

Forest, Women, and Transition: A Study of Desia Kandha Community of Kandhamal

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Partial Fulfilment of the award of a Ph.D. degree**

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Gender Studies

By

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Certificate

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1. June 2023, Kandha Women and Forest: Mapping Social World and their Association with Forest in *South India Journal of Social Sciences*, Vol. XXI No.1: 184-191. ISSN 0972-8945

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1. Presented a paper titled “Microfinance Institutions: Empowering Women or Exacerbating their Situations?” in the National Seminar on “Globalisation and its Impact on Trafficking on Women” organised by School of Women Studies, Utkal University, Bhubaneswar, on 10th March, 2015.
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Declaration

I, **Asish Kumar Sahu**, hereby declare that this thesis entitled “**Forest, Women, and Transition: A Study of Desia Kandha Community of Kandhamal**” submitted by me under the guidance and supervision of Prof. K. Suneetha Rani is a bonafide research work. I also declare that it has not been submitted previously in part or in full to this University or any other University or Institution for the award of any degree or diploma.

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To,

Maa

I am Dedicating the present thesis to my loving Mother. She has always given priority to education and pushed me and encouraged me in every step of my career...

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LIST OF ABBREVIATIONS

AJY	Ama Jungle Yojana
AMCS	Agency Marketing Co-operative Society
AWS	Anganwadi Kendra
BPGY	Biju Pucca Ghar Yojana
CA	Compensatory Afforestation
CAFA	Compensatory Afforestation Fund Act
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CFM	Community Forest Management
CFR	Community Forest Resource
CFRR	Community Forest Resource Rights
CHC	Community Health Centres
CIDA	Canadian International Development Agency
DHH	District Headquarters Hospital
DLC	District Level Committee
DSMS	District Supply and Marketing Society
EDC	Eco-Development Committee
FAO	Food and Agriculture Organization
FCA	Forest Conservation Act
FPC	Forest Protection Committee
FRA	Forest Rights Act
FSI	Forest Survey of India
GDI	Gender Development Index
GIM	National Mission for Green India

GP	Gram Panchayat
HDI	Human Development Index
IFR	Individual Forest Rights
ITDA	Integrated Tribal Development Agency
JFM	Joint Forest Management
KASAM	Kandhamal Apex Spices Association for Marketing
MFP	Minor Forest Produce
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MLE	Multilingual Education
MoEF	Ministry of Environment and Forest
MoTA	Ministry of Tribal Affairs
NAP	National Afforestation Programme
NCA	National Commission of Agriculture
NFP	National Forest Policy
NGO	Non-Governmental Organization
NHM	National Health Mission
NREGS	National Rural Employment Generation Scheme
NTFP	Non Timber Forest Produce
OFDC	Odisha Forest Development Corporation
OLM	Odisha Livelihoods Mission
OREDA	Odisha Renewable Energy Development Agency
ORMAS	Odisha Rural Development and Marketing Society
OTELP	Orissa Tribal Empowerment and Livelihoods Programme
OVFR	Orissa Village Forest Rules

PHC	Primary Health Centre
PMAY	Pradhan Mantri Awas Yojana
PMGSY	Prime Minister Gram Sadak Yojana
PRI	Panchayati Raj Institutions
PVTG	Particularly Vulnerable Tribal Group
RCDC	Regional Centre for Development Corporation
RKVY	Rashtriya Krishi Vikas Yojana
RWSS	Rural Water Supply and Sanitation
SDH	Sub-Divisional Hospital
SDLC	Sub-divisional Level Committee
SFP	Social Forestry Project
SGSY	Swarnajayanti Gram Swarojgar Yojana
SHG	Self-help Group
SIDA	Swedish International Development Corporation Agency
SLC	State-level Committee
TDCC	Tribal Development Co-Operative Society
TRIFED	Tribal Co-operative Marketing Federation of India Limited
USAID	United States Agency for International Development
VFC	Village Forest Committee
VSS	Vana Samrakshayana Samiti
WFP	World Food Programme

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CHAPTER 1

Introduction

1.1 Background of the Study

Forests are essential ecosystems that offer numerous benefits, including ecological stability, biodiversity conservation, climate regulation, and resource provision. They are crucial for food security and livelihood for forest-dwelling communities and combating rural poverty. Over 1.6 billion people globally rely on forests, with 60 million indigenous people relying entirely on them¹. Forest products meet both domestic and economic needs of forest-dwelling communities. In Asian countries, indigenous women and men work together in forest-based livelihoods, contributing almost equally to household income from unprocessed forest products². However, they rely on forests differently, have a unique understanding of them, and take different stances on use, management, and conservation. Despite women's significant dependence on forests, they have minimal role in decision-making power over forest utilisation patterns³. Therefore, to achieve gender equity and justice for women in the forest, their meaningful participation is required in formal and informal forest management institutions. Forest management institutions should prioritise gender-sensitive and gender-responsive models in policies and activities.

India has a sizable indigenous population popularly known as tribes or Adivasi.

¹ Linley Chiwona-Karlton et al., "What Is the Evidence That Gender Affects Access to and Use of Forest Assets for Food Security? A Systematic Map Protocol", *Environmental Evidence* 6, no. 1 (December 2017): 2, <https://doi.org/10.1186/s13750-016-0080-9>.

² Terry Sunderland et al., "Challenging Perceptions about Men, Women, and Forest Product Use: A Global Comparative Study," *World Development* 64, no. 1 (December 2014): 58, <https://doi.org/10.1016/j.worlddev.2014.03.003>.

³ Bina Agarwal, "Gender and Forest Conservation: The Impact of Women's Participation in Community Forest Governance," *Ecological Economics* 68, no. 11 (September 2009): 2786, doi.org/10.1016/j.ecolecon.2009.04.025.

They primarily live in hilly areas and significantly rely on forest resources for their livelihood and survival. Forests are one of the critical sources of food, fodder, firewood, medicinal herbs, timber, and construction materials for the tribal people. Over 53 million tribal people in India rely on forest for their everyday needs⁴. Both tribal women and men gain monetary and non-monetary benefits from the forest. Women, in particular, rely on forests in various ways. They gather forest products for domestic use and to support their family economically. Forests also provide the locals with alternative diet sources during “hunger seasons” and act as a “buffer” during droughts, crop failures, epidemics, and other emergencies. Many forest products are also culturally significant, essential source of nutrition, used as traditional foods, and represent food sovereignty. Additionally, forests are crucial in tribal communities’ agricultural practices and cattle rearing.

Besides subsistence and commercial services, forests are the foundation for tribal communities’ religious beliefs and cultural practices. Many tribal communities protect them through their traditions, customs, belief systems, and myths. Nature and culture coexist in tribal areas. The tribal people worship the forest and mountain deities during festivals and rituals. Their sentiments and thoughts are linked inextricably to the forest around them. The forest is central to their folk culture and folklore. The interaction between forests and tribes represents a distinct socio-religious forest atmosphere in many tribal areas. The symbiotic relationship between tribal people and forests is built on sustainable and ethical resource use, maintaining a harmonious relationship with nature. The tribal people’s materialistic needs and belief system on

⁴ Manika Saha and Susmita Sengupta, “Symbiotic Relationship between Forest and Tribe: A Case Study of Santal Tribe of Jayapur Forest, Bankura District, West Bengal,” *Transaction of the Institute of Indian Geographers* 36, no. 2 (12 January 2014): 235.

the natural environment are inseparably linked.

Forests nurture the tribal people by providing shelter, livelihoods, and culture and safeguarding them from natural calamities. Therefore, the tribal people consider themselves “children of the forest”. Tribal people’s healthcare, economy, nutrition, knowledge, culture, and sentiment are firmly associated with their surrounding forests. However, forests are legally owned by the government, and it has the authority to manage them independently. However, given the tribal people’s close relationship with forests, the government should define forest management policy. Therefore, to ensure the tribal people’s connection to the forest, a comprehensive understanding of forests from a local perspective is necessary before initiating or implementing management strategies. This will protect tribal communities’ bond with the forest and ensure access to necessary resources.

However, when we look at tribal women separately in a society or community, their perception, interrelation, and dependence on forests are very different from those of men. In patriarchal societies, including tribal societies, women are traditionally barred from owning land. As a result, they often see common property resources such as forests as their valuable assets. In reality, they are the principal stakeholders and users of forest resources. Tribal women gather various commodities from forests for domestic use and commercial purposes to support themselves and their families financially. Compared to about one-third of men, women can generate more than 50% of their income from forests⁵. Collections and sales of various non-timber forest products (NTFPs) are significant income sources for tribal women in forest areas.

⁵ CIFOR, *Gender in the CGIAR Research Programme: A Strategy for Research and Action* (Bogor, Indonesia: Centre for International Forestry Research, 2013), 2.

Furthermore, women's knowledge of trees and species has been linked directly to household food consumption, health, and nutrition, which is particularly crucial during food crises. Forest food can help cope with food shortage, extreme weather conditions, natural disasters, communal conflicts, and other shocks⁶. The forest is a significant source of livestock fodder, which is crucial to the tribal economy. Tribal women usually look after and own livestock, which is an essential source of their income. Women's control over income correlates positively with improved food intake and child nutrition status⁷.

Nevertheless, various discussions about the rights of the tribal peoples are done mainly at a societal level. However, most societies in India, including tribal societies, are based on patriarchal principles, representing male perspectives across all social and political platforms. Despite being an equal part of society, women lack equality compared to men. They face underrepresentation, discrimination, prejudice, and subordination to men in society. Women primarily face social inferiority due to the androcentric traditions prevailing in societies⁸. Most human societies operate on informal principles, which mainly reflect patriarchal interests, and the state apparatuses act in the interest of these societies. Women were excluded from government subjects for a long time due to patriarchal societal dominance for an extended period. At the same time, as a part of the community, they are still oppressed in their sociopolitical space. Therefore, despite being the most significant community resource stakeholder, they are often overlooked as a part of the community and excluded from important

⁶ M. Arnold et al., "Forests, Biodiversity and Food Security," *International Forestry Review* 13, no. 3 (1 September 2011): 259, <https://doi.org/10.1505/146554811798293962>.

⁷ Eileen Kennedy and Pauline Peters, "Household Food Security and child nutrition: The Interaction of Income and Gender of Household Head," *World Development* 20, No. 8 (August 1992): 1077-1088.

⁸ Abeda Sultana, "Patriarchy and Women's Subordination: A Theoretical Analysis," *Arts Faculty Journal* 4 (2010): 6-11.

resource allocation decisions⁹.

Women's forest-related gender discrimination is intertwined deeply with other gender issues in society. As a result, any effort to provide gender justice to women in the forest without considering other societal gender issues will not liberate them from the vicious cycle of gender inequality. On the other hand, the forest provides them with a source of income, a unique identity, and a particular space they claim as their own. Furthermore, the forest provides a social space for tribal women, where along with forest product collection, they gossip, eat, sing, bathe, roam, and for some time, escape from the drudgery of household chores. Notably, forests are a reliable asset for women to counter the hegemony of a male-dominated society. Therefore, for gender justice, it is imperative to protect women's valuable resources in forests and ensure their meaningful participation in all forms of forest management. Women are susceptible to changes in forest vegetation. If forest management or deforestation alters their relationship with the forest, they may become vulnerable¹⁰.

The significance of forests in women's lives was invisible and never got attention or discussed until the Chipko movement in Uttarakhand took place in the 1970s. The Chipko movement brought women's presence in forests to the forefront. As a result, in the post-Chipko period, the government prioritised the inclusion of women in various environmental and forest conservation programmes. However, despite lengthy discussions on the gender dimensions of the relationship between women and forests during the post-Chipko era, forest management programmes considered women's participation without a critical gender perspective.

⁹ Ashish Kothari et al., *Communities and Conservation: Natural Resource Management in South and Central Asia* (New Delhi: Sage Publications, 1998), 40.

¹⁰ Arnold et al., "Forests, Biodiversity and Food Security," 260.

Forests, like any other habitations and resources have been going through transition. Reasons for the transition could range from geographical to political. That transition could be from deforestation to reforestation or vice versa.¹¹ The transition applies not only to the forest but also to the forest dwellers. The transition could be “natural”, voluntary, or forced. The changing circumstances and their changing aspirations take the forest dwellers through transition. The transition becomes much more complex as a concept as well as a phenomenon when the forest and the forest dwellers enter into a conflict with the factors and the forces that push them towards force and control in the name of governmentalisation, civilisation and development.

The present study proposes to analyse the transition that the forest and the Desia Kandha women of Kandhamal district are going through independently and together, owing to various historical, cultural, social and political factors. Their transition can be studied together as they are closely interconnected and interdependent in terms of survival of women and conservation of forest. It will attempt to understand the complexities of change in the lives of Desia Kandha community, particularly among the Desia Kandha women, who do not remain mere passive receivers of change but speak to us about the past and the present that they have witnessed, and look forward to a future from the lens of their aspirations for better livelihoods for themselves and their children.

The present study examines the forest from the perspectives of tribal communities, with a primary focus on tribal women. It aims to explore the position,

¹¹ Proposed by Alexander Mather (1992), forest transition theory suggests that forested landscapes move from net deforestation to net reforestation as societies undergo economic and social changes (Rudel et al., 2005; Rudel et al., 2010)

relationship, and reliance of tribal women on the forest, and how various factors including forest policies, forest management, afforestation, deforestation, and forest conservation influence their connection to the forest. The study specifically concentrates on the Desia Kandha tribe, particularly the Kandha women, residing in the Kandhamal district of Odisha. Kandhamal, located at the centre of the Eastern-Ghat mountain range, is a hilly district characterised by forests, hill ranges, streams, rivers, and mountain peaks. According to the Forest Survey of India (FSI), approximately 70 percent of the district's land is under the control of the state forest department.

The district is primarily inhabited by tribal people, with more than half of the total population belonging to the Kandha community. Due to the scarcity of agricultural land, limited employment opportunities, and the prohibition of shifting cultivations, tribal individuals, particularly women in rural areas, heavily rely on the forest for their livelihood and sustenance. The unique geography of the district has also played a significant role in shaping the history, lifestyle, livelihoods, belief systems, culture, healthcare, and knowledge structure of the tribal communities. Kandha women hold crucial responsibilities in managing domestic and economic affairs within their families. Collecting various forest products serves as one of the primary sources of livelihood for Kandha women. Deforestation has been a persistent issue in the district, significantly impacting the lifestyles of women. Simultaneously, flawed afforestation projects and the prioritisation of monocultures of commercial trees through forest conservation activities often compel women to lose access to their resources.

