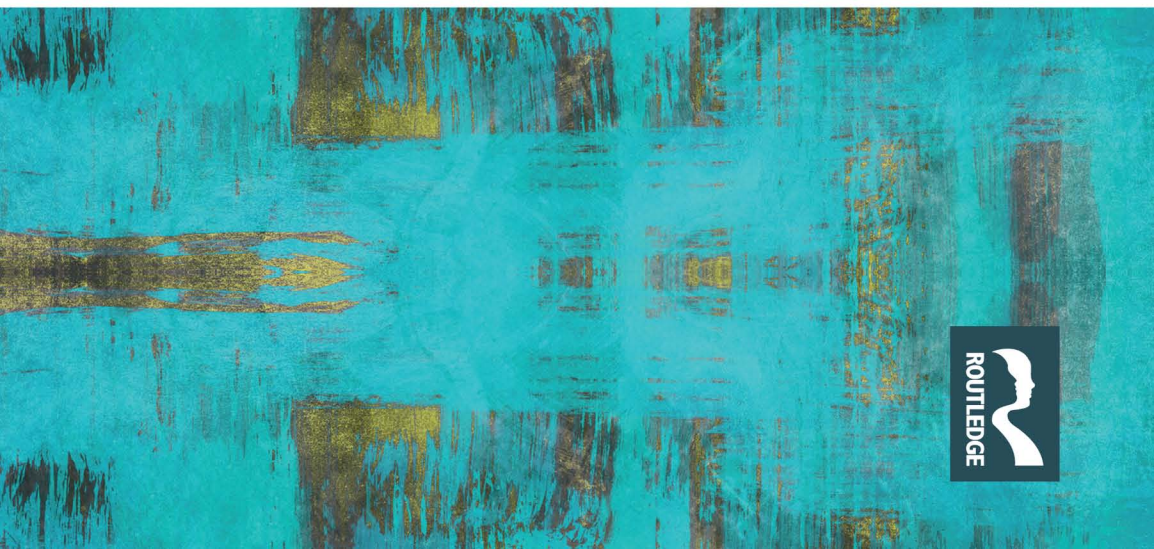
Routledge Studies in Conservation and the Environment

A POLITICAL ECOLOGY OF FOREST CONSERVATION IN INDIA

COMMUNITIES, WILDLIFE AND THE STATE

Amrita Sen



The Sunderbans stands out as not just the biggest mangrove forest in the world, but as a complex, multi-layered and multi-dimensional ensemble of humans and non-human actors. We actually know and understand much less than we think we do and Sen takes one important step in this book in explicating this dynamic world of forests, tigers, prawn, livelihoods, conflict, itinerants, rivers, tides, boats, fishing nets, bees, *fakirs* and much more . . . a very welcome addition to the literature.

Pankaj Sekhsaria, *Indian Institute of Technology Bombay*

A meticulously researched account. This book is an excellent resource for students of conservation and researchers alike. The Indian Forest Rights Act was potentially one of the more radical and transformative conservation experiments. This careful analysis of its failures, and the reasons why it is not implemented is important. The site of the study—the Sunderbans—and the intricate understanding of mobility and the examination of indigeneity that the author provides, make it all the more important. This is an excellent contribution to our understanding of the political ecology of conservation.

Dan Brockington, *University of Sheffield*

Amrita Sen advances the field of political ecology by centering the mutually constitutive nature of political and ecological contexts of the socioecological landscape in the Indian Sundarbans. Her fascinating ethnographic work engages deeply with forest-based life worlds of families, social groups, and political communities that inhabit these endangered and rapidly eroding landscapes. Sen's arguments about how humans and tigers of Sundarbans are subjectified, through processes of regulation, control, and subjugation, shine new light on the complex workings of power within the narratives of interspecies rights.

Prakash Kashwan, *author of Democracy in the Woods: Environmental Conservation and Social Justice in India, Tanzania, and Mexico* (2017) and editor of *Climate Justice in India*

Amrita Sen breaks new ground in understanding the politics of participation in community-based conservation, by exploring how the capacity to participate is unequally distributed among different social groups as well as between humans and nonhumans. A timely and important intervention.

