestation which is often monoculture does not replace the disturbed flora and fauna and causes permanent damage to the ecosystem. It is based on the flawed assumption that ecosystem can be replaced by planting new trees in place of the chopped ones.

Saxena, K B. ‘Compensatory Afforestation Fund Act and Rules: Deforestation, Tribal Displacement and an Alibi for Legalised Land Grabbing’. *Social Change* 49 (1) - 24-40.

⁴²¹ ‘Environmentalists decry revival of controversial Athirappilly Hydel Project by Kerala Govt.’ *Sabrangindia.in* - July 17, 2020 - <https://sabrangindia.in/article/environmentalists-decry-revival-controversial-athirappilly-hydel-project-kerala-govt>

‘Tribespeople stage protest against Anakkayam project’ - *The Times of India* - November 19, 2020 - <https://timesofindia.indiatimes.com/city/kochi/tribespeople-stage-protest-against-anakkayam-project/articleshow/79289270.cms>

Unnithan, Lakshmi. ‘The Anakkayam Small Hydro Electric Project, Kerala will Wreak Havoc, Wild Animals and Adivasis to Lose their Homes’ - *Krishijagran.com* - November 09, 2020 - <https://krishijagran.com/news/the-anakkayam-small-hydro-electric-project-kerala-will-wreak-havoc-wild-animals-and-adivasis-to-lose-their-homes/>

⁴²² Thamarassery, Shafeeq. ‘Athipillikky pinnale Anakkayavum’ – *Doolnews* – October 28, 2018 - <https://www.doolnews.com/kssp-against-anakkayam-project-423.html>

⁴²³ Kalathingal, Divya. ‘Conservation—a contested story: the State and the Kadar Adivasis, India’, 16/1 *Law, Environment and Development Journal*. 2020, p. 20-38.

But the distribution of titles has been slowed down or even stalled under the garb of the pandemic. Chitra says, “The catastrophic Kerala floods and the Covid-19 pandemic are being used to push the indigenous community further into the margins and under its cover they are pushing development projects without sufficient notice and publicity. They want to divide us and displace us and take away our land and forest. This is nothing less than human rights violation and what has been happening to the people of Anakkayam is a perfect example of this.”

Responses from the Community

It is through newspaper reports that those already involved with the Athirapilly campaign got to know about the revival of the Anakkayam HEP in 2019. This prompted Geetha VK (Oorumupathy,⁴²⁴ Vazhachal) and V Ajitha (Secretary of the Community Forest Rights Coordination Committee) to reinstate conversations on the impacts of a hydro power plant in such a biodiversity hotspot⁴²⁵ and in the protected area where the FRA titles were granted. With the support of groups such as Chalakkudy Puzha Samrakshana Samiti and River Research Centre, they launched a similar vocal campaign *#kaadinoppamkaadarkoppam*, *#SaveAnakkayam* against the project pointing out issues such as the loss twenty acres of rich evergreen forest land and impact on biodiversity; categorisation of the project area as ESZ-1 by the WGEEP and the High Level Working Group (Kasthurirangan Committee); violation of State Disaster Management Act, the FCA, Biodiversity Act 2002, the FRA, the PESA, etc.⁴²⁶

SP Ravi, Secretary of Chalakkudi Puzha Samrakshana Samiti and Director of River Research Centre pointed out that the community under the leadership of Geetha and Ajitha submitted a petition with the above-mentioned points to the Kerala High Court, where the case is currently pending. He also pointed out that the project is neither economically viable, nor environmentally sustainable: “The cost of electricity from this project will be more than Rs. 10/unit which is exorbitantly higher than what KSEBL is presently availing which is Rs 3.5 - Rs. 4 per unit from others. Solar would be cheaper than this though even in that the viable mode is to move towards decentralised usage!” Hydropower is always proposed with the argument that it is a renewable source of energy and puts less strain on the environment, but the stories from the Himalayas tell a very different tale.⁴²⁷

Impact on Ecology

Between June 1 and August 18, 2018, Kerala experienced the worst floods since 1924 with 42% excess rainfall than the normal average.⁴²⁸ The Western Ghats reported nearly 341 landslides from 10 districts during this period and also led to the release of excess water from 37 dams across Kerala which impacted close to 14 lakh people who had to be evacuated to relief camps (GoK 12-18) including people from the Vazhachal and Parambikulam areas.

⁴²⁴ Oorumoopathy refers to the head woman of a hamlet; ‘ooru’ means hamlet.

⁴²⁵ Bachan, Dr K. H. Amitha & Mr. M. P. Shajan. Assessment of Impact of flood/landslide on Biodiversity and developing methodology for long-term monitoring and evaluation of changes in the ecosystem and biodiversity: A case study in the Athirapilly Panchayath: Final Project Report. Kerala State Biodiversity Board. April 2019. Thrissur, Kerala.