1.2 Significance of the Study

Tribal women have historically been intimately connected to forests, relying on them for their livelihoods, cultural practices, and overall well-being. However, despite their

significant contributions and knowledge, tribal women often face various challenges that hinder their full participation and empowerment in forest-related activities. These challenges encompass socio-cultural, economic, and institutional factors that perpetuate gender inequalities and limit the agency and decision-making power of tribal women in forest management and conservation.

The problem at hand is the limited understanding and recognition of the unique experiences, needs, and perspectives of tribal women in the context of forests. The existing literature predominantly focuses on broader issues related to forest conservation and indigenous rights, often overlooking the gender-specific dynamics within tribal communities. Consequently, the specific challenges faced by tribal women, including limited access to resources, discriminatory practices, lack of representation, and marginalisation within forest governance structures, remain understudied and inadequately addressed.

Furthermore, the rapid changes in the socio-political, economic, and environmental landscapes pose additional challenges for tribal women, as they face the impacts of globalisation, land encroachment, climate change, and evolving cultural dynamics. These factors influence the traditional roles and responsibilities of tribal women, altering their relationship with forests and affecting their social and economic well-being.

Therefore, a comprehensive exploration of the problem is necessary to understand the multifaceted barriers faced by tribal women in forest-related activities. It is also important to understand how the Desia Kandha women are handling the increasing distance from the forest, as livelihood dependence is very crucial in their life. Similarly, it is crucial to understand their aspirations of education, secure

livelihood, and minimum facilities such as transport and medicine. By identifying these challenges and their underlying causes, and by understanding the nuances of transition of the forest and the Desia Kandha women, this research aims to contribute to policy formulation, development programs, and interventions that promote gender equity, ensure the meaningful inclusion of tribal women, and foster sustainable forest management practices that respect their rights and aspirations.

1.3 Theoretical Approach

The interaction between tribal women and forests is a dynamic and diverse phenomenon comprising cultural, social, economic, and ecological dimensions. Tribal women have historically shared a deep and symbiotic connection with forests, which has shaped their identities, livelihoods, and cultural practices. Conceptualising their relationship with forests involves understanding the diverse ways in which tribal women interact with and depend on forest ecosystems, as well as the challenges and opportunities they face within these contexts. The relationship between tribal women and forests has been studied from various theoretical perspectives, each providing unique insights into the dynamics and complexities of this relationship. The current study critically examines the relationship between tribal women and the forest, as well as their associated issues, through the theoretical frameworks of Vandana Shiva's "ecofeminism" and Bina Agarwal's "feminist environmentalism."

Ecofeminism: Vandana Shiva's ecofeminism theory considers a special relationship between women and nature. She has theorised the relationships between "women and nature" by binding them through the "feminine principle", that is based

on reproduction and nurturing qualities¹². She criticises capitalist development as a western, patriarchal, and colonial project that is inherently violent towards women and the natural world. Adopting such a development model entailed “a departure from traditional Indian philosophy, which regards nature (Prakriti) as a living and creative process, a feminine principle from which all life emerges”¹³. Shiva ecofeminism emphasised the spiritual and cultural aspects of women’s relationship with nature and their concern for the conservation of nature. She has argued that: “women and nature are intimately related, and their subjugation and liberation are linked in the same way”. Similarly, “women and ecology movements are one, and patriarchal mal-development is their antithesis”¹⁴.

Feminist Environmentalism: Bina Agarwal’s “feminist environmentalism” model is embedded in material reality and sees the relationship between women and nature as structured by gender and class (caste/race) organisation of production, reproduction, and distribution. As Bina Agarwal points out (1992), women’s relation to the environment is socially and historically variable. Women, particularly in poor rural households, are both victims of environmental degradation and active agents in movements for protecting and regenerating the environment. They act in both positive and negative ways with the environment. The unquestioning acceptance of the woman-nature connection and the notion that because women are disproportionately affected by environmental degradation, they have “naturally” favourable attitudes toward

¹² Vandana Shiva, *Staying Alive: Women, Ecology and Development*, 1st ed. (New Delhi: Kali for Women, 1988), 37.

¹³ Shiva, 37.

¹⁴ Emma Mawdsley, ‘After Chipko: From Environment to Region in Uttaranchal’, *Journal of Peasant Studies* 25, no. 4 (1998): 43.

ecological conservation is unacceptably naive¹⁵.

1.4 Research Questions

1. How does the relationship between tribal women and forest change owing to the specific socio-political, cultural, geographic and climatic conditions of a region?
2. What are the factors responsible for tribal women's close association with the forest?
3. What are the specific roles and responsibilities of tribal women in forest-related activities, such as gathering non-timber forest products or engaging in sustainable resource management practices?
4. What are the socio-cultural factors that influence tribal women's knowledge and practices related to forest conservation and sustainable resource use?
5. What is the impact of changing forest landscapes, deforestation, afforestation, and climate change on the livelihoods and well-being of tribal women?
6. What are the challenges faced by tribal women while pursuing forest-based livelihood and participating in decision-making processes related to forest governance and management?
7. How do forest-based livelihood opportunities contribute to the empowerment and socio-economic status of tribal women?

¹⁵ Bina Agarwal, "The Gender and Environment Debate," in *Handbook of Gender*, ed. Raka Ray (New Delhi: Oxford University Press, 2012), 126–27.

8. How can policies and interventions be designed and implemented to address the specific needs and aspirations of tribal women in relation to forest resources?

1.5 Research Objectives

1. To map the forest-tribe relationship and the importance of forest in tribal people's life, particularly tribal women.
2. To examine the effect of forest conservation and deforestation on tribal women.
3. To map the various issues associated with the forest and their impact on tribal women.
4. To study the contemporary events/initiatives for the conservation and management of forests and the role of tribal women in such initiatives.

1.6 Methodology

The argument of the present thesis is based on data gathered from both primary and secondary sources. Qualitative research methodology was followed to acquire the primary data from the field. The purpose of the qualitative research here in the thesis is to explain the challenges better than giving numerical values.

The primary data was collected from the field using research tools such as focus group discussions, interviews, case studies, transect walks, and observation. The questions asked in the focus group discussions were cross-checked during the discussion among the participants for accurate and reliable information. Modern technologies like digital cameras, voice recorders, and smartphones were used to capture the details of the fieldwork. A field notebook has been kept up-to-date to keep

track of the people's daily lives, the layout of the villages, the activities of the people, and the natural and human resources.

Secondary data was gathered from books, journals, reports from government and non-government organisations, previous research studies and papers, and online sources. Books and reports were acquired from the IGML Library University of Hyderabad, the State Library of Odisha, the State Archive, the NCDS library, the ST & SC research centre, and the library of Utkal University. Furthermore, a few online libraries were also used to collect essential books and reports. The journals were primarily collected from online sources. However, hard copies of a few relevant journals were collected during visits to different institutions. The thesis has followed the Chicago Manual of Style, 17th edition, for citation and formatting.

1.6.1 Selection of the Research Field

The Kandhamal district is extensive, and it is not easy to cover the entire region. As a result, the researcher selected a few villages in two blocks of the district to define the purpose of the study. To specify the study area, thirteen villages from the Chakapad and Tikabali blocks of the Kandhamal district were visited initially for a pilot study. These are the villages of Chakapada block: Nidhiaberena, Ragapaju, Kekatapa, Karukatta, Adima, Gasama and Gistikhole; and Tikabali block: Ududeba, Mazagada, Kutrikhole, Patingia, Kilusuga, and Bidingia. The study provided a comprehensive understanding of how people's lifestyles are differently associated with their forests. Finally, Ragapaju, Gistikhole, Nidhiaberana, Bidingia, Ududeba, and Patingia villages were considered for an intensive study. The villages were chosen based on their geographical location, settlements, connectivity, livelihood options, cultural practices, and women's reliance on forest resources.

Ragapaju village comes under the Chahali Grampanchayat of Chakapad Block. The total population of the village is around seventy to eighty. All the villagers belong to the Adivasi community, except two families that belong to the Gauda (herder) community. The village is situated on the border of the Ganjam district. Poor roads and lack of basic infrastructure have deprived the villagers of a modern lifestyle. People have to walk five to six kilometres in the forest and hilly terrain to avail the facilities of the panchayat office, high school, public transport, market, and essential medical services. As the village is situated on the border, the villagers often face clashes with people of their neighbouring district over access to the forest resources. In particular, women who go to the forest for various purposes face many challenges due to outsiders' interference. Deforestation is a significant issue in the region, with wood mafia extorting timber from the village's protected forests. Migration is another issue among the younger generation. They are migrating to other districts and states as daily wage labour due to lack of employment opportunities in their locality.

Nidhiaberana is a small tribal hamlet of Chahali Grampanchayat, with a population of hundred to hundred-fifty. All the people living there belong to the Kandha tribe. The village is far from the Gram Panchayat headquarters and lacks adequate road access. The clay road passes through hills and forests and is crossed by small streams that disrupt the villagers' lives during the rainy seasons. The village is in a small mountain valley surrounded by forest and hills. Making siali leaf plates is a crucial non-timber forest-based livelihood pursued by many women in the village. They get the raw material quickly as the forest is close to their village. The villagers have traditionally protected their surrounding forests without the assistance of the forest department or any other organisation.

Gistikhole is a large tribal village with around 1,000 thousand population in the Chahali Gram panchayat of Chakapad block. The Kandha tribe primarily inhabits the village. Agriculture is the primary occupation of the people. Apart from that, they also depend on forests to meet their domestic and economic needs. The village is located in the forest, four to five kilometres from the main road. The road connectivity to the village is deplorable; however, the construction of a new road has been initiated. The villagers have traditionally protected the surrounding forest. However, deforestation in the area is a significant concern.

Bidingia is a populated village in the Pikaradi Grampachyat of Tikabali block. The village has around six hundred people, primarily belonging to the Kandha tribe. However, a few Dalit (Pano) families also live there. The village is situated in a small hillock valley with a good amount of agricultural land rolled down from the village to the nearby stream. The village's main crop is paddy. Apart from paddy, villagers grow vegetables such as cauliflower, cabbage, beans, potato, maise, and brinjal. Pulses and millets are also grown on undulating land near foothills. Turmeric is an important cash crop grown by many families in the village. Previously, the villagers practised slashing and burning cultivation (Podu cultivation), but they stopped after the forest department intervened. The village is well-known in the locality for its shamanic practices and traditional healing.

Ududaba is a small tribal village in the Sankarakhole Gram Panchayat of Tikabali block. The village is connected by all-weather roads and facilitated by Anganwadi Kendra (AWS), a primary school, and a tube well for drinking water. The village has a Vana Samrakshana Samiti (VSS) under the government's JFM programme that protects approximately 120 hectares of forest. Women are actively involved in

forest protection and they hold offices in the VSS. The forest department has allotted a piece of forest land to the village's self-help groups (SHGs) to grow hill broom.

Patingia is a small tribal village under the Kainjhar Gram Panchayat of Tikabali block. The total population of the village is around a hundred, and all belong to the Kandha tribe. Despite the village being close to the GP headquarters, it lacks good connectivity. The Salunki River intersects the clay road connecting to the village. There is no bridge over the river, so people face many problems accessing markets and necessary institutions in the rainy season. The village is protecting around 150 hectares of forest area by forming a Vana Samrakshyana Samiti (VSS) under the JFM programme of the government.

1.6.2 Respondents

For the current study, the purposive sampling method has been followed to collect data from the field.

Purposive sampling is subjective or selective sampling, where the researcher chooses an individual or group for a particular purpose. The reason for choosing purposive sampling is to gather more accurate information. The respondents are identified based on their position and the resource they hold in society. For example, Jani and Jhankar (Kandha Priest) are the key persons to collect information on the culture, beliefs, and practices of the tribal community. Traditional medicine practitioners know about various medicinal plants and their uses. Similarly, retired school teachers, the village headmen, elderly women/men, scholars, and politically active person are the key informants on the region's social, political, and historical background and the changes happening.

The study included both women and men respondents. However, since the topic is centred on women, the primary respondents were women of the Kandha community. Respondents comprised women leaders in VSS, SHGs, and PRI members. In addition, Kandha women scholars such as Purnamasi Jani (Padma Shri awardee in 2021), popularly known as Tadisaru Bai, was interviewed to understand her perspectives on Kandha culture and women. Separate focus group discussions were organised exclusively for women participants to gain a more in-depth understanding of their knowledge and concerns. Women's narratives and experiences were prioritised and recorded during the research process. Even though the study prioritised women, men's perspectives on general and women-specific issues were also documented

1.6.3 Location of the Researcher

“Positionality” refers to “a researcher’s worldview and position on a research task, as well as the social and political context in which it exists”¹⁶. It depicts a researcher’s self-location during the research process and how socio-cultural and regional identity, political views, gender, and subject knowledge could influence the research process and outcome. Thus, researchers must be aware of their positionality while conducting qualitative research. Defining the researcher’s positionality ensures accuracy and honesty in capturing information and conducting analysis.

I began the present research with the conviction that forests are critical to forest-dwellers’ survival as well as environmental security. Tribal women are major stakeholders of forest resources, so they should be given top priority in forest management activities. Thus, the idea was that our forest management policies should

¹⁶ Andrew Gary and Darwin Holmes, “Researcher Positionality- A Consideration of Its Influence and Place in Qualitative Research- A New Researcher Guide,” *Shanlax International Journal of Education* 8, no. 4 (September 2020): 1.

simultaneously focus on environmental and ecological security, people's forest rights, and a gender-sensitive and gender-responsive approach. However, many other significant aspects of the forest were explored during the research. Based on my understanding, textual knowledge, subject expertise, and fieldwork experience, I took my position in the research field as follows.