Robert Fletcher, *author of Romancing the Wild: Cultural Dimensions of Ecotourism* (2014), *Wageningen University*

Sundarbans is in the centre-stage of our climate change debate. By exploring the political ecology of India's highly contested regime of forest conservation and by looking at what is happening in the Sundarbans, this book offers compelling insights into the making of modern Indian nature. This will be a companion for those interested in Indian environmental politics.

Arupjyoti Saikia, *Indian Institute of Technology Guwahati*

A valuable contribution to the burgeoning political ecology literature in India. By taking a rights-based approach, this book highlights the adverse environmental justice implications of conservation policy in the Sunderbans and how well intended laws such as the Forest Rights Act end up benefiting powerful interests at the expense of more marginalised forest-fishers.

Ajit Menon, *Madras Institute of Development Studies*

A Political Ecology of Forest Conservation in India

This book critically explores the political ecology of human marginalization, wildlife conservation and the role of the state in politicizing conservation frameworks, drawing on examples from forests in India.

The book specifically demonstrates the nuances within human-environmental linkages, by showing how environmental concerns are not only ecological in content but also political. In India a large part of the forests and their surrounding areas were inhabited far before they were designated as protected areas and inviolate zones, with the local population reliant on forests for their survival and livelihoods. Thus, socioecological conflicts between the forest dependents and official state bodies have been widespread. This book uses a political ecology lens to explore the complex interplay between current norms of forest conservation and environmental subjectivities, illustrating contemporary articulation of forest rights and the complex mediations between forest dependents and different state and non-state bodies in designing and implementing regulatory standards for wildlife and forest protection. It foregrounds the issues of identity, migration and cultural politics while discussing the politics of conservation. Through a political ecology approach, the book not only is human-centric but also makes significant use of the role of non-humans in foregrounding the conservation discourse, with a particular focus on tigers.

The book will be of great interest to students and academics studying forest conservation, human–wildlife interactions and political ecology.

Amrita Sen is Assistant Professor of Sociology at the Indian Institute of Technology Kharagpur and Visiting Faculty with Azim Premji University, India. Her research interests include cultural and political ecology, politics of forest conservation, urban environmental conflicts and Anthropocene studies. In 2019 she received the 'Excellence in PhD Thesis award' from the Indian Institute of Technology Bombay, for her doctoral research on the conservation politics in Sundarbans.

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Communities, Wildlife and the State

Amrita Sen

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Acknowledgements

As I write this book, the world seems to be reeling with COVID-19, running its course with the second wave now—spreading contagions; claiming lives; and added to this, in India, rendering people homeless with jobs lost; communications scrapped; and no food, ration and money. What is troubling, even more, is a severe political apathy towards the economically vulnerable people—those struggling the most with the pandemic. Coronavirus, the severest zoonotic virus which wreaked havoc across the world since December 2019, has taken the worst toll on marginal communities. While I remain worried on the lingering impact of pandemic, I remember the days I had spent in Sundarbans, amidst such a group of people who despite being economically fragile kindly welcomed me into their lives with all warmth, and despite their many constraints allowed me to explore their worlds. I owe a large debt of gratitude to each one of them.

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mention Bhanu da, in whose cycle van, I was travelling to different places and this was a memorable experience. I remember time spent with Shyamal Nandy and Satabdi, with whom going for fieldwork and to village markets in evening, walking along the river early mornings and the endless conversations will be a much-cherished experience.

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with the prawn fishery owners. I thank Aswini Pahari, chief librarian of West Bengal Legislative Assembly, for letting me access archives and documents from the Assembly library. I thank Pranabes Sanyal who always encouraged me to visit him for discussing my research. I earnestly thank Nilanjan Mallick, field director of STR, for bearing with me long interviews. I also thank Anindya Guha Thakurta, assistant field director of STR, Chandani Tudu, managing director of WBTDCC Ltd., Arabinda Bhattacharya and Madhusudan Dhar, forest guards from Bidya Beat Office of STR, for their cooperation. I thank Tapas Mondol, forest guide under STR, for his immense help during my visits to the Forest Range Offices. I also thank several forest officials from STR Range Office at Sajnekhali—Biplab Kumar Bhowmick deserves a special mention.