⁴²⁶ Collated from a note circulated by the campaign team during the online and offline campaign in November 2020.

⁴²⁷ The study conducted post the 2015 floods in Nepal and the recent recurrent floods in Uttarakhand and Himachal Pradesh depicts that the activities around the construction and running of hydropower plants such as drilling and blasting are making these places prone to seismic tremors and landslides.

‘About 70 hydropower projects in Himalayas at risk of quake-triggered landslides’ - Down to Earth Magazine – October 01, 2018 - <https://www.downtoearth.org.in/news/environment/about-70-hydropower-projects-in-himalayas-at-risk-of-quake-triggered-landslides-61766>

⁴²⁸ ‘Executive Summary.’ Kerala Post Disaster Needs Assessment Floods and Landslides August 2018. Government of Kerala et al. Thiruvananthapuram. pp 10-28.

Geetha points out that around 24 families who were flood-impacted have still not been rehabilitated back to their original hamlet and points to the grave danger the people will be in with further tunnelling (5.5 km long) which would require blasting.⁴²⁹

Region	Incidents of Landslides
Himalaya	High to very high
North-eastern Hills	High
Western Ghats and Nilgiris	Medium to High
Vindhyachal	Low

(Source: Landslide Preparedness Guidelines for Safety of Buildings on Slopes by National Institute of Disaster Management (NIDM), 2019)⁴³⁰



Fig. 3: Location in Anakkayam where the landslide occurred during the 2018 floods.

(Source: <https://www.facebook.com/Peoples-Movement-Against-Aanakkayam-HEP-102295415027399>)

Though blasting to build the tunnel was not permitted initially, the KSEBL made a fresh request to the Parambikulam Tiger Conservation Authority for the same. This was raised in the Rajya Sabha by Shri CP Narayanan, to Minister of MoEFCC (Anil Madhav Dave) on August 01, 2016: whether request for permission has come to NTCA from KSEBL for cutting trees and digging of tunnels and use of explosives. The Minister responded that no such request has been received in the matter.⁴³¹ However, the commu-

nity gathered information about the insidious way in which KSEBL procured sanction for the project with only a few members from two oorus (tribal hamlets) of the area, which is a violation of the FRA and WLPA.

Considering that the FRA is applicable in Vazhachal forest division and the people have gained individual and community forest rights⁴³², KSEBL could not have proceeded with the project without the consent of the Gram Sabhas. Eight out of the nine oorus passed resolutions in the Gram Sabha rejecting the project and notified the Chief Minister, Sub Division Level Committee, District Level Committee and 15 others including state ministers, political leaders and KSEBL officials, other concerned ministers and officials, with copies of the resolutions; the same was produced in the High Court. The petitioners in the case filed on 12 November are Vazhachal Kadar Prakrutha Gotra Grama Sabha (Grama Sabha of the Vazachal Oorukootam), Vazhachal Community Forest Resource Coordination Sangham.⁴³³

⁴²⁹ MoEFCC accorded clearance for the diversion of 8 ha forest land for the implementation of the project on the condition that explosives will not be used for open excavation works and drilling of tunnels.

⁴³⁰ Landslide Preparedness Guidelines for Safety of Buildings on Slopes. National Institute of Disaster Management (NIDM), Ministry of Home Affairs, New Delhi - 2019.

⁴³¹ Unstarred question. Rajya Sabha August 01, 2016 - <https://rajyasabha.nic.in/rsnew/Questions/archivemain12.aspx>

⁴³² 'Monthly Update on status of Implementation of the Scheduled Tribes and Other Forest Dweller (Recognition of Forest Rights Act), 2006 (for the period ending 30.06.2020) - October 13, 2020 - Ministry of Tribal Affairs, Government of India.

⁴³³ Vazhachal Kadar Prakrutha Gotra Grama Sabha & Anr ... (Petitioners) Vs. State of Kerala & Others (Respondents): Petition submitted to High Court Judicature of Kerala at Ernakulam, 12 November 2020.

Geetha reiterates that the Kadar community will continue their opposition to the project, which is disastrous to the ecology and lives and livelihood of the people who are dependent on the non-timber minor forest produce. For the Adivasis, every tree is pristine, it is “considered as God and the project proposes felling 1,897 big trees (70-740 cm of girth) and a larger number of smaller trees,” says Ajitha.