My initial understanding of the forest stemmed from my village upbringing, experience, and observations. I was born in a small forest-fringed village in Orissa's Kalahandi district. Since childhood, I have seen how the forest and rural life are intertwined and how it has always been a necessary resource for the poor in the village. The stories and experiences of forest life shared by the village elderly taught us about the local ecology, biodiversity, and survival skills. Those are key knowledge sources to learn the use of various trees, the behaviour of wildlife, and how they deal with difficult situations in the forest. However, I learned about forests' environmental and ecological dimensions from academic texts and media. Nevertheless, looking at forests from a gender perspective was a new and comparatively less-known academic domain for me.

Despite having a thorough understanding of the people-forest relationship in my locality, working on forest-related subjects in the Kandhamal district was a challenging and unique experience. The district is dominated by tribal communities and differs from its neighbours geographically, culturally, socially, and economically. The abundant forest resources of the district have played an essential role in the socio-economic and cultural life of the tribals, particularly tribal women. Kandhamal is my neighbouring district, so it is not new or unfamiliar territory. Moreover, I used to visit the district to meet my relatives. Therefore, my position in the research field can be evaluated from

both outsider and insider standpoints. However, I consider myself an outsider with some insiderness to Kandhamal and its people.

I had a comprehensive idea about the district's socio-cultural, political and geographical set-up because of my long association with the region. Since childhood, I used to travel and spend mainly summer vacations in Kandhamal due to its cool weather compared to my native place. During my travels and stay, I visited many tribal villages and observed people's village life, especially the Kanda people. However, as I have lived mainly in an urban area, I have also observed the economic activities of the tribal people in the market, in which women and men sell wood, mangoes, leafy vegetables, and many other forest products in the streets and the weekly market. Moreover, I have witnessed the transformation phases of the Kandhamal region. The district was once an isolated area with poor communication facilities (people generally avoided unnecessary travel) and gradually developed into a well-connected and emerging tourist destination. Many kutcha roads and narrow pathways connecting the remote villages to the main roads are now converted into paved roads. Because of these past experiences in the district, I have always considered myself belonging to the region. This experience also gave me certain advantage while establishing a relationship with the research field.

Although I had an overall idea about tribal people's village life, my observations and experiences were limited to villages on or near the main roads. However, most villages are situated in the interior and within the forest. I had never been to the interior villages or had any idea about the people living there. Therefore, my views and preconceived notions regarding tribals were partial, personal, and outsider's observations. In the present study, the selected villages were chosen from areas I had never visited. As a result, the field area and the people, their lifestyle, culture, and

language were all new experiences for me. Accordingly, I was ultimately an outsider in the context of those villages.

Moreover, my regional, caste, cultural, linguistic, educational, and gender identities rendered my position as an outsider in the research field. However, a researcher's position in the research field is not static. It changes as time passes and the relationship with the respondent develops. Although I have spent a significant amount of time in the field, that does not alter my outsider position and my identity diverse from others in various ways. However, after spending time with them, the initial gap narrowed somewhat.

As an outsider in the research field, I was constantly mindful of the impact of my knowledge and position on the research process and data collection. I entered the research field with specific theoretical contexts and objectives, which could manipulate the “situated knowledge” of the field area. Therefore, while conducting interviews and group discussions, I prioritised mobilising the process and listening and recording the data, avoiding giving my opinions as much as possible. I listened to them attentively and tried to understand the social, cultural, and historical context of what they were saying. My approach in the field was that of a seeker rather than a giver.

Many times people mistook me for a government or an NGO employee. To prevent their confusion, I was transparent about my student and regional identity and the specific purpose and relevance of the information for my academic pursuit. I also assured the respondents of the confidentiality of their identity and the information provided to me. My Odia identity and previous connection with the district helped me gain people's confidence and trust in the research process.

1.6.4 Approach and Challenges in the Field

Rapport building with communities is the primary challenging task for any social science researcher conducting qualitative research. Significantly, the challenges are more difficult when the researcher goes to an unfamiliar area to conduct research. Initially, I encountered similar situations in my research field. To deal with them, I decided to stay in the villages and interact with the people regularly. The aim was to get a closer look at village life and familiarise myself with the surroundings. At the start of my visit to the field area, I sought the assistance of a local named Bhaganaba Nayak, whom I reached through one of my relatives. He initially accompanied me to the villages and assisted me in forming rapport with the locals. In this case, my previous relationship with the district worked in my favour.

Despite having access to the villages, I was bewildered as to why people would give me their time and information for work that had no direct benefit to them. Therefore, I paid several visits to the villages to gain people's trust and convince them of the significance of my research. During the initial meetings, I started the conversation by asking fundamental questions about their daily lives and the everyday challenges they faced. Once I understood the communities, I started collecting data on forest-related issues using multiple methods. Apart from the formal interviews, group discussions, and case study method of data collection, I explored much information while sitting at a campfire with the villagers, accompanying them to the forest and agricultural land, and spending leisure time with the elderly. During interactions with the villagers and respondents, I was asked numerous questions about my identity, educational background, purpose of the study, and what benefits the research would provide them. Answering their questions was a difficult task.

As a man, it was not easy for me to interact with the village women. Since the research was focused primarily on women, I needed to talk to them in separate groups and individually. However, my gender and outsider identity made it difficult to communicate with them. Once I gained the confidence of the men, I started interacting with women in mixed and separate group discussions. I began meeting them individually when they understood and were ready to collaborate with me on the research work. Initially, I started meeting older women to give the younger generation more time and gain their trust. Moreover, I conducted their interviews in the open space, particularly on their veranda, to make their participation as simple as possible. Although I found them to be participating in the interviews without hesitation, I still noticed their discomfort in my presence, especially among the younger generation.

Furthermore, meeting the respondents was difficult because of their busy schedule. The tribals of Kandhamal are very industrious people. They have a tight schedule of work from morning to evening. Women have a busy daily schedule, engaging in domestic work and other agricultural and economic activities. One must go to the villages in the afternoon or evening to meet the women. They are busy in the morning with household work and a fixed schedule. Talking to them in the afternoon while they process forest products is possible, but it will disrupt their work. They only have free time in the evening, which is an inconvenient time to visit the interior villages. However, regardless of the meeting time, I was careful not to interfere in their time and space.

Language was another barrier I encountered in the field. The Kandha people speak “Kui” (their mother tongue). Although they can speak Odia, many are not fluent, especially women. In some villages, older women are unable to communicate or

understand Odia. On the other hand, because I am from Western Odisha (where people speak Kosali or Sambalpuri), my Odia was also not fluent and was mixed with my native language. As a result, some difficulties arose during communication with the people, mainly when they spoke in colloquial language. However, I took the help of people who spoke Odia and the local language fluently.

Aside from rapport building with the communities, I encountered numerous other difficulties in the field, particularly in communicating with the villages. Some villages are located in very remote areas with poor road connectivity. Those narrow and unpaved roads pass through the thick forest and mountain curves and occasionally intersect with seasonal streams. Many of those streams lack bridges; even light rain can disrupt communication. Locals have no other choice but to use those roads. I found it challenging to travel on those roads, especially while returning from villages at night. The villagers often warned me that hyenas, wolves, leopards, and tigers regularly visited their forests and crossed the road. The forest-based climate was also a challenge for me. Significantly, the climate is prone to Malaria, so I was taking reasonable caution to avoid any health incidents as an outsider.

Furthermore, the villages lack basic infrastructure such as drinking water facilities, toilets, and bathrooms. One must go to the nearby stream or pond to perform the everyday routine. However, managing such situations is not easy for an outsider holding a specific identity, as they would be noticed by people everywhere and in every action. My village life experiences helped me manage the situation in this scenario. Although, as a man, I faced some restrictions, especially when it came to interacting with women, it also gave me many advantages and privileges. Notably, the freedom to

go anywhere, anytime, in these secluded forest regions, which may be challenging for a woman researcher.

1.6.5 Limitations of the Study

The scope of the present study is confined mainly to the Kandhamal district of Odisha state. The study has been analysed from the perspective of the forest-dwelling tribes in general, particularly the Desia Kandha tribe of the Kandhamal district. However, the district is a large region with diverse geography and culture, whereas the sample villages taken for the study are limited. Therefore, some of the present research findings can vary in different parts of the district and outside. The historical overview of forest governance provided in Chapter II is intended to capture the trend of forest policy; however, each part and region of the country has its history. The fieldwork was done between 2014 to 2016, and the last time the researcher visited the study villages was in 2017-18, so the information provided here is subject to change. Notably, the infrastructural facilities in the villages and locality are continuously changing due to various development and welfare programmes.

1.7 Profile of Odisha

Odisha, previously spelled as Orissa, is India's ninth-largest state in terms of land area. Historically, the region was known as Kalinga, Utkala, and Udradesa and was ruled by famous dynasties like Chedi, Ganga, Gajapati, and Bhoi. Odisha became a state in 1936 based on its people's "Odia" language. However, the current geographical boundary of Odisha was established after 1948, when the 26 princely states merged with the Orissa state. Politically, the state is divided into 30 districts, 58 sub-divisions, 314 blocks, and 6209 Gram Panchayats.

1.7.1 Geography and Climate

Geographically, the location of the state is between 81.27E longitude to 87.29E longitude and 17.49 N latitude to 22.34 N latitude. The state has an area of 1, 55,707 square kilometres, accounting for 4.7% of the country's area. Odisha shares its boundary with Andhra Pradesh in the south, Chhattisgarh in the west and northwest, West Bengal in the northeast, Jharkhand in the north, and the Bay of Bengal in the east. Geographically, the state is divided into four parts: Northern Plateau, Eastern Ghats, Central Tableland, and Coastal Plains. Except for coastal plains, forests cover the majority area of the state. The Eastern Ghat mountain range covers the hilly district of the state and plays a significant role in the state's climate. Odisha generally observes three types of climate: summer, monsoon, and spring. Summer is hot and humid, with temperatures exceeding 45 degrees in many places. Winter is cold, and the average temperature stays between 16 and 20 degrees. However, it drops to below 5 degrees celsius in a few hilly areas. Odisha receives plenty of rain. During the rainy season, the average rainfall is around 1159 mm. However, uneven rainfall in different regions makes some areas prone to drought and others prone to flooding. Many rivers originate from the state. A few inter-state rivers also pass through the state and fall into the Bay of Bengal. The principal rivers of the State are Mahanadi, Subarnarekha, Budhabalanga, Baitarani, Brahmani, Rushikulya, Vamsadhara, Indravati, Nagavali, Tel, and Kolab. These rivers constitute the state's significant water sources for agriculture, industries, and drinking.

1.7.2 Demography

Demographically, Odisha ranks as the 11th most populated state in the country. According to Census 2011, the state's total population is 4.2 crores, with a sex ratio of

979 females per thousand males and a growth rate of 14% from the 2001-2011 census. The population density of the state is 270 people per square kilometre. The overall literacy rate of the state as per the 2011 census is 72.87%; of that, the men's literacy rate is 81.59%, while the women's literacy rate is 62.46%.

1.7.3 Forest Cover

According to the forest survey of India (FSI), the recorded forest area of the state is 37.33% of the total geographical area, which extends over 58,136 square kilometres of land. Out of the total forest area, the reserve forest constitutes 45.29%, the protected forest 26.70%, and the unclassified forest 28.01%. The state has two national parks and 18 wildlife sanctuaries covering 7,960 square kilometres of forest. Most of the forests in Odisha are found in the Eastern Ghats mountain ranges, which encompass undivided Koraput, Kalahandi, Sambalpur, Phulbani, Anugul, Keonjhar, Ganjam, Sundargarh, Mayurbhanj, and Nayagarh districts. Most of the forests in the state are tropical dry-deciduous and moist-deciduous forests.

1.7.4 Language

Odia (Oriya) is the state's official language and is spoken by most people, particularly in the coastal and eastern regions. Another language spoken primarily in Odisha's western belt is Sambalpuri (Kosali). Apart from the two major languages, the state has 74 dialects spoken primarily by tribal communities. Other languages spoken near the state's borders include Bengali, Telugu, Chattisgarhi, and Hindi. As a result, many people in the state are multilingual, speaking their native language for intra-community interaction, Oriya for inter-community communication, and other languages to communicate with the people of neighbouring states. Furthermore, the students learn Oriya, Hindi, Sanskrit, and English in schools and colleges.

1.7.5 Economy

The state's economy is primarily agrarian, with 60% of the population depending upon agriculture and allied activities. A sizable population in the hilly areas also relies on livestock farming and forest-based subsistence. Odisha is one of the wealthiest states in natural resources and mines. There are vast reserves of minerals such as iron ore, coal, bauxite, manganese, chromium, and nickel for the growth of industries. The service sector is the highest contributor to the state's GDP (gross domestic product). However, massive labour migration to other states and major cities for economic reasons has been a significant challenge for the state in recent decades. The state has high tourism potential owing to its numerous religious and historical shrines and natural landscape. Tourism development industry could create new opportunities for the locals.

1.8 Profile of the Kandhamal District

Kandhamal district is in the centre of Odisha. The district was previously known as the Boud-Phulbani district, with Phulbani serving as the administrative centre. In 1994, the district was bifurcated into two separate districts: Boud and Kandhamal. The district is named after the Kandha tribe, the most significant tribal community in the region. "Kandhamal" means "Kandha people's land," and the Kandhas are the district's leading tribal group¹⁷. The local Kandha community introduces themselves as "Kui loka" or "Kui enju", which means "Kui people", and the Kandhamal as "Kuidina", which means "Kui people's land."

¹⁷ Taradatt, ed., *Odisha District Gazetteers: Kandhamal*, (Bhubaneswar: Government of Odisha, 2016), 1.

1.8.1 Geography and Climate

Kandhamal is the state's sixth-largest district of Odisha, covering an area of 7,654 square kilometres. It lies between 19 degree 34' to 20 degree 34' in the north latitude and 83 degree 30' to 84 degree 35' in the east longitude. The district is surrounded by Boudh in the north, Rayagada and Gajapati in the south, Nayagarh and Ganjam in the east, and Kalahandi district in the west. The district is a beautiful combination of mountains, rivers, streams, forests, and undulating valleys. The region is located in the Eastern Ghats mountain ranges at an average elevation of 518 metres above sea level.