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Part of the fourth chapter, 'Forest-based livelihoods, survival crisis and politics of belongingness', was published in the *Journal of Political Ecology* (Volume 24, 2017). Also, part of the fifth chapter, 'Decentralizing conservation processes through rights-based frameworks: Forest Rights Act and Joint Forest Management', was published in the *Economic and Political Weekly* (Volume 52, No. 29, 2017), *Environment Development and Sustainability* (Volume 21, No. 5, 2019) and *Environmental Sociology* (Volume 5, No. 1, 2019). I thank the editors of these journals for consenting to use these works in my book. I also thank referees of these articles, who offered multiple insightful comments. John Baddeley has been extremely cooperative during the writing and kindly considered my several requests for extensions, when I failed to meet submission deadlines.

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Foreword

In 2000, when atmospheric chemist Paul Crutzen and other scholars of global environmental change introduced the idea that humanity is living in a new Epoch—the Anthropocene—they were met with substantial scepticism. A couple of decades later, it has become clear that we are indeed living in a time unlike any that humanity has witnessed. The rate of destruction of natural resources, ecology and the environment has led to the transgression of multiple planetary boundaries, with visible impacts that include climate change and biodiversity collapse.

The idea of the Anthropocene emanates from an acknowledgement that humanity has played a major role in this destruction. Yet by placing all of humanity in the same category, we implicitly assume that that all people are equally culpable, failing to acknowledge the role of capital in shaping systemic inequalities. It is an undeniable fact that those countries, societies and groups of people who have contributed the least to climate change will face the worst of the impact. Political ecology frameworks are fundamental in helping us to develop a better understanding of the structural factors that shape these inequities.

In 'A political ecology of forest conservation in India: communities, wildlife and the state', Dr. Amrita Sen provides a deep dive into the world of the biodiverse mangrove forests of the Sundarbans, one of the world's most densely populated areas. These forest islands are highly vulnerable to climate change and associated sea level rise. For the forest-dependent communities who eke out a precarious living in this threatened landscape, life is further complicated by the fact that much of the Indian side of the Sundarban falls within the Sundarban Biosphere Reserve (SBR). Thus, the Sundarban landscape is marked by contestations, conflict and the claiming of territorial space by the state, ostensibly for biodiversity protection. Dr. Sen weaves a compelling narrative of coupled political-social-ecological change in the Sundarbans from the colonial period through post-independent India, up to current times. She draws deftly on multiple methods, including analysis of archival records, and deep ethnographic analysis as an embedded observer.

As Dr. Sen demonstrates, colonial ideas of conservation as a political project bear their signature in the Sundarban forests even today, impacting politics,

living conditions and culture. The nexus between politics, power and socio-economic inequalities has a visible impact in shaping imaginations, narratives and practices of forest management in the Sundarbans. By notifying large tracts of forest as protected, and drawing lines in the shifting marshland between indigenous and non-indigenous communities, political ecology plays a key role in shaping winners and losers in the short term. Tigers also become co-opted as commodified objects of control, to simultaneously serve conservation and political objectives, in a landscape which witnesses exceptionally high levels of human–wildlife conflict. In the long term, with climate change looming on the horizon, both the human and non-human actors who inhabit these islands may be doomed to lose, as global inequalities play out at a much larger scale.

Through a series of chapters examining the lived experiences of specific villages, caste groups and forest management communities, this book thoughtfully demonstrates the illogic of using a simplistic, universalized understanding of politics, culture and ecology in a complex social-ecological landscape like the Sundarbans. In doing so, the book also offers a critique of existing tropes on sustainability which posit a harmonious relationship between people and nature in 'unspoiled' areas like the Sunderbans, blind to the complexities of everyday navigation between a sinking landscape and a hostile state that local communities are forced to undertake.

There is a growing understanding of the importance of political ecology in shaping long-term trajectories of social-ecological systems in different parts of the world. This book provides a rich and nuanced addition to this literature and will be of value to scholars interested in diverse aspects of sustainability in the global South.