Explicit Double Standard: Conservation and Customary Rights

India is one of the signatories of the Global Tiger Recovery Program⁴³⁴ that seeks to empower tiger range countries to “address the entire spectrum of threats, domestic as well as those that are transboundary in nature, and work towards increased financial sustainability through the integration of conservation objectives into development.” This declaration itself is a contradiction as the attempt to integrate conservation into development is almost always impossible as development in such eco-sensitive spaces would entail disturbing the terrain and its biodiversity and causing irreparable damage.

The state in the name of conservation makes national parks, wildlife sanctuaries, tiger reserves, conservation reserves and community reserves on the one hand to supposedly curb human interventions and protect rare species of animals, and on the other hand, sanction projects that cause harm to the ecology and the living organisms that inhabit those spaces. It is essential that the government abides by its international obligations such as ILO Convention No. 107 that restricts the eviction of indigenous people from the land they live on, as well as various national legal protections crystallising this right. Creating hurdles for recognising the community and individual rights of forest-dependent communities and cordoning their habitats by declaring them as PAs and then implementing the age-old colonial method to use this as a means to loot the resources to benefit the extractive economy needs is a pattern one has seen across the country. Instead the state should be proactively granting customary rights to the people who won them through long-standing struggles.

In a recent television interview, the newly elected Minister of State Power, K Krishnankutty dismissed queries on the Athirapilly hydropower plant and said, “Let us concentrate on the 20 non-controversial dams that are functional. We will come back to this later.” The interview implied that the project could be on hold though the Minister reiterated that hydropower plants are the cheapest method to make electricity in Kerala which has a large riverine source.⁴³⁵ Though through the interventions of the forest community, civil society, environmentalists and citizens, the Anakkayam SHEP seems to be shelved for now, Sharat Chellor (National Alliance of People’s Movement) feels that the community needs to be alert towards any move in that direction by the state. As someone who was also active with the Athirapilly struggle, he points out that though the government has seen the state through two disastrous floods (2018 and 19), they will still proceed with developmental activities without any concern about biodiversity hotspots or ecological peculiarities of the state with Western Ghats and the 585 km long coastline.

KSEBL had suffered huge infrastructural mishaps and financial loss due to the flood and subsequent landslides, including at Poringalkuthu. To proceed with the HEP in the Western Ghats would not only be detrimental to the ecology and the communities living there but also foolish as a business venture. The current government of Kerala seems to be keen on pursuing developmental projects without much concern about the environment or ecology; the K-rail controversy will point in this direction.

⁴³⁴ Held at Saint Petersburg, Russia on November 23, 2010, the meeting appealed for an increased cooperation and coordination of efforts among the tiger range countries.

Global Tiger Recovery Program 2010-2022. Global Tiger Initiative Secretariat, The World Bank, Washington DC - March 2011.

⁴³⁵ Exclusive Interview with Minister K Krishnankutty | Straight Line EP 416 | Part 02 | Kaumudy – July 25, 2021 -

<https://www.youtube.com/watch?v=QoKKxgQ31Ns>

The Left Democratic Front-led Kerala government should devise ways to preserve the Western Ghats which as per their manifesto play an important role in the environmental protection of Kerala and withdraw any positive steps to implement the project.⁴³⁶ If anything, one needs to learn from the catastrophe that the Himalayan belt is suffering currently from the construction of more than 600 dams in the seismic region which has suffered in the last few years through torrential rains and subsequent landslides.⁴³⁷ Or will the state government be going by the flawed and fake positions as the one that was made by the head of the state during a conference on tiger conservation where conservation was defined as “a means to achieve development rather than considering it to be anti-growth”?⁴³⁸

The Kadar community in this area have experienced frequent displacement earlier during the construction of the Parambikulam, Peringalkuthu, Sholayar, and Thunakadavu dams which prompted them to seek tenurial rights. To put them and their habitats at risk again would be repeating the historic injustice that the community has lived through since the colonial times. In places like PrTR, where the human-animal conflict has been minimal, and the community has played a proactive role in preserving the forest, the government should abide by the FRA and promote a sustainable and mutually beneficial coexistence between animals, nature and the humans, thereby democratising forest governance.

⁴³⁶ Manifesto of Left Democratic Front - <https://ldfkeralam.org/manifesto/>

⁴³⁷ Asher, Manshi. ‘Hydropower projects ruining lives in the Himalayas’ - The Third Pole - August 13, 2019.

The Hidden Cost of Hydropower: Environmental Hazards and risks of tunnelling, excavating & construction in Run of the River Hydropower Projects in Himachal Pradesh - Himdhara Environment Research & Action Collective - June 2019.