The district's climate is subtropical, with maximum temperatures of 40° C in summer and minimum temperatures of 3° C in winter. During the winter, temperatures can drop to 0° C in a few places. The district's average annual precipitation is 1522.94 mm, higher than the state's yearly rainfall of 1451.2 mm. The Kandhamal's mountain ranges serve as the catchment area for rivers such as the Rusikulya, Loharakhandi, Badanadi, Uttei, Roul, Khadga, Jhiripani, Bagh, and Salunki. Although the rivers are not suitable for irrigation in Kandhamal, they significantly irrigate the neighbouring districts. In some areas, however, farmers irrigate their land using lift irrigation facilities and diverting small watercourses to their agricultural land through pipes or barricades.

1.8.2 Forest Resources

Kandhamal has the highest percentage of forest among all the districts of Odisha. It has 5,709.83 square kilometres of forest land, which is around 71 per cent of the total geographical area of the district. The non-forest lands are 29 per cent, out of which private entities hold only 12 per cent, and the rest 17 per cent is government land. The forest of the district is divided into three categories: reserved, protected, and revenue. There are 2010.06 square kilometres of reserved forest, 1783.30 square Kilometres of

protected forests, and 1914.47 square kilometres of revenue forest in the district. Around 1,58,779 hectares of forest area fall inside the village boundaries. The Kotagarh wildlife sanctuary is the only wildlife-protected area which is established in the Kotagarh and Tumudibandh blocks. The forest department controls all the forests, whether inside or outside the village boundary.

The type of forest in Kandhamal is primarily tropical moist deciduous forest. The common floras in the forest are sal, siali, bamboo, piasal, sissoo, mango, kendu, jamun, harida, kushum, bahada, amla, tamarind, mahua, salap, char, jackfruit, bheru, asan, arjun, gambhari, dharua, dumer, and kochila. The common faunas are elephants, tigers, leopards, bears, sambars, wild boars, nilgais, spotted deer, barking deer, mouse deer, bears, pangolins, monitor lizards, gaurs, hyenas, jackals, wolves, hares, peafowls, jungle fowls, grey falcons, hornbills, cobras, and pythons.

1.8.3 Administrative Set-up

The district has one municipality, two Notified Area Councils (NAC), two subdivisions, twelve Community Development (CD) blocks, twelve tahsils, one hundred fifty-three Gram Panchayats (GPs), and 2,546 revenue villages for administrative purposes. There are eighteen police stations in the district to look after the issues of law and order. For healthcare facilities, there is one district headquarters hospital (DHH), one sub-divisional hospital (SDH), fourteen community health centres (CHCs), forty primary health centres (PHCs), and five private hospitals available in the district. There are 1,277 primary schools, 577 middle schools, 154 secondary schools, and 17 colleges to educate students. The information above was compiled from the 2011 district statistical handbook, and the figures are subject to change.

The district has two forest divisions: Baliguda and Phulbani. They are further

divided into 14 ranges, 48 sections, and 150 beats. The Phulbani division has seven ranges: Tikabali, Sudurukumpa, Raikia, Phiringia, Phulbani G. Udayagiri, and Karada. Similarly, there are seven forest ranges in the Baliguda division: Tumudibandh, Kotagarh Sanctuary, Simanbadi, K. Nuagaon, Brahmanigaon, Beghar, and Baliguda. The forest divisions have their own set of officers to manage the forest, ranging from Divisional Forest Officers at the top to forest guards at the bottom, all with assigned roles.

1.8.4 Demography and People

According to the 2011 census report, the district's total population is 7.33 lakh, of which men constitute 3.60 lakhs and women constitute 3.73 lakhs. The number of women per thousand men is 1037. The population density is only 91 per square kilometre (30th in the state) compared to the average of 270 per square kilometre. The district's settlement is primarily rural, where 91.1 per cent of the total population lives, while only 9.9% of the population lives in urban areas. Kandhamal is a tribal-dominated district where the Scheduled Tribe people constitute 53.6% of the total population. The prominent tribal communities are Kandha (93.33%), Gond (2.99%) and Kotia (1.05%). The scheduled caste constitutes 15.8% of the total population. The total literacy rate of the districts is 64.1%, the male literacy rate is 76.9%, and women's literacy is 51.9%. Out of the number of scheduled tribes inhabiting the district, the most significant are Kandha, Gond, Kandha Gauda, Kotia, and Saora. The Pano, Hadi, Ghasi, Tanla, Dom, Dewar, and Dhoba are prominent among the Schedule Castes. The other castes are Sundi, Teli, Mali, Kumuti, Brahmin, Kulta, Suda, Kshyatriya, Kharuda, Kamar, Karan, Gauda, Gudia, Dumal, Bhandari, Khachera, Kansari, and Bania.

1.8.5 History

There are very few written historical sources about the Kandhamal district before the British invasion. When the British arrived in 1835, the current Kandhamal was part of the princely states of Boudh, Ghumusar, and Khemundi. However, the feudal rulers had marginal control over the region, which was mainly ruled by the hill chieftains. During the annexation of the region, the British encountered consistent resistance from hill chieftains. The tribal communities of the district fought against the British from 1835 to 1880 until the British captured the Baliguda Maliah.

Many Kandha fighters gave their lives in the fight against the British troops. In 1835, the Kandha revolted against the British under the leadership of Dora Bissoyee. However, following Dora Bissoyee's death in 1840, his nephew Chakara Bissoyee took command of the Kandhas. Chakara Bissoyee wreaked havoc on the British government. He organised the Kandhas and Savaras in various locations and attacked the British camps numerous times. The British announced a reward of 300 rupees for Chakara Bisoyee, but they could not succeed. Chakara Bissoyee was active until 1856 when he unexpectedly disappeared and was never seen again. However, the Kandhas resisted the British under many leaders until 1880. The prominent Kandha leaders were Bira Kanhar, Maheswar Kanhar, Nabaghana Kanhar, Damara Malik, Bhanga Malika, Singara Malik, and Birasha Mallik, who fought valiantly against the British troops¹⁸.

After the reorganisation of the Odisha state, the Boudh-Kandhamal district was constituted on January 1, 1948. However, the state government's land and forest policies challenged the Kandhas' traditional rights over the land and the forest. The forest, which was earlier not taken up by the British government, became state property,

¹⁸ Taradatt, 47–48.

and with its nationalisation, the tribal communities lost their sovereignty over it. Furthermore, despite the special rules of the “Odisha Scheduled Area Transfer of Immoveable Property (Scheduled Tribe) Regulation, 1952”, a significant portion of the tribal land, in due course, passed into non-tribal hands. In 1970, the tribals initiated a movement against restoring their ancestral property, which resulted in communal clashes and riots in the Dasingbadi village of the Baliguda sub-division in 1987¹⁹.

In 1993, inspired by B. D. Sharma’s “Campaign of Tribal Self Rule” and “Our Government Our Village”, the people of the Kotagarh region formed the “Pahadi Sangram Manch” (struggle for hill people). They organised a rally with thousands of Dalits and tribals from Kotagarh to district headquarters against the exploitation by the bureaucracy, the business people, Sahukars, police, and forest officials²⁰. In 1996, a mass protest was initiated by ‘Pahadi Sangrami Manch’, Banabasi Surakshya Parishad, and Adivasi Manch against the declaration of Kotagarh as a Wildlife Sanctuary, stating it was an anti-people move by the government. The sanctuary threatened the homes of thousands of tribals and Dalits. The people from Kotagarh, Tumudibandh, and Daringbadi blocks faced challenges accessing their livelihood, land, and forest. To convey their protest, 60,000 citizens of the area boycotted voting for the Phulbani parliamentary constituency in the general election in 1998.

A major issue in the Kandhamal region around the 1990s was the communal tension between the Kandha and Pano (Dalit) communities. In 1994, a communal riot occurred between them, claiming 20 lives, and thousands were homeless. In that incident, the Kandha gained the support of the Hindu upper castes, who singled out the

¹⁹ Taradatt, 54.

²⁰ Mohanty Narendra, “Arrest Killers of Tribal Leader Shyam Patamajhi, Kotgarh, Kandhamal,” *Sabrang*, 14 October 2016, <https://sabrangindia.in/article/arrest-killers-tribal-leader-shyam-patamajhi-kotagarh-kandhamal>.

Panos. According to D. N. Jena, the land and the forest were among the central issues associated with the uprisings of Kandhas. The Kandhas did not want the Panos to exploit the forest products that the Kandhas claimed as their traditional rights. The Pano claim over the forest resources was one of the reasons that added fuel to the clashes²¹. However, the immediate and most prominent cause of the conflict was the issue of entry into a temple by the Pano community. The matter was raised when the Panos tried to enter a temple at Khuditentuli village of Linepada GP despite resistance from the Kandha people. Subsequently, owing to the support of the other Hindu caste people, the Kandhas launched violent action against the Panos throughout the district. The communal clashes cost many casualties and ceased the area's peace for months.

Since the 1994 communal conflict, a hostile atmosphere has spread across the district. On many occasions, the conversion and re-conversion of the tribals and Dalits by the Hindu and Christian religious groups created sensitive circumstances in the district. The religious leaders of both communities were looking for opportunities and playing hide and seek to punch each other. In December 2007, communal tension was outraged in the Brahmanigaon area over the suspected hostile treatment of a senior VHP leader, Laxmanananda Saraswati, by the Dalit Christians of Dasingbadi village. The communal outrage claimed four lives, and many churches and houses of Christian people were vandalised in the Daringbadi block.

On August 23, 2008, some miscreant people gunned down Laxmanananda Saraswati and four of his disciples in his Jalespata Ashram. The left-wing extremists admitted to their involvement in the murder, but the right-wing fundamentalists blamed

²¹ Debendranath Jena, "A Critical Analysis of Tribal Uprising in Orissa: Case of Kandhamal", in *Contemporary Society: Tribal Studies*, ed. Deepak Kamar Behera and Georg Pfeffer, vol. 4 (New Delhi: Concept Publishing Company, 1999), 159.

the assassination on Christians. The next day, on August 24, 2008, atrocious violence against Dalit and Adivasi Christians occurred throughout the district. A state-wide communal outburst occurred against the Christian people in the subsequent days. The peace in the district ceased for more than two months, affecting the socio-cultural and economic life of the ordinary people. The communal riots cost thirty-eight people's lives, and around 25,202 people took shelter in different relief camps. Four hundred fifty villages were severely affected. Three thousand two hundred and seventy houses and one hundred ninety-five churches were demolished.

Because of the region's frequent communal riots, the district had become disconnected from many socio-economic and developmental issues that needed to be prioritised. Also, the district got a bad reputation on the international stage, hurting the rich culture and history of the tribal communities in the district.

1.8.6 Economy and Poverty

Land is the most critical asset of the people for their subsistence. Rural settlers' primary sources of income are agriculture, horticulture, animal husbandry, forest-product collection, and daily wage labour. The collection of non-timber forest products (NTFPs) is a significant economic activity for rural women. Lack of industries and urban settlement in the region has limited the local job opportunities. However, the district has good opportunities for agro-forestry-based industries, which could generate employment. Local handicrafts could also be promoted and linked to the market to generate employment. Tourism is another sector that can boost the district's economy and employment opportunities if adequately promoted.

Kandhamal is one of the state's least developed districts. According to the Human Development Report 2004, the district ranked 20th out of 30 in terms of the

Human Development Index (HDI) and the Gender Development Index (GDI). However, the state government has implemented various programmes and schemes in the district to alleviate poverty, including MGNREGS, OLM, SGSY, ITDA, OTELP, RKVY, NHM, and other government programmes. Furthermore, the government is strategically working with the Self-Help Groups (SHGs) to make women self-reliant and to increase their social and political participation in various developmental initiatives. The state and central government agencies such as Tribal Co-operative Marketing Federation of India Limited (TRIFED), Odisha Rural Development and Marketing Society (ORMAS), Tribal Development Co-Operative Society (TDCC), Agency Marketing Co-operative Society (AMCS), District Supply and Marketing Society (DSMS), and Kandhamal Apex Spices Association for Marketing (KASAM) are also operating in various parts of the district to collect and market forest and agricultural products.

1.8.7 Tourism

The natural beauty of the hill district has much potential to become a destination for eco-tourism. Some hill stations, such as Daringbadi, Mandasur, and Belghar, are naturally designed to attract nature lovers, tourists, and trekkers. The weather in the region is pleasant throughout the year. Even in summer, the temperature stays average compared to other districts. The beautiful snaky roads of Kalinga Ghat, Ranipathar Ghat, Gadiapada Ghat, Daringbadi, and Mandasur have the potential to hypnotise a by-passer to halt for a few moments and enjoy the scenery. The district has a few beautiful waterfalls surrounded by forests and hills. Putudi, Ludu, Katramal, Umagada, Pakadajhar, and Beheragaon are the most notable waterfalls. The Kothgarh wildlife sanctuary protects wildlife such as elephants, tigers, leopards, bison, sambars, spotted

deer, hyenas, wolves, pangolins, and rare birds, making it an ideal location for wildlife lovers. Despite having vast tourism potential, the district has not performed well due to the government's lack of attention. Also, these are affected by poor communication and lack of infrastructure facilities.

1.8.8 Vulnerability and Insecurity

The district is vulnerable due to food insecurity, economic crisis, and threat to internal security. Food insecurity is a significant problem that persists in the district. In 2008, the Food Security of India (FSI) designated the district as the “geography of hunger” in Odisha²². Kandhamal has become one of the state's economically vulnerable districts due to limited livelihood opportunities and excessive-reliance on agriculture. Poverty, ethnic conflicts, violence between communities, and skirmishes between the police and left-wing extremists significantly affect the security and livelihood of the poor people in the district.

1.9 Review of Literature

Several books, articles, reports, and documents were read to gain theoretical and historical context of the current research topic and area. It would be lengthy to review every material cited in this thesis. However, some critical books that help understand the relationship between the forest, environment, and tribal people are reviewed in this section.

Forest Tribes of Orissa: The Kutia Kondh (2006) by Mihir K. Jena, Padmini Pathi, & Kamala K. Patnaik (2006), is a significant ethnographic study on the “Kutia

²² UNWFP, *Food Security Atlas of Rural Orissa* (New Delhi: Institute for Human Development, 2008), 2.