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1 Introduction

A political ecology of forest conservation in the Indian Sundarbans

Abstract: This chapter sets the conceptual framing of the book, by introducing political ecology as an analytical category to explain impacts of conservation politics on forest-dependent communities. The proposed framework offered in this chapter also provides a grounding to ask how vulnerable ecologies shape human associations, claims to resources and material relations between humans and the state. The framework foregrounds issues of power asymmetries, inequities and social injustice as imperatives in framing explorations on forest conservation politics in India, moving beyond discourses which see conservation as strictly defined by the state or those that rely on a simplistic portrayal of local communities. It prompts readers towards recognizing ecological conflicts as chequered and non-linear, shifting discourses towards capturing complexities within place-based framings—on the impact of conservation norms on diverse stakeholders.

This book is an attempt towards the analyses of human-environment linkages in contemporary India, through an empirical and epistemological exploration of the political ecology of forest conservation. Contextualized in a geopolitical conservation landscape, the book reflects on human relationships with nature and coupled social-cultural-environmental conflicts caused by unabated human dispossessions from the forests. In the book, political ecology as an analytical framework foregrounds issues of power asymmetries, inequities and social injustice as imperatives in framing practical explorations on conservation politics, moving beyond discourses which see conservation as strictly defined by the state or those that rely on a simplistic portrayal of local communities. The aim of the book is to understand how prevailing conservation norms mediate communities and affect their existing social and institutional structures, underpinning forest livelihoods into a political realm that is embedded within multiple networks of power. While livelihoods of marginal communities are challenged by a range of control mechanisms inherent within conservation norms, the book explains how many of these conservation landscapes 'comprise socially

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differentiated actors, whose priorities and claims to resources vary over space and time' (Chomba, Treue and Sinclair 2015: 38) and so do their responses to recent conservation initiatives.

The structural and social differentiation within local communities and the key imports of this differentiation within contemporary neoliberal mechanisms of forest governance are central to the political ecology analyses of this book—the current framework of forest conservation has to a large extent led me to explore and analyse the prevailing sociality of the landscape and its intensifying complexities. The book discusses ways in which rights and entitlements to resources are differentially constituted, based on social and political factors determining everyday realities of living—local heterogeneity fundamentally accounts towards exploring and identifying role of forest communities with regard to their rights to forests. It prompts readers towards recognizing ecological conflicts as chequered and non-linear, shifting discourses towards capturing complexities within place-based framings—on the impact of conservation norms on diverse stakeholders.

The book raises some questions, crucial to the understanding and problematization of rights, identity and marginalization within forest-dependent lifeworlds and their profound bearing in the politics of conservation. How do vulnerable risk-prone ecologies shape material socio-economic relations and institutional contexts of forest communities? How are the marginal forest-dependent people represented as a part of the 'local'? How are policy choices determined within ecologies with sharply disaggregated social interests? Why increasing participatory powers and empowerment policies, mandated within recent conservation frameworks, fail to reduce socio-economic marginalization? The structural context (caste, class, religion and kinship) and political organization of the forest-dependent communities provide the primary context in addressing these questions, situating political-economic policies of forest conservation within the complex social arrangements of conservation landscapes.

Bringing 'politics' in political ecology

One of the prominent frameworks that engages with the central questions of this manuscript is political ecology, which discusses ecological transformations triggered by complex political and material forces, marginalization and vulnerabilities of people dependent on ecosystem resources, movements which emanate from ecological distribution conflicts as well as political changes determining access and use of resources (Daur, Adam and Pretzsch 2016: 96). In many contemporary contexts of conservation, which are ecologically fragile and have quintessentially distinct social characters owing to unique geopolitical locations and structural compositionality, identities and political struggles around forest rights are constituted differently and cease to be explained through representative narratives (Karthik and Menon 2016; Sen and Pattanaik 2019). In an era of rapid forest policy reform, such distinctive social characters are instrumental in shaping and politicizing ecologies, since situating identities in relation to the landscape are critical imperatives while legitimizing rights to livelihood resources. In his recent book, Kashwan (2017: 13–16) points out how the interests of different social groups around resource rights are transformed into