⁴³⁸ While inaugurating the 3rd Asia Ministerial Conference on Tiger Conservation PM Narendra Modi said, “We need to define conservation as a means to achieve development rather than considering it to be anti-growth. I strongly believe that tiger conservation or conservation of nature is not a drag on development” https://tigers.panda.org/news_and_stories/stories/3rd_asia_ministerial_conference_on_tiger_conservation/

‘Tiger Conservation is not choice, but an imperative: PM’ - India Today - April 12, 2016 -<https://www.indiatoday.in/pti-feed/story/tiger-conservation-is-not-choice-but-an-imperative-pm-589135-2016-04-12>

Going through this compendium, one can easily see that tiger reserves which are being affected by infrastructure or developmental projects are not restricted to just sporadic cases. A distinctive pattern can be observed as to how these protected areas are being forced to bear the negative consequences due to the ‘human needs’, ‘public interest’ or making way for the “development aspirations” of the nation. The manner in which several projects within or near tiger reserves have been given a go ahead by the regulators including the MOEFCC, NBWL and NTCA raises serious questions as to whose interests are being served.

This also raises the question about what needs to be done to ensure that such protected areas are not sacrificed at the altar of development. One of the key things is to ensure that when any kind of infrastructure or developmental project is being proposed within or near any protected area or tiger reserve, there should be wider consultations with the citizens, members of civil society, any affected communities and environmentalists. This should be accompanied by detailed disclosures related to the proposed projects, the background and track record of the project proponents, periodic review of the projects, grievance redressal mechanisms in place, etc. Along with this, the impacts of the projects should be seen not just on a standalone basis, but their cumulative impacts should be taken into account, both at the time of approval and on a periodic basis. The dilution of environmental laws which has been witnessed over the years is also a matter of deep concern, which have proven ineffective to a large extent in preserving the protected areas and other forests. What is more worrying is that further dilutions of environmental laws are being proposed and this may further result in loss of habitats, making the international commitments to protect the endangered and threatened species redundant. It becomes a collective responsibility to ensure that the laws are shaped in a manner that ensures conservation and sustainability. Verdicts like the recent one passed by Supreme Court in June 2022, which stated that a minimum 1 km ESZ should be mandated for all protected areas where a wider ESZ has not yet been proposed or notified would provide some additional protection, but at the same time needs more deliberation as to why so many protected areas have still not notified an ESZ despite its acknowledged significance.

With the focus on Protected Areas, the well-being of forest dwelling communities is often undermined and overlooked by the authorities, including the forest department. While the conservation goals for Protected Areas such as Tiger Reserves are crucial in several aspects, the short-sightedness of the forest department and the higher authorities in trying to create ‘inviolable spaces’ needs to be critically questioned, which often leads to the violation of rights of forest-dependent communities, especially when the importance of a symbiotic relationship between these communities and the forests has been widely recognized as playing a crucial role in preserving the protected areas. Whether it is the issue of displacement, proper rehabilitation, generating livelihoods or forced migration, forest dwelling communities should not be made to bear the brunt of conservation goals. This also needs to be weighed with the fact that often the forest department and state governments see these protected areas as a revenue generating tool through promoting wildlife tourism, which essentially is in conflict with their quest for inviolable spaces. Adequate measures should be taken to ensure that where the displacement of forest-dwelling communities becomes unavoidable, proper rehabilitation should take place along with ensuring that they are able to secure their livelihoods. At the same time, the consent of Gram Sabhas should be respected if these communities want to live inside these protected areas.

There should also be adequate Grievance Redressal Mechanisms for them which should also be made accessible for them through proper support. Financial accountability and transparency are key mechanisms to challenge destructive projects. It was observed during the writing of the case studies in this volume that financial information such as the cost of the projects, key financiers behind the projects, any safeguard mechanisms followed by the financiers, etc. was not available in the public domain. Making such information accessible can go a long way in strengthening financial accountability, which in turn can ensure that the projects are not pushed indiscriminately solely for the sake of financial returns.

Often such infrastructure and development projects are at loggerheads with the goals of conservation and sustainability, especially in preserving our precious biodiversity, which cannot be traded merely for financial gains. This also provokes fundamental questions about the need of such projects, who gets to decide that such projects should materialize and the larger debate on the direction of development which has been discussed and debated ad infinitum. But such questions are pertinent even more in today's turbulent times when nations are in a race for economic growth and the dangers of climate change are manifesting more than ever.

Annexure

Location of Selected Tiger Reserves on India's Map



Centre for Financial Accountability (CFA) engages and supports efforts to advance transparency and accountability in financial institutions. We use research, campaigns and trainings to help movements, organisations, activists, students and youth to engage in this fight, and we partake in campaigns that can shift policies and change public discourse on banking and economy.

We monitor the investments of national and international financial institutions, engages on policies that impact the banking sector and economy of the country, demystify the world of finance through workshops and short-term courses and help citizens make banks and government more transparent and accountable, for they use public money.