Kondh” tribe of Orissa. The Kutia Kondh is a primitive tribe that lives in the dense forest and hill range of the Belghar region of the Kandhamal district. The book depicts Kutia Kondh’s beliefs, practices, traditions, customs, culture, livelihood, economic condition, and way of life. It also details Kutia Kondh’s social, cultural, and economic relationship with the forest. This book tells how the life and culture of Kutia Kondh are traditionally connected with nature.

The Kond (1982) by Barbara M. Boal is a significant study of the Kondh tribes. The book primarily describes the Kui-speaking Kondh people of Odisha’s Kandhamal, Kalahandi, Rayagada, and Ganjam districts. It explains the Kondh rituals, beliefs, sacrifices, and practises in detail. The book also includes a brief history of the Kondh tribes of Odisha. Although it does not explicitly address environmental and forest issues, it discusses the Kondh people’s practices, which connect to nature and forest. The author does not place a high value on gender and women’s issues in his book, but the role of women is highlighted in some sections.

Gender relations in forest societies in Asia-Patriarchy at odds (2003) by Govind Kelkar, Dev Nathan, and Pierre Walter, examine the various matriarchal and patriarchal societies in various parts of Asia. The book consists of articles mainly focused on how gender plays a significant role in forest use and management. Some articles also mention how external factors such as religion, colonisation, modernisation, and centralised policies have periodically destroyed existing matriarchal societies and replaced them with patriarchal systems. An article authored by Indira Munshi has discussed how the women of the Warlis tribe of Thane (Maharashtra) have lost not only their primary source of income but also their religion and culture as a result of commercialisation and forest depletion. Prior to the arrival of the British, this tribe

practised hoe cultivation (similar to shifting cultivation) and food gathering, with women playing roughly equal roles to men. She claimed that the invention of settled agriculture reduced their role in the agricultural sector, affecting their social status and identity. The forest loss has increased the burden on women's work, as most of the material required for household use is derived directly from the forest. The author also mentioned that women prioritised a forest with species diversity, whereas men primarily paid special attention to commercially valuable trees. In protest against the commercialisation of forest space, women from the Warlis community uprooted the forest department's teak plantation in the jungle. This book is an essential resource for understanding the problems faced by forest-dependent communities due to deforestation and government-sponsored forest mismanagement practices.

This Fissured Land: An Ecological History of India (1993) by Madhav Gadgil and Ramchandra Guha is a masterwork for understanding the politics of British forest policies in India. The book focuses on how the commercialisation of forest resources has caused problems for indigenous forest communities. The authors argue that before the British era, the forest was considered the property of the commons or the people who lived in it, particularly tribals. However, the tribals lost their sovereignty over the forest after the nationalisation of forests during British rule. The restriction on the use of forest resources was one of the primary causes of tribal uprisings against the British rule in 19th and 20th centuries. The authors also argued that large-scale deforestation during the British rule significantly degraded the Indian subcontinent's environment and ecology.

Ecofeminism (2010) by Maria Mies and Vandana Shiva, analyses the environmental crisis from a feminist perspective. According to the authors, nature and

women are closely linked, so the degradation of nature is directly related to the marginalisation of women. The authors are critical of modern science and technology, which they believe is unsustainable and destructive for the planet. Furthermore, the book argues that the western development model, which is based on industrialisation and capitalism, is patriarchal and negatively impacts the natural environment. Thus, the sufferers are the poor and marginalised communities, including women. The ecofeminism model is based mainly on the Chipko movement in India's Uttarakhand and the Green Belt Movement of Kenya.

Staying Alive: Women, Ecology, and Development (1988) by Vandana Shiva, is inspired by the Chipko movement, where many women marched against state-sponsored forest commercialisation. According to the author, nature and women are intimately connected. She argues that industrial and scientific developments are colonial in origin, reductionist in nature, and patriarchal in construction, inflicting violence simultaneously on nature and women. The existing development models, according to Shiva, represent a “radical shift from the traditional Indian cosmological view of nature as ‘Prakriti,’ an expression of Shakti, the feminine and creative principle of cosmos, which creates the world in conjunction with the masculine principle (Purusha)”²³. Shiva observes that the connection between violence against women and nature is ideological and material. Referring to the third-world women, who rely heavily on nature for their sustenance, she notes that the destruction of nature thus becomes the destruction of women's sources for staying alive. However, Shiva's ecofeminism was criticised mainly for portraying women as homogeneous and the pre-colonial period as classless, for idealistic Hindu views, and for the unique relationship

²³ Shiva, *Staying Alive: Women, Ecology and Development*, 39.

between women and nature. Shiva also provides a detailed account of women's roles and activities in the Chipko movement in this book.

Phulbani: The Khond Land (1965) by Sashibhushan Thiady, describes in detail the geographical and political history of the former Phulbani district (now Kandhamal). He also details the Khonds' social lives, economic status, belief system, culture, and practices in the region. The book covers the region's history and the Khond tribe's liberation war against the British rule.

The Kandhas and Kandhamal (2010) by Raghunath Rath, describes the Kandha peoples' mythology, culture, religious faith, beliefs, festivals, and crafts in the Kandhamal and Kalahandi districts. The book also contains valuable information on the Kandha tribe's material culture, such as bamboo works, iron implements, agricultural implements, jewellery, earthen craft, stonework, and dress patterns. One of the chapters of the book is a collection of Kui riddles. Kui is the language of the Kandha people, and the riddles reflect their folk culture.

Material Culture of Orissan Tribals (2007) by Nityananda Patnaik, traces the history of human settlement and habitation in the hilly region of Kandhamal. It also describes the Kutia Kandha, Malia Kandha, and Desia Kandha's material cultures, traditions, and belief systems. It describes the Kandha tribe's dress, adornments, musical instruments, religious objects, and personal care items. The book is an excellent source to learn about the Kandha tribe's traditional lifestyle.

The Kondhs: A Handbook for Development (1990) by Radhakanta Nayak, Babra M. Boal, & Nabor Soreng, vividly describes the Kondh tribe's traditions, belief system, and socio-cultural lifestyle. It also describes the Kandhamal region's natural resources and how they are essential for the Kandha people's survival. It also suggests

how the Kandha people's development could be achieved by sustainably using natural resources. The book also looks at various issues associated with the Kandha people, such as health, drinking water, sanitation, education, communication, and livelihood.

Marketing of Tribal Products (2004) by Rabi N. Mishra & N. Panda is based on the critical role of a cooperative society in the Kandhamal district. The Agency Marketing Co-operative Society (AMCS) was founded in 1947 under the Madras Co-operative Society Act. The society's goal was to obtain various forest products from the tribals and export them to various parts of the country. The agency has established a presence in major Indian cities such as Bombay, Madras, and Calcutta. People in the current research area stated that the co-operative society greatly benefited farmers and forest product gatherers. However, the co-operative society was defunct around the year 2000 due to mismanagement and corruption. This book has provided valuable information on many marketable forest products in Kandhamal's forest. It also illustrates the critical role of co-operative societies in the economic development of poor and marginalised tribal people living in rural areas.

A Personal Narrative of Thirteen Year Survive among the Wild Tribe of Khondistan (1864) by John Campbell is one of the earliest colonial writings on the Kandhamal region. The book primarily focuses on the abolition of human sacrifice, also known as "meria sacrifice", practised by the Kandha tribe. However, the book has also provided some information about Kandha's social, economic, and agricultural life. The author also mentions basic information about the region's geography, forest, flora, and fauna. The book gives an idea about the socio-political scenario of the Kandhamal region in the early 19th century.

Odisha Forest Manual with Code (2015) by R. N. Nayak, provides detailed information on various forest acts and policies implemented by the British and Indian governments. The author also discusses the forest acts and policies enacted by the Odisha State Government. It also shares the administrative and operational structure of the state forest department and the rights, concessions, and limitations granted to the general public to access forest resources. The book also discusses the Forest Rights Act (FRA), 2006.

History and Culture of Khond Tribe (1992) by Nihar Ranjan Patnaik detailed the Khond rebellion of the 19th century. The author has also detailed the British Raj's political and administrative structure in the Khond hill tracks. The book helps gather knowledge of agriculture, economic, social, and religious life of the Khond people of the Kandhamal.

The Kandha of Orissa: Their Socio-Cultural Life and Development (2006) by Government of Orissa's Schedule Castes & Scheduled Tribes Research and Training Institute, is an ethnographic study of three major Kandha communities of the state, such as Kutia, Dongria, and Desia. The Kutia Kandha lives in the Kandhamal and Kalahandi districts, the Dongria Kandha in the Rayagada district, and the Desia Kandha in Kandhamal and neighbouring districts of Nayagarh and Ganjam. The Kutia and Dongria Kandhas have kept their traditional ways of life. In contrast, the Desia Kandhas, who comprise roughly 40% of the Kandha population, have nearly converted to Hinduism and mostly follow Hindu customs and rituals. The book provides detailed information about the social, political, and economic organisation of the Kandha communities. It has also focused on the Kandha tribe's lifestyle, religious beliefs and practices, rituals, material culture, healthcare practices, and status of women.

Forest Management in Tribal Areas (1997) by P. M. Mohapatra and P. C. Mohapatro contains forest-related articles focusing on Orissa's tribal communities. The book addressed several issues concerning forest policy, forest and tribal relations, ecology, shifting cultivation, participatory forest management, forest and tribal women, and deforestation. The book provides a comprehensive picture of the forest-tribal relationship in Orissa.

Tribal Identity: Continuity and Change among Kondhs of Orissa (2004) by Sukant K. Chaudhury, explains how the Kondh people's social, political, cultural, and economic structures are changing in response to modernisation, market dominance, development programmes, and the influence of people from other castes and religions. The author researched a few villages in Kandhamal's G. Udayagiri block to write the book. The book examined the essentials of Kondh's traditional way of life and its transitional stages. The author explored how the tribe, once conservative and firmly adhering to its traditional lifestyle, is now taking advantage of modern education, employment, money and market economy, and development activities. The author is concerned that government-sponsored development programmes, cultural influences from the neighbouring Hindu-caste community, and religious influences from Hinduism and Christianity are at the root of the Kondh community's identity and ethnicity crisis. The book helps understand the Kondh people's transitional life.

Man, the Gods and the Search for Cosmic Well-being (1999) by Barbara M. Boal, details the various rites and rituals practised by the Kondh tribe of Kandhamal. The Kondhs have their belief system and mythology, and rituals are the foundation of their religious beliefs. From birth to death, they perform a variety of rituals to ensure their own and their people's well-being. Different rituals are performed to appease

various deities for specific purposes. Some of their rituals are directly related to their traditional village governance systems. In this book, the author has documented several Kondh rituals concerning agriculture and wild fruits harvesting, consumption of new crops of the season, traditional healing, justice and conflict resolution, new village settlement, betrothal and marriage, child-rearing, purification and pollution, hills, forests, land, and so on. However, his study is limited to the eastern part of the district, and the situation may differ in other parts. The book is an essential source for learning about Kondh's traditional life, which is rapidly changing.

Tribals and the Indian Constitution: Functioning of Fifth Schedule in the State of Orissa (2006) by N. K. Behura & Nilakantha Panigrahi accounts for various constitutional and legal provisions enacted to protect the interests of tribal communities. The authors have specifically mentioned the tribal communities of Orissa as well as the state's special provisions for tribal communities. The book also details tribal development programmes and the organisations and institutions working for the tribal communities. The book is essential to understand the tribal communities from an administrative viewpoint.

The Unquiet Wood: Ecological Change and Peasant Resistance in the Himalaya (2010) by Ram Chandra Guha, is based on the peasant movements against state-sponsored ecological and environmental degradation in the Himalayan region of Uttarakhand. The author begins the discussion with the environmental aspects of the "Chipko movement" and explores its historical and sociological context, rooted in colonial commercial forest policies. Guha points out that the villages in the hilly areas have a symbiotic relationship with the forest, and the forest is a significant source of their subsistence economy. However, British forest acts and policies took over forest

control, disrupting the local people's traditional bond with the forest. Furthermore, British scientific forestry was based on commercial exploitation, which exacerbated the village people's plight. Historically, the local people have mounted many small and large-scale protests against the forest department's monopolising activities, and the Chipko movement is the continuation of those movements. Guha directly links the leading cause of the environmental crisis to British forest governance. The book discusses the history of the environmental crisis and how it affected the tribal and peasant communities.

Tribal Culture, Modernisation and Development: A Study of Kondh Tribe (1996) by Bijaya Kumar Behera, is an anthropological study based on various dimensions of social, political, economic, and religious change in the Kondh tribe of Kandhamal. The author has investigated the impact of agents of change such as education, modern political institutions, religious groups and institutions, transportation and mass communication development, and government welfare projects on the Kondhs. The study was conducted in the Kanjamendi village of the K. Nuagaon block of the district. The author has noted that the Kondh initially opposed many of the changes but accepted them over time due to unavoidable circumstances. The book is an excellent source to understand various grassroots factors that influenced the transformation of the Kondh tribe in the 1990s.

Of Myths and Movements: Rewriting Chipko into Himalayan History (2000) by Haripriya Rangan examines the post-Chipko development scenario in the Himalayan region. She visited the region after 20 years of the Chipko movement to re-explore the Chipko memories as well as to map the various social, political, economic, environmental, and developmental aspects of Chipko in the region. The Chipko

movement occurred during the 1970s in the Himalayan region of Uttarakhand. The movement was framed globally as the subaltern's voice in response to environmental degradation. The active leadership of women in the movement, in particular, attracted international attention and secured a separate place for women in the debates. Chipko achieved tremendous success as an environmental movement and became an ideological symbol for many other environmental movements worldwide. However, Chipko's impact on the people of the Garhwal region of the Himalayas has been concentrated marginally by academicians and researchers. In this book, the author examines how the Chipko movement affected the social and material lives of the people. The government's total ban on cutting trees affected the daily lives of the poor and marginalised people whose subsistence is associated mainly with forest resources. Furthermore, due to the ban and the government's radical forest policies, many welfare and development activities were halted, and the local people were deprived of basic infrastructure. Based on "political ecology theory", the author looks for an alternative sustainable development model for the region.