political choices and specific policies through mechanisms of 'political intermediation'. Such intermediation takes place through politically engaged social movements, party-led corporatism and politically structured advocacies, and are effected through successful mechanisms of representation at the national, sub-national and local levels. He argues that apart from civil and political rights, mechanisms of political intermediation are critical components in successful claim-making and instituting political and policy change (ibid.). Implementation of Forest Rights Act, one policy reform explained in this book, is identified as being largely embedded in such a political agenda, necessitating an inquiry into the multiple levels of politics to understand how its implementation is translated into practice through similar political intermediations. Others referring to competing discourses in situating politics in political ecology describe interactions around resource management as 'cultural politics'—ways to understand symbolic values of resources as instrumental in shaping collective representations, exceeding a mere signification of resources for immediate material use (Baviskar 2003: 5052). However, political ecology, including cultural politics, does not account for the effects of mainstream political processes, including how populist politics shapes the extent to which different groups can assert their rights to natural resources. Scholars of environmental politics account for these processes linked to electoral politics—the power and authority of forestry agencies and the effects of forest laws, policies and programmes on the nature and the outcomes of the contestations over natural resources.

Conventionally, scholars of political economy have failed to account for the complex ways in which power shapes subjective worldviews of individuals in different contexts. An exhaustive and burgeoning range of studies have linked Foucault's theorization of power and governmentality to the political economy of conservation. Foucault (1991: 102) defined governmentality as the

> ensemble formed by the institutions, procedures, analysis and reflections, the calculations and tactics, that allow the exercise of this very specific albeit complex form of power, which has as its target population, as its principal form of knowledge political economy and as its essential technical means apparatuses of security.

His analysis of 'governmentality' presents a unique approach in examining power as central to current environmental governance frameworks (Goldman 2001; Agrawal 2005; Fletcher 2010; Bose, Arts and Dijk 2012). A fundamental way in which governmentality is understood alludes to the fact that power does not remain central to the sovereign but is exercised at all levels of the society. Power is manifested through technologies and practices, fields of knowledge, fields of visibility and forms of identity. According to Goldman (2001: 500), Foucault's 'art of government', or ways in which traditional state decentred itself as the locus of centralized power, leads us to envision 'dispersed forms of government and their immanence to the state' (Foucault 1991: 91). This art of governance adds explanatory power to the contemporary politics of forest conservation. 'Eco governmentality', an effort in this direction, explores the construction of environment through production of expert knowledge and

power mechanisms (Blake 1999; Goldman 2001; Agrawal 2005; Rutherford 2007). Goldman (2001: 501) describes eco governmentality as 'the productive relations of the government, with their emphasis on "knowing" and "clarifying" one's relationship to the nature and environment as mediated through new institutions'. Luke (1995: 77) has used the concept of 'green panopticon' in understanding how environmental non-governmental organizations (NGOs) like World Watch Institute encloses nature in a kind of global supervision in order to dominate, exclude and repress people and the environment. Current environmentalism, marked by a precedence of global conservationist principles, continually operates with a scientific eco knowledge-based management of protected areas, delineating individuals into specific roles of environmental custodians. Protected areas, according to Dudley and Stolton (2008: 9), are 'an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means'. In India, they include national parks, wildlife sanctuaries, conservation and community reserves. Environmentalism is linked to a kind of 'knowledge production', based on institutionalized and professional scientific activity, whereby environmental activism and its relationship with science appears as a nexus of knowledge and power, along with being a political project (Epstein 2005: 48). This is integral to the current neoliberal conservation policies, characterized by the diffusion of regulatory powers across global think tanks, environmental organizations and corporations (Rutherford 2007: 296).

Other scholars describe how forest governmentality, by reshaping forest legislations through new laws, regulations and procedures, has created 'environmental subjects', who 'not only adapt to the environmental regulation practices as set by the state, but also change their behaviour from initial resistance to state regulation to pro-active participation in forest management' (Bose, Arts and Dijk 2012: 665–666). By this mechanism, current participatory forestry policies like Joint Forest Management (JFM) transform communities from passive entities to the keepers of wildlife and forests, rather 'environmental subjects' (Agrawal 2005; Fletcher 2010). In recent times, environmental politics scholars have also sought to bridge gaps in conventional political economy analysis by mapping how global, transnational and national actors utilize multiple dimensions of power at various scales. For example, Kashwan, MacLean and García-López (2019) present a 'Power and Institutions Matrix' to facilitate a holistic mapping of power in the 'shadows of neoliberalism'. By facilitating incorporation of material, discursive and agenda setting powers of various actors, the power matrix affords a holistic analysis of human-environment interactions, including the multiple facets of community forest dependence, the social ecologies of forests as well as the entrenched political forces that besiege contemporary forest governance and the everyday lives of the forest communities.[1]