Gender and Green Governance: The Political Economy of Women's Presence within and beyond Community Forestry (2010) by Bina Agarwal, is based on extensive fieldwork in Nepal and India on community forestry. Her research focuses on women's representation in local forestry institutions, their role in decision-making, their participation in forest conservation, and how women's participation improves their socio-economic well-being. According to Agarwal, women are historically invisible in both traditional and modern forest governance, and despite their importance, men always represent them in public spaces. She claims that though women have been a part of the decentralised forest governance, overlooking the gender issues is a significant hindrance to their meaningful participation. She has examined women's relationships

with the environment, specifically how deforestation affects women's time, income, health and nutrition, and indigenous knowledge. In this book, the author examines environmental concerns through the gender lens.

Branching out Joint Forest Management in India (2001) by Nandini Sunder, Rogger Jeffery, and Neil Thin, is a review of the Joint Forest Management (JFM) programme launched by the Government of India in 1990. JFM is a participatory forest management programme between the forest department and the village community. The book is based on research conducted in sixteen JFM villages in Gujarat, Orissa, Madhya Pradesh, and Andhra Pradesh. The study's primary goal was to investigate the origins of the JFM programme, variations in its implementation and results in ethnically homogeneous and heterogeneous villages, the impact of NGOs' involvement, the attitude of the forest department, the impact on the ecology and local forest vegetation, the benefits achieved by the villages, and the gaps and shortcomings of the JFM programme. Because the JFM was still in its early stages, the authors had conflicting opinions about its success or failure. They have suggested, however, that JFM primarily serves the interests of forest bureaucracies by providing free labour. At the same time, the benefit to local people is limited, mainly because conservation and afforestation are focused primarily on commercial tree species. Gender issues, which emerged as a significant debate in the later development of JFM, were not given much weight in the book.

Gender Challenges (Volume 3): Environmental Change and Collective Action by Bina Agarwal, is a theoretical work and debate on gender, environment, and forest resources. The author examined the Indian environmental debates from a gender perspective. Agarwal begins the book by criticising the ecofeminist construction of

women as a unitary group and their unique relationship with nature. She argues that women differ based on class, ethnicity, race, age, and geographic location, experiences, knowledge, understanding, dependence, and relationship with the environment. In response to ecofeminism, Agarwal promotes her “feminist environmentalism” theory. “Feminist environmentalism” is based on the material realities that shape relationships of women and men with the natural environment. According to the theory, “the relationship between women and nature can be seen as structured by the given gender and class organisation of production, reproduction, and distribution, and the ideological construction of women’s relationship with nature can be seen as part of it but not the whole of it”²⁴. However, the book’s core theme focuses on community forest governance, specifically community forest management (CFM) institutions. The author has comprehensively discussed the causes and needs of women’s absence and meaningful participation in community forest management institutions from a gender perspective. She has also examined how gender-sensitive and gender-responsive forest management practices can differently benefit both women and the environment.

Contested Domains: The State, Peasants and Forests in Contemporary India (1994) by Akhileshwar Pathak, critically examines the relationship between the state, forests, and forest-dwellers, as well as the conflict of interest between the state and forest-dwellers. According to the author, there is a nexus between the state, capitalists, wealthy farmers, and political-bureaucratic alliances. State hegemony over forests has primarily benefited capitalists and wealthy farmers, with politicians and bureaucrats enacting favourable policies for them. On the other hand, the state has maintained a conflict status with forest dwellers regarding forest uses. The state-sponsored

²⁴ Bina Agarwal, *Gender Challenges: Environmental Change and Collective Action*, First, vol. 3 (New Delhi: Oxford University Press, 2016), 29.

commercialisation of forests in order to prioritise rapid development and modernisation has exacerbated environmental crisis in India. The author also discusses how Stockholm's declaration on the environment in 1972 and social movements like Chipko had shifted government commercial forest policy towards the conservation of forests. However, he argues, the state did not focus on reviving the traditional pattern of forest management, in which the forest and forest dwellers coexisted symbiotically. Instead, it followed scientific forestry that emphasised commercial plantation on forest land to supply raw materials to industries. The book primarily refers to forestry development between 1970 and 1990. The book is vital for understanding the politics of commercialisation and conservation of forests and their impact on forest dwellers.

Deeper Roots of Historical Injustice: Trends and Challenges in the Forests of India (2012) by Ram Chandra Guha & et al., is a compilation work on India's forest development trends by some leading Indian scholars and experts on forest and environmental issues. The experts have focused on the past, present, and futuristic trends of India's forest policy change with the changing political and economic tendencies. Nandani Sunder, one of the authors, has focused on the social, political, and economic dimensions of the conflicted relationship between the forest-dependent communities and the forest administration. Guha has traced the past development of Indian forestry and its futuristic road map. N. C. Saxena critically examines the various forest policies and their impact on tribal communities. The articles of the book critically examine the forest governance institutions, laws, policies, politics, and critical actors.

Gender and Forest: Climate Change, Tenure, Value Chains and Emerging Issues (2006) by Carol J. Pierce Colfer & et al., comprises a series of articles written by gender and forestry experts from all over the world and from various backgrounds.

The book attempts to establish gender through various forestry-related subjects such as agroforestry, forest management, community forestry, forest conservation, climate change, forest rights, and forest governance. It provides an understanding of the conceptual framework and theoretical perspectives on gender and forestry issues. A few articles, such as Carol J. Pierce et al.'s "A Gender Box Analysis of Forest Management and Conservation" and Priyanka Bhalla's "Gender Dynamic in Odisha's Forest Rights Act", discusses the significance of women in the forestry sector in Odisha. The book is essential for anyone interested in understanding gender in forest management and environmental security.

The Earthscan Reader on Gender and Forest (2017) by Carol J. Pierce Colfer et al., has analysed some critical gender issues related to forests. The book contains a variety of studies on gender and forests from developing countries. It also critically examines theoretical discourses on gender, women, and forests. A few of the articles in this book offer methodological perspectives on gender and forest research. The book is beneficial for developing a theoretical understanding of gender and forests.

India's Forest Policies: Analysis and Appraisal (1994) by L. K. Jha, details the situation of India's forest governance in the Pre-British, British, and post-independence eras. Regarding ancient India's forest governance, the author refers to Kautilya's *Arthashastra* and its prescription on forest administration, followed widely during the Mauryan period. The book also provides an overview of the state of forests, deforestation, and forestry initiatives during the Sultanate and Mughal reigns in the mediaeval period. In this book, Jha critically examines the various flaws in the forest policies of 1894, 1952, and 1988. However, the author has attempted to positively justify the measures taken by the forest policies towards conservation while obscuring

their negative impact on traditional forest governance and management. The author has also largely ignored the commercial intent of the governments driving those forest policies, which were a significant cause of forest degradation and the plight of forest-dwelling communities. However, the book helps gather knowledge on the emergence and evolution of Indian forest governance.

Fencing the Forest: Conservation and Ecological Change in India's Central Provinces (1996) by Mahesh Rangarajan, examined how colonial forestry development radically altered the Central Province's social and ecological structures. The author has given a historical overview of human-driven deforestation and its ecological impact in India. He has critically examined the changing forest use pattern, the increase in the value of forests after the introduction of railways, and the growth of industrialisation. Further, he mentions how the British notion of exploitation of forests changed to the protection of forests and afforestation to supply raw materials to their industries. The book has also concentrated on the various impacts of the imperial forest policy on underprivileged groups, focusing on the tribal communities of the central province. The author concentrates primarily on the impact of imperial forest policy on the tribal traditional lifestyles such as shifting cultivation, cattle grazing, subsistence, and economic life. He has also detailed the effect of the reckless hunting of wild animals by colonial officials on the ecological balance and the lives of the tribals. However, the book only covers the situation before 1914 and misses the crucial tribal rebellion aroused in response to the imperial forest policy in the 19th century.

1.10 Chapterisation

The present doctoral thesis is divided into six chapters. The **First Chapter** of the thesis consists of an introduction to the research, a brief overview of the forest in India, a brief

description of Odisha and the Kandhamal district, a review of literature, research objectives, and methodology section.

The **Second Chapter** examines the state forest governance and its long-term impact on tribal communities. The chapter begins with an overview of forest governance before the British rule, followed by an in-depth examination of the British forest policies and post-independence forestry development in India, Odisha. The post-independence forest governance has been examined from a gender perspective, emphasising the role of women in the forest and the importance of their meaningful participation in forest management. It has also outlined the gender issues prevalent in state and local forest management practices and institutions.

The **Third Chapter** profiles the Desia Kandha community in the field area. It examines their socio-economic conditions, including village structure, livelihood pattern, infrastructure facilities, education, sanitation, accessibility to healthcare facilities, markets, and communication and transportation availability in the field. This chapter also covers forest resources, their utilisation, and forest-related issues, and the development of forest governance in Kandhamal.

The **Fourth Chapter** discusses how the Desia Kandha women in the study area have been associated with the forest in various ways. The chapter examines the significance of the forest in Kandha women's livelihood, agriculture, survival structures, belief system and the position of women in tribal communities. The chapter also discusses the challenges faced by Kandha women while following their forest-based lifestyle.

The **Fifth Chapter** is based on the life experiences in the forests shares by respondents from the field. The themes of there narration are on their survival, challenges, lifestyle, belief system, and forest conservation experience.

The **Sixth Chapter** is the final section of the thesis. It discusses the central issues and findings of the current study and provides concluding remarks on the entire thesis.

CHAPTER 2

Tribal Communities and the Forest Governance

2.1 Introduction

The tribal communities in India have historically faced oppression from the ruling and mainstream societies. Displacement, resource deprivation, and social marginalisation are some challenges that have followed them historically. Even in contemporary times, despite having many constitutional safeguards, the persecution of tribal people is not entirely eliminated. Their habitat and survival resources have been persistently threatened and exploited in one way or another to protect the state's interests. The forest is one of the significant natural resources which traditionally supported many tribal communities for their survival. However, the state controls the entire forests of the country and prioritises the interests of powerful groups over those of disadvantaged tribal communities.

The current chapter investigates the evolution of forest governance over time and how it has impacted the tribal groups in India and Odisha. The chapter critically examines how the British forest control damaged indigenous tribes' traditional lifestyles and economies. Furthermore, the chapter briefly presents the post-independence forest governance and the situation of tribal communities' access to forest. It underlines the significance of women's participation in Chipko movement and how it has influenced the government to include women in forest conservation. The chapter also examines various state-sponsored community forest management programme, such as social forestry, joint forest management, and forest rights act from the perspective of the tribal communities, focusing on tribal women. The chapter begins a brief overview of the tribal communities in India and Odisha.

2.2 Tribal Communities in India

Before discussing tribal communities in India, it is essential to understand how the concept of “tribe” is constructed and applied in the Indian context. The notion of “tribe” was introduced in India during the colonial period for administrative purposes. Initially, the British considered all Indian communities to be tribes. For example, M.A. Sherring described and classified the tribes as “Brahminical tribes, Kshatriya tribes, Rajput tribes, Mahomedan tribes, agriculture tribes, aboriginal tribes, low caste tribes, mixed castes and tribes, and so on”²⁵. However, following the colonial ethnographic survey in 1885, the British separated the tribes from the caste communities. Subsequently, the concept of ‘tribe’ was developed and defined in successive census reports of the British government. The tribals were classified as “people with tribal religion” in the 1891 census report, “animists” in 1911, “hill and forest tribes” in 1921, “primitive tribes” in 1931, and “tribes” in the 1941 census reports. Apart from census terms, many Indian and British scholars have defined tribes in various contexts. Risley, Leisy, and A. V. Thakar referred to them as “Aboriginals”. Baine called them “Hill Tribes”, “Jungle People”, “Forest Tribes”, and “Folks”²⁶. Elwin called the Baigas, “the original owners of the country”²⁷. Thakkar Bappa, in 1930, introduced the word “Adivasi” (indigenous) to identify the tribal people, which has been used popularly since then to the present day. Most tribes in our country live in or near forest areas, and most of the forest areas lie within tribal areas and tribal districts.

²⁵ K.S Singh, “Tribe into Caste: A Colonial Paradigm (?)” in *From Tribe to Caste*, ed. Dev Nathan, (Shimla: Indian Institute of Advance Study, 1997), 34.

²⁶ Mamoria C B, *Tribal Demography in India*, (Allahabad, Uttar Pradesh: Kitab Mahal, 1957), 19.

²⁷ Elwin V, *The Baigas*, (New Delhi: Gyan Publishing House, 2002), 519.

Traditionally, the tribal communities in the Indian subcontinent were known as Jana Jati (folk communities), Pahadi, Adim Jati (primitive communities), Vanajati (forest communities), and Girijan (hill-dwellers). However, these terms had some bureaucratic links that the local rulers used to classify specific communities for political and administrative purposes. The tribal communities primarily introduce themselves to the larger society through the identity or title assigned by their surrounding caste societies. While the tribals accept the identities offered by the outsiders, they prefer to present themselves through their intrinsic identity, derived primarily from their language or oral history. For example, the Kandha, a principal tribe of Odisha, also listed as the Scheduled Tribes, identify themselves as “Kui Loka” or “Kui Enju”. “Kui” is the language they speak. Likewise, the Oraon tribe views their community as “Kurukh” people, and the Santal tribe introduces themselves as “Hor” or “Manjhi”. Bonda, an aboriginal tribe of Odisha’s Malkangiri district who lived in the mountainous area near the Andhra border for thousands of years, calls themselves Remos (brave men). However, the people of the lower hill and plain areas recognise them as “Bonda”, which means naked or savage.

After independence, it was realised that special protection, provisions, and policies were required to develop the socially marginalised tribal populations. However, the major challenge was identifying communities based on the ever-polemic and unresolved meanings of the word “tribe”. After much debate on replacing the word “tribe” with an alternative term in the constituent assembly, Dr B. R. Ambedkar’s suggestion of “Schedule Tribe” was adopted²⁸. Subsequently, the tribal groups were considered scheduled tribes (ST) under Article 342 of the Constitution of India. Article

²⁸ N.K. Behura and Nilakantha Panigrahi, *Tribals and the Indian Constitution*, (Jaipur: Rawat, 2006), 7.

366 (25) defines a “scheduled tribe” as “such tribes or tribal communities, or parts or groups within such tribes or tribal communities, as are deemed under Article 342 to be scheduled tribes for purposes of this constitution”. The President of India has the authority to schedule or unschedule a community from the list of Scheduled Tribes on the recommendation of the Governor of the concerned States and UTs.