The inquiry in this book advances this line of analysis on the centrality of power in administrative agendas of conservation, by putting forward a political ecology framework of incorporating politics as a context within forests life-worlds. This framework helps to bridge a common critique of political ecology, which is, to leave out mainstream populist political processes and political

economy, resulting in a failure to account for its mutually reinforcing effects in ecological and social contexts. Conservation politics, as has been conventionally understood by scholars, has been shaped by ideological debates on wildlife preservation between multiple social classes having contradictory views on the management of natural resources and simultaneously embedded in a politics of prioritizing voices of privileged stakeholders (Saberwal and Ranarajan eds. 2003; Lele 2019). Johari (2007: 48) points out that the principle of exclusion underlying the politics of forest conservation has centred on a production and divide between two distinct varieties of ecological knowledge—traditional and scientific. An exhaustive range of studies have indicated how forest policies have worked to the detriment of marginal classes by restricting their livelihoods—a primary strategy reinforced to sustain political imperatives of industrial development (Blaikie 1985; King 1996; Alier 1997). In the framework of this book, I introduce a perspective to define politics as a context in systematically examining ways in which a variety of existing socialities as well as forest rights come into conflict with conservation—an enterprise to discuss the role of politics in constituting marginalization and instituting structural changes in forest-based lifeworlds. Drawing on recent works which strongly emphasize the contemporary role of power within neoliberal policy reforms on resource management (Kashwan, MacLean and García-López 2019), this book aims to navigate through current institutional mechanisms of conservation in understanding how they differ from past approaches and how critical their role is in redefining material social organizations in vulnerable environments.

The book is based on an ethnographic fieldwork in Sundarban mangrove forests in India, a climate-vulnerable geopolitical ecology situated at the mouth of the Ganges River, inhabited by more than 4.5 million people. Sundarbans, the largest brackish riverine mangrove belt globally, is shared between India and Bangladesh, with a maze of small and large crisscrossing deltaic rivulets interspersing the mud-washed islands. Out of the 102 islands that are located in the Indian part, 54 are inhabited and can be broadly characterized into two kinds—one set of inhabited islands are closer to the mainland and were reclaimed between 1765 and 1900, while the other set, adjoining the forests, were reclaimed between 1900 and 1980 (Jalais 2010: 2). Contextualized in the SBR, as Indian Sundarbans is known as, the book captures the daily practices of people inhabiting the forest fringes, in association with the forests, their resources and their intermediations with the conservation policies today. It narrates how conservation politics shapes constellations of social and ecological vulnerabilities in the delta and progressively transforms socio-economic and political relationships of the contextual actors, often through disparate representations for instituting reforms (Bryant 1991; Kashwan 2017).

Forestlands in India

Forest policies in post-independent India, before the trends towards reform since1990s, were largely formulated mirroring colonial policies—the most prominent one being the Indian Forest Act (IFA) of 1878 (subsequently revised in 1927), which at large converted majority of the national forest lands into state

property. The takeover severed most of the livelihood dependencies by banning shifting cultivation, nationalizing timber and non-timber forest products, imposing fee on grazing and notifying major forest areas as 'inviolate' through legal categorization of forest areas (Lele 2019: 23). Post-independence, state monopolization of forests continued unabated, mostly for the supply of raw materials and state revenue. During this period, attempts of industrialization at par with the developed world relegated environmental concerns while development in practice was witnessed as a universal desire for the pursuit of economic growth—an aspiration overlooking ecological concerns as a 'luxury imported from the West' (Baviskar 1997: 196). However, rapid decline in forest cover owing to the increasing demands of industrialization eventually prompted states towards drafting rigorous wildlife conservation policies from 1970s, most of which advocated forest fencing in the form of protected areas. The centralized forest laws drafted during this time notified forests as national parks, wildlife sanctuaries and critical tiger habitats (CTHs),[2] curtailing human activities and evicting people, more or less following the colonial past (Willems-Braun 1997). The Wildlife Protection Act of 1972 secured certain hunting restrictions but at the social cost of excluding local communities (Lele 2019: 23–24). Redrafting forest policies with wildlife conservation as a priority also underscored an ideological debate between middle-class wildlife enthusiasts and forest rights activists. According to Guha and Alier (1997: 35), this debate represented a conflict between elite environmentalism or an 'environmentalism of affluence', hinging on an 'enhanced quality of life', contradicting an 'environmentalism of survival', where dispossession from inhabited natural landscapes challenges life prospects and leads to resistance. Several years after independence and three decades since economic liberalization, conservation of forests still remained a contested practice. The forest policy reversals, which initiated since the implementation of National Forest Policy (NFP) of 1988 to integrate local needs within forestry, failed to provide a robust mechanism for sustainable management and remained unsuccessful to a large extent. Recent works prompt a necessary transformation of conservation frameworks towards a convivial one, keeping in mind larger challenges of the Anthropocene (Büscher and Fletcher 2019, 2020).