The category of “tribe” has social and cultural dimensions, but the Scheduled Tribe category has politico-administrative implications. Initially, in 1950 and 1956, primitiveness and backwardness were the criteria to include communities in the Scheduled Tribes (ST) list. Later, the standards recommended by the Lokur Committee in 1965, such as (a) primitive traits (b) distinct culture (c) geographical isolation (d) shyness of contact with the community at large and (e) backwardness of communities were taken into consideration to include various communities in the ST list²⁹. However, the parameters laid down by the Lokur committee are hardly relevant in the present and upcoming days. For example, very few tribes presently live with “primitive traits”, and road and communication facilities are available to many formerly “geographically isolated” tribal areas. So, any attempt to define or justify the term “tribe” is to fall into the vicious circle and fallacy of the colonial categorisation of “tribe”. Therefore, looking at the intricacy of the definition and use of the word “tribe”, this study has considered “tribe” as those communities constitutionally specified as “scheduled tribes”. However, the researcher is conscious of the administrative and political context of using the term “schedule tribe”.

²⁹Virginious Xaxa (Ga.) Ministry of Tribal Affairs, *Report of the High Level Committee on Socio-Economic, Health and Education Status of Tribal Communities in India*, (New Delhi: Government of India, 2014), 25.

The scheduled tribes are categorised further into “particularly vulnerable tribal groups” (PVTGs). The PVTGs are the most vulnerable and isolated groups among all the tribal communities listed as ST. The following characteristics categorise tribal groups into PVTGs: i) forest-dependent livelihood ii) pre-agricultural technology iii) stagnant or declining population iv) extremely low literacy and v) subsistence level of the economy. According to the Ministry of Tribal Affairs (MoTA), seventy-five communities are recognised as PVTGs, spread across eighteen states and the union territory of the Andaman and Nicobar Islands. The PVTGs are categorised to provide them with special administrative concessions, welfare provisions, and legal protections.

The tribals are settled mainly in the hilly and forest areas. Forest areas are home to approximately sixty per cent of the country’s total tribal population. So far, around 705 communities are recognised constitutionally as “scheduled tribes”. Tribal communities have spread across the country except the states of Punjab and Haryana and Union Territory of Delhi, Chandigarh, and Puducherry. The states of Madhya Pradesh, Maharashtra, Odisha, Jharkhand, Chhattisgarh, West Bengal, and Bihar have a high concentration of tribal population, accounting for more than half of the tribal people of India. Population-wise, the Gond, Bhil, Santal, Khond, Oran, Mina, and Munda are the most prominent communities, with over one million inhabitants each. At the same time, the Birja, Asur, Bihor, and the tribal groups of the Andaman and Nicobar Islands are less populated tribes.

According to the 2011 census survey, the total tribal population of the country is 104.3 million, accounting for approximately 8.6 per cent of the total population. Around 93.8 per cent of the tribal population lives in rural areas, practising mainly agriculture, forestry, animal husbandry, and wage labour for a living. Approximately

87 per cent of the tribal families rely on conventional sources of fuel for cooking, mainly firewood collected from the nearby forests. The tribal population is slightly better regarding sex ratio (990 females per 1000 males) than the national figure of 940. According to the 2011 census, the overall literacy rate of tribal communities is 59 per cent, of which the female literacy rate is 49.40 per cent and the male literacy rate is 68.50 per cent. The percentage of tribal people living below the poverty line (BPL) in 2011-12 was 45.3 per cent in rural areas and 30.4 per cent in urban areas.

2.2.1 Constitutional Provisions and Special Welfare Programmes for Tribals

Special welfare provisions for tribal communities in India have been continuing since the British era. In the pre-British period, tribal communities were primarily self-governing, with their political structures usually headed by hereditary chieftains. However, since the British imposed their administration on the tribal areas, the tribals' socio-political structure, economy and autonomy were hampered. The tribal people fought against the British anti-tribal laws across the Indian subcontinent. Between 1800 and 1947, the tribal communities launched several revolts and rebellions against British rule. The British government killed thousands of people to suppress the movements, uprooted their villages, destroyed their crops, imprisoned them, and imposed heavy fines to punish them. Such incidents led the British to initiate special programmes and administrative provisions to develop tribal communities and tribal regions³⁰.

The first step taken by the British for tribal people was the implementation of the Scheduled District Act of 1874. The Act provided special status to the tribal dominated areas by forming "scheduled districts." The provision was to provide special civil and judicial administration and restrict the application of general rules in these

³⁰ Behura and Panigrahi, *Tribals and the Indian Constitution*, 55.

areas. In the latter part of the nineteenth century, the British government granted free education to children in schools located in tribal areas. The Government of India Act 1935 further classified the tribal-dominated areas as “excluded areas” and “partially excluded areas” for smooth administration. The Act had delegated more power and autonomy to the Governor General, and “without his approval through public notification, none of the dominant legislatures would apply to such areas”.

After independence, the Indian government focused on developing and protecting the tribal communities’ interests. There are around twenty articles and two particular schedules in the constitution to safeguard the tribal communities from exploitation and underdevelopment. Part X of the constitution administers the scheduled and tribal areas. The various articles that represent the scheduled tribes’ interests are “Articles 14, 15(I, II), 15(4), 16(I), 16(4), 16(4 A), 17, 19(5), 23, 24, 25, 29, 46, 164(II), 244, 275, 330, 332, 334, 335, 338, 339(1), 340, 341, 342, 366, and 371(A, B, C)”. The fifth and sixth schedules of the constitution provides for the administration of the scheduled areas. The sixth schedule applies to the north-eastern states of Assam, Meghalaya, Tripura, and Mizoram, while the fifth includes the rest of India. Article 244 (2) deals with the provisions of the Sixth Schedule.

Article 244 (1) of the fifth schedule has provisions for establishing the scheduled areas. The scheduled areas are those that “the Honourable President of India may declare to be scheduled areas” by order. The criteria for declaration of scheduled areas are (i) predominance of tribal population (ii) compactness and reasonable size of the area (iii) a viable administrative entity such as a district, block, or taluk and (iv) economic backwardness of the area as compared to the neighbouring areas. Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh,

Maharashtra, Odisha, and Rajasthan are among the eleven states that have scheduled areas.

The Government of India has concentrated on tribal welfare since the fifth five-year plan along with implementing the Tribal Sub-Plan (TSP) programme. Following that, the other programme such as the Integrated Tribal Development Programme (ITDA), Modified Area Development Approach (MADA), Minimum Support Price (MSP), Tribal Cooperative Marketing Development Federation of India Limited (TRIFED), Tribal Development Cooperative Cooperation (TDCC), Special Central Assistance to Tribal Sub-Scheme (SCA to TSS), and Tribal Advisory Council (TAC) are some centrally sponsored programmes and agencies employed for the welfare of tribal communities. Furthermore, in addition to the centrally sponsored programmes, each tribal state has programmes for the tribals' socio-economic and cultural welfare. In 1999, the Ministry of Tribal Affairs (MoTA) came into force, which is the nodal agency for all tribal-related subjects.

In 1996, the central government enacted PESA (Panchayat Extension to Scheduled Areas) Act to extend the provisions of Part IX of the Constitution to the scheduled areas. The objective was to “ensure self-governance through traditional Gram Sabha and to safeguard and preserve the traditions and customs of tribal communities”. PESA acknowledges the tribal communities' rights over natural resources and grants them ownership over Minor Forest Produce (MFP) and the rights to protect and manage the local forest. However, PESA's provisions are limited to the Scheduled Areas and do not cover the tribal communities outside them. The Indian government passed the Scheduled Tribes and Other Traditional Forest-Dwellers (Recognition of Forest Rights) Act in 2006, which grants land and forest rights to local

tribal and other forest-dwelling communities. The Act gives tribal communities legal rights over the forest lands they cultivate and allows village communities to self-govern their traditional forests.

2.3 Tribal Communities in Odisha

The state has the largest concentration of tribal communities in India. Out of the 705 tribal communities listed by the constitution, Odisha has 62, including 13 Particularly Vulnerable Tribal Groups (PVTGs). The PVTGs are Birhor, Bonda, Chukutia Bhunjia, Dongria Kondh, Didayi, Hill Kharia, Juang, Kutia Kondh, Lanjia Saora, Lodha, Mankidia, Paudi Bhuyan, and Saora. The dominant tribes are Kandha, Gond, Santal, Munda, and Sabar Lodha. On the other hand, the Chenchu, Mankidi, Ghara, Baiga, and Korua are less populated and confined within a particular area.

The tribals of Odisha are mainly settled in the state's hilly areas, extending from the Malkangari district in the south to Mayurbhanj district in the north. Primarily, they live in the Mayurbhanj, Keonjhar, Sundargarh, Sambalpur, Jharsuguda, Deogarh, Kandhamal, Kalahandi, Nuapada, Bolangir, Rayagada, Gajapati, Nabarangpur, Koraput, and Malkangiri districts of the state. Around 94% of the tribal people of the state live in rural areas. The Fifth Schedule of the Constitution has declared 44.70% of the state's total geographical area as "scheduled areas", which extends over 118 blocks in 13 districts. Sixty-eight per cent of the state's total tribal population lives in the Scheduled Areas.

Odisha has the third largest tribal population next to Madhya Pradesh and Maharashtra. According to the 2011 Census, the total tribal population of the state is 9,590,756, or approximately 22.85 per cent of the state's total population. The tribals are more or less concentrated all over the state. However, their number in Mayurbhanj,

Malkangiri, Rayagada, Nabarangpur, Gajapati, Kandhamal, Sundargarh, and Koraput accounts for more than 50% of the total population. On the other hand, their numbers in the district of Puri, Kendrapada, and Jagatsinghpur, have less than 1% of the total population. The state always has an advantage in the sex ratio among tribals in all the census reports. The latest sex ratio (Census 2011) is 1029 females per 1000 males. The tribal literacy rate increased significantly from 37.37 per cent (female 23.37 per cent, male 51.48 per cent) in the 2001 census to 52.24 per cent (female 41.2%, male 61.7%) in the 2011 census, but is still significantly lower than the overall literacy rate of the state, which is 72.87 per cent. Among all tribal communities of the state, the Baiga, Banjara, Bathudi, Ghara, Kavar, Kisan, Kora, Kulis Midras, and Oran have comparatively better literacy rates (more than 60%) than the others. In contrast, the Korua, Mankidi, Mankirdia, Omanatya, Parenga, and Paroja have lower literacy rates (less than 40%).

Most of the tribal communities in Odisha are bilingual, and some areas are multilingual. They generally use their language for intra-community interaction and other languages to communicate with outsiders. However, native languages are becoming less popular among the new generations due to the influences of the state's political system, popular media culture, the market, and the educational system. The tribals of Odisha speak as many as 74 dialect. Konda, Koya, Kui, Kuvi, Olarri, Parji, Pengu, Jharia, Bhatari, Halbi, Kurmali, Sadri, Binjhia, and Lambadi are a few of the languages widely spoken by the tribals across the state. Apart from their language, the tribals speak Odia and Sambalpuri (Western Odisha) for inter-community conversation. The tribals living on the state borders also speak other languages, such as Hindi, Telugu, and Chhattisgarhi.

The tribals primarily depend on agriculture, collection of forest products, horticulture, wage labour, and animal husbandry for their survival. Many tribal communities are good hunters, gatherers, and qualified shifting and settled cultivators. In the interior areas, they grow millets, pulses, vegetables, and maize on the hill slopes and shifting-cultivation lands. At the same time, they cultivate paddy in the settled agricultural land, primarily for self-consumption. Apart from agriculture, the forest boosts their economy to some extent; especially tribal women gather various products from the forest to financially support their families. Horticulture also contributes significantly to the tribal economy. The fruit trees, such as mango, jackfruit, dates, and jamun (java plum) are grown on private and public lands in the tribal areas. In the Dongria Kandha area of the Rayagada district, the tribals depend heavily on cultivating pineapple, orange, banana, papaya, and mangoes. The rearing of poultry, goats, sheep, and cows yields good monetary returns to them at the necessary time. Besides the primary sector, the tribals work as daily wage labour in the agricultural sectors and construction sites for their subsistence. According to a planning commission of India report, agricultural labour constitutes 47%, the cultivator 33%, the other 15%, and tribal workers engaged in household industries 4.8%³¹.

Poverty, development-induced displacement, land rights, and rights over the forest are a few issues that have persisted with the tribals of Odisha for a long time. According to a World Bank report, around 72% of the tribal population of Odisha is below the poverty line. In southern Odisha, their number is more than 87%. The absence of communication, healthcare, education, employment, and infrastructure facilities has

³¹ Sinha B K P, Minaketan Behera, "A Research Study on Changing Socio-Economic Condition and Livelihood of Geographically Isolated Tribal in Kandhamal and KBK districts of Odisha" Submitted to Planning Commission, Government of India, Yojana Bhawan New Delhi. 2009. P. 64

resulted in acute poverty in the tribal areas. In 2016, the deaths of 19 tribal children in Nagada village, Jajapur district, due to malnutrition, and 83 children's death in Malkangiri district, due to Japanese encephalitis were examples of acute poverty and the negligence of healthcare facilities in the tribal belt.

The construction of large dams, the establishment of industries, mining activities, and the formation of wildlife sanctuaries has displaced tribals and forest dwellers from time to time. The construction of the Hirakud, Indravati, Rengali, Balimela, and Kolab dams has displaced thousands of tribal families without proper rehabilitation³². On the other hand, tribal populations of the mineral-rich hill areas are engaged in an endless struggle against mining companies like Vedanta and Nalco. The mining companies have adopted a hook or crook policy to exploit the reserved minerals at any cost, making the lives of the tribals in the area miserable. In the same way, the establishment of wildlife sanctuaries in Similipal, Kotagarh, and Satakosia has displaced the tribals from the core areas of the sanctuaries.

Migration is a constant problem in many tribal areas. The increasing necessities for survival, the unavailability of wages in the locality, low wage rates, the marginal holding of agricultural land, the degradation of the forest-based livelihood, and the unequal profit distribution in the forest product value chain are some of the primary drivers of migration of the tribal people. However, the primary sufferers of male migration are the women, who take on the additional burden of domestic and economic responsibilities in the absence of male members. Other reasons, such as government

³² Mishra S K, "Development Displacement and Rehabilitation of Tribal People: A Case Study of Odisha", *Journal of Social Sciences*, Volume 6, Issue 3. 2002. P. 197-208.

encroachment on tribal land, deforestation, forest commercialisation, and faulty afforestation programmes, have significantly affected tribals.