Forest reforms, initiated with the introduction of the NFP, exemplified an organizational restructuring through decentralization. Decentralization, as defined by Ribot, Agrawal and Larsson (2006: 1865), refers to 'any political act in which a central government formally cedes powers to actors and institutions at lower levels in a political-administrative and territorial hierarchy'. Decentralization, which gained momentum in the realm of forest governance since the mid-1980s,[3] has been commonly defined as a system of power delegation and management rights to marginal communities for ensuring democratic decision-making and greater stakeholder participation within management practices. Decentralization had been largely driven by demands of participation by local communities and external pressure from national and international donors. Community-based natural resource management (CBNRM) is a form of decentralized management, offering a new paradigm in forest conservation, by abandoning the exclusivist agendas entrenched in the pre- and postcolonial

management practices (Das 2007). CBNRM was adapted mainly in the latter half of the 1970s, to enable and engage the forest-dependent communities in applying indigenous techniques of forest management (Arnold and Campbell 1985). Success of CBNRM can depend on a range of factors, integrating ecological sustainability, social equity and economic efficiency (Pagdee, Kim and Daugherty 2006: 35). CBNRM can be of two broad types. The first one is where the communities have the sole management rights over a patch of forest land which they jointly manage and control through local disciplinary mechanisms. The second one, commonly known as JFM in India, is where the state involves the communities for participating with the State Forest Department, in managing certain tracts of forest land, on which the communities depend for livelihood. CBNRM differs from JFM in certain ways. While CBNRM refers to the management of communal forests by a village where management plans are developed for government approval, there is certain accountability and revenue sharing between the communities and the state in case of JFM. However, in CBNRM, the community is principally involved in forest management and conservation with indirect and informal cooperation from the state (Pailler et al. 2015: 84).

JFM, as a World Bank report states in 2006, is a model of community forestry where the state engages with the communities in forestry, as a contrary to exclusive community management of forests. JFM was an important and radical departure from the administrative imperative of the forest officials confined within the department, since its advent initiated an attitudinal change among the officials, who initially considered the communities as negligent subjects and incalcitrant (Jodha 2000). JFM is a development program predicated on active cooperation between the forest officers and the villages. While recent studies emphasize the role of plural knowledge into decision-making, democratization and community-based transformations in addressing current environmental challenges, JFM, can be an effort towards recognizing shifts towards equitable resource governance patterns (Zafra-Calvo et al. 2020).

There have been significant debates on the nature of participation in contemporary collaborative forest governance mechanisms like JFM (Agrawal and Gupta 2005; Lele and Menon eds. 2014). Community management is usually successful in those areas where communities are ethnically homogenous, small in size and have limited variations in individual interests (Agrawal and Gupta 2005). In a large number of demonstrated cases, decentralization has led to asymmetric power relations within the communities (Manor 2004; Kashwan and Lobo 2014; Kumar, Singh and Kerr 2015). JFM while having necessary merits if successfully implemented to situation-specific needs, there are internal political hierarchies at the local level that subvert the rationale of community participation. According to Das and Narayanan (2008), if argued from the new governance perspective which promises an exit from the bureaucratic, hierarchical and overloaded structures of decision-making, the efficacy of the new method in resolution of conflicts demands an inquiry. Efforts to implement JFM are in many cases plagued by political participation, power differentials between the state and the resource users, favouritism and legal restrictions on