2.3.1 Special Provisions for Tribal Communities in Odisha

Since the British period, the tribal people of the hill tracts of the then Ganjam district enjoyed special protection regarding their land. Looking at the increasing land alienation, from tribal to the non-tribal, the British government passed the Agency Tracts Interest and Land Transfer Act, 1 of 1917. The act prohibits the transfer of tribal land to the non-tribal people in the Hill-Tract Agency of Ganjam, Visakhapatnam, and Godavari districts. The present Kandhamal and part of the Gajapati district were designated as the “Maliah Agency” and was a part of the Ganjam district during British rule. The British government enacted the Act to prohibit the transfer of hill people’s (Kondhs) land to non-hill (non-Kondhs) people in the Ganjam hill tract without the permission of the concerned authorities³³. The British also put the “Maliah Agency” under the “excluded areas” and specially administrated under its provisions.

After the independence of India, the Odisha government promulgated several provisions to protect the interests of the tribal people in the state. “The Orissa Scheduled Areas Transfer of Immoveable Property (by Scheduled Tribes) Regulation, 1956 (amended in 1993)” prohibited the alienation of an ST’s land to non-ST people. Furthermore, sections 22 and 23 of “The Orissa Land Reforms Act 1960” protect the ST population living outside the Scheduled Areas from land alienation. In Andhra Pradesh, the tribal lands are protected by the “Land Transfer Regulation Act 1 of 70”. “The Orissa Reservation of Vacancies in Posts and Services (for ST and SC) Act, 1975”

³³ Nilamani Senapati and Durga Charan Kuanr, eds., *Orissa District Gazetteers: Boudh-Khondmals* (Cuttack: Orissa Government Press, 1983), 222–23.

grants 22.50% of reservations in jobs for STs in initial appointments and promotions in State Government and other authorities under their control.

Apart from the legal provisions, the state government has implemented several programmes for educational, economic, social, and cultural welfare of the tribal communities. Some of the schemes are the Pre and Post-Metric scholarship, Multilingual Education (MLE) for tribal children, Odisha Girl Incentive Programme (OGIP), Special Development Council, Misson Jivika, Odisha Particularly Vulnerable Tribal Group Empowerment and Livelihood Improvement Programme (OPELIP), Orissa Tribal Employment and Livelihoods Programme (OTELP), and Tribal Development Cooperative Corporation of Odisha Limited (TDCCOL). The state government has instituted separate agencies for developing all 13 PVTG categories, such as Kutia Kandha Development Agency (KKDA), Dongria Kandha Development Agency (DKDA), Pahadi Bhuiya Development Agency (PBDA) and so on.

2.4 Forest Governance and the Tribal Communities: Pre-Colonial Situation

The early existence of state-sponsored forest governance in India is evident from the Vedic era. During the Vedic era, the Aryan people heavily depended on the forest for wood and non-wood items to construct agricultural machinery, chariots, and utensils. The Vedic texts also displayed great reverence for forests and recommended the villages to maintain three types of forests around their territory: Mahavan, Shrivan, and Topavan³⁴. Mahavan was a protected area where all species could coexist; Shrivan was a production forest that provided essential commodities to humans and livestock;

³⁴ *Pancavati: An Indian Approach to Environment*, Asha Vohra, tran. (Delhi: Sri Vinayak Publication, 1992), 31.

Topavan was a sacred forest preserved for religious purposes³⁵. The classification of forests during the Vedic period could be seen as one of the earliest instances of organised forestry. When the Aryan colonisation spread into the sub-continent, more forests were brought under their control or cleared for human settlements, forcing forest-dwellers to relocate to other areas. However, according to Ribbentrop, the forest-dwellers were not significantly affected as the forests were extremely spread over India and what was destroyed was a small portion of it³⁶.

During the Mauryan period, a formal structure of state-sponsored forest governance first arose in Kautilya's (popularly known as Chanakya) written book *Arthashastra*. Those days the forest was important sources for construction materials, caring & training of war elephants, and urban settlements. Forest products such as bamboo and reeds, creepers, leaves for writing, medicinal plants, poisonous plants, barks, animal body parts, metals, clays, charcoal, firewood, and cattle fodder were valuable sources of revenue for the state³⁷. Kautilya's *Arthashastra* has prescribed three state-keeping forests: elephant, production, and game³⁸. Elephant forests were reserved for caring and training of war elephants. The killing of elephants was prohibited, and such an offence could result in death penalty. However, the forest-gathering tribes living in such forests would have abstained from eating elephant meat because of the restriction and punishment³⁹. Production forests were primarily maintained to extract timber for urban settlements and build bridges and dams. he game

³⁵ B. M. Kumar, "Forestry in Ancient India: Some Literary Evidences on Productive and Protective Aspects," *Asian-Agri-History* 12, no. 4 (2008): 301–2.

³⁶ Ghosal, "Pre-Colonial and Colonial Forest Culture in the Presidency of Bengal," 108–9.

³⁷ *Kautilya's Arthashastra*, R Sharmashastry, trans. (Mysore: Wesleyan Misson Press, 1929), 139–41.

³⁸ Patrick Olivelle, *King, Governance, and Law in Ancient India: Kautilya's Arthashastra* (New Delhi: Oxford University Publications, 2013), 44.

³⁹ Madhav Gadgil and Ramachandra Guha, *This Fissured Land* (New Delhi: OXFORD University Press, 1992), 75.

forests were exclusively for the royal courtyards' recreational activities, and local communities' hunting activities in such forests were prohibited. The *Arthashastra* also calls for a well-organised forest department, with authorities designated in various positions to manage the state forests. Thus, the forest dwellers living within the various state-designated forests may have faced some restrictions on the use of forests.

Kautilya's doctrine of statecraft somehow followed until the end of the Hindu dominion⁴⁰. As a result, despite the increased emphasis on agricultural and land revenue, forests continued to be a source of revenue for the state. However, the rise of Mughal power in India caused the decline of Hindu rulers' statesmanship. The Mughal rulers developed a new political and economic system primarily based on agricultural land revenue. Forests were freed from state control and revenue because Islam regards "forest as the gift of nature, just like water, and thus everyone's property⁴¹." However, as Mughal rulers continued to invade the Indian sub-continent, local agricultural communities and nomadic people sought refuge in the forest. They cleared vast forest areas for settlement, threatening the original forest-dwelling communities' lives and livelihoods.

Until the end of the 16th century, many forests covered the subcontinent, and forest-dwellers almost lived freely in the forest by adhering to their tradition, culture, and forest-based livelihood. Particularly in the hilly and mountainous regions, forests were untouched by the rulers and landlords. Tribal communities residing in these regions have traditionally enjoyed their rights over forestlands within the scope of

⁴⁰ P.K. Gautam, *One Hundred Years of Kautilya's Arthashastra*, IDSA Monograph Series 20 (New Delhi: Institute for Defence Studies and Analysis, 2013), 8.

⁴¹ Berthold Ribbentrop, *Forestry in British India* (New Delhi: Indus Publishing, 1989), 51.

customary regulations and territorial subjects⁴². The forest was an essential aspect of village administration, regulated by local communities or open to everyone⁴³. Rulers had imposed marginal restrictions on forests, except those reserved for the recreational purposes of royal families. The forest crisis and the forest-dwelling communities' tragedy occurred in modern times⁴⁴.

2.5 Forest Governance and Tribal Communities in the Colonial Period

The process of deforestation in India was at its height during the colonial regime. One of the significant factors in the rapid depletion of forests was the growing demand for timber in Great Britain⁴⁵. The British initially exploited the Indian forests irrationally, considering them inexhaustible. However, the crisis of the Indian forest significantly intensified after the introduction of the railway service in 1853. The railway network's subsequent development demanded teak, deodar, and sal timbers to prepare railway equipment. A mile of broad-gauge rail track was estimated to have 1800-2000 sleeper requirements, whereas a full-grown tree can produce a maximum of four to five sleepers⁴⁶. Additionally, the trains in the initial days used firewood as fuel instead of coal. So, the government required large tracts of forest to fulfil the railway's demand for wood and timber. With the mounting demand for timber, the British government

⁴² Buddhadeb Chaudhuri, "Forest, Forest-Dwellers and Forest Development", in *Forest and Forest Development in India*, Buddhadeb Chaudhari ed. (New Delhi: Inter-India Publications, 1989), 20.

⁴³ Madhav Gadgil, "India's Deforestation: Patterns and Processes," *Society & Natural Resources* 3, no. 2 (1 April 1990): 134, <https://doi.org/10.1080/08941929009380713>.

⁴⁴ Ram Sharan Sharma, *India's Ancient Past* (Delhi: Oxford University Press, 2007), 41.

⁴⁵ E.P. Stebbing, *The Forest of India*, vol. 1, 3 vols (Plymouth, Great Britain: John Lane, 1922), 34-35.

⁴⁶ Mahesh Rangarajan, *Fencing the Forest: Conservation and Ecological Change in India's Central Provinces, 1860-1914* (New Delhi: Oxford University Press, 1996), 29.

needed effective forest management for a secure and continuous timber supply. Hence, the British government set up a separate forest department in 1864.

2.6.1 Evolution of Colonial Forest Acts and Policies

The British government noted that it would be difficult to conduct large-scale forest management and timber processing without proper control over the forests. But, their main obstacle was the privileged status of forests as “common property” and the overwhelming dependence of Indians on forests for their many needs. To claim absolute control over forests, the British government interpreted the forests as “historically belonging to the rulers”, and the native people’s exclusive privileges were because of the rulers’ mercy⁴⁷. The British authorities initially asserted rights over forest resources based on this hypothesis. They politically disintegrated the forests from the villages and invalidated the people’s customary rights to bring entire forests under their jurisdiction. They gradually took absolute control over forests by introducing various acts and policies.

Government Forest Act 1865: The Act allowed the government to declare any patch of land covered by trees, bushes, woods, or jungle as a “government forest” without infringing any existing rights of individuals or communities⁴⁸. The Act ended local people’s rights over forests, as the British viewed the customary use of forests as based on “privilege” and not on their “rights”⁴⁹. Further, the Act divided the village and forest into two administrative areas. While the forest became state property, the people’s

⁴⁷ Akhileswar Pathak, *Contested Domain: The State, Peasants and Forest in Contemporary India* (New Delhi: Sage Publication, 1994), 19.

⁴⁸ E.P. Stebbing, *The Forests of India*, vol. II (Great Britain: The Mayflower Press, 1923), 8–9.

⁴⁹ Ramachandra Guha, “Forestry in British and Post-British India: A Historical Analysis,” *Economic & Political Weekly* 18, no. 44 (29 October 1983): 1884.

ownership rights settled within the village's revenue boundaries. The Act categorised the forests into first, second, and third-class forests. The "first-class forests" were protected and closed to the local people. In the "second-class forests", the villagers had restricted rights, and timber collection was not allowed. The "third class" forests were open to the public only for domestic purposes.

Indian Forest Act 1878: The "Government Forest Act 1865" was repealed by the "Indian Forest Act 1878". The Act covered all the Indian provinces except Madras, Coorg, Berar, Burma, Ajmer, Baluchistan, and the Hazara district of Punjab. It classified forests as reserved, protected, and village forests. "Reserved forests" were located primarily in valuable timber-stocked forest areas⁵⁰. The Act nullified all rights and privileges of the local people in the reserved forests to protect them from local encroachment. "Protected forests" were developed to convert them to reserved forests in the future. Individual or community rights and claims in such forests were reported but not resolved. According to Ribbentrop, "everything was an offence that was not permitted in reserved forests, while in protected forests, nothing was an offence that was not prohibited"⁵¹. Chapter III of the Act provided for the creation of "village forests". The "village forests" were proposed for the exclusive use of the villages. However, the priority to constitute "reserved forests" failed to demarcate the village forests, and this chapter became a "dead letter"⁵².

Madras Forest Act 1882: The "Board of Revenue" of the Madras Presidency refused to extend the Indian Forest Act of 1878 to Madras. According to the board, "The rights

⁵⁰ Richard Haeuber, "India's Forest Policy in Two Eras: Continuity or Change?," *Environmental History Review* 17, no. 1, (Spring, 1993): 55, <https://doi.org/10.2307/3984890>.

⁵¹ Ribbentrop, *Forestry in British India*, 18.

⁵² Ramachandra Guha, "The Prehistory of Community Forestry in India," *Environmental History* 6, no. 2 (April 2001): 216, <https://doi.org/10.2307/3985085>.

of villagers over wastelands and jungles were considered to be of such a nature as to prohibit the government from creating an absolute forest property”⁵³. However, after the deputation of Dr Brandis to the Madras Presidency, a separate Madras Forest Act was enacted in 1882. The Madras Forest Act imported many elements from the Indian Forest Act of 1878. However, unlike the Indian Forest Act, which has three different categories of state forests, the Madras Forest Act has reserved forests only. The forest areas beyond the reserved forests were either open to everyone or managed by the village communities. There were no provisions for “village forests” in the Act.

National Forest Policy 1894: The British government implemented the National Forest Policy of 1894 based on the Voelcker Report on improving Indian agriculture. The objectives of the policy were to maintain sufficient forest for general welfare of the country, maximising revenue collection, and meeting the local people’s need. The policy categorised forests into four classes: forests for climatic purposes, forests for commercialisation, minor forests, and pasturelands. However, the policy prioritised agriculture over forestry to maximise revenue collection⁵⁴. Suitable forest lands were granted to the cultivators at no cost or nominal cost to increase agricultural revenue⁵⁵.

Indian Forest Act 1927: The Act codified all the practices of the forest officials, such as their power, duties, and rights. The forest officials were authorised to arrest forest offenders without a warrant. The government strengthened the forest department to increase its control over forest resources and regulate people’s rights in the forest. The

⁵³ Ribbentrop, *Forestry in British India*, 16–17.

⁵⁴ Aditya Kumar Joshi et al., “National Forest Policy in India: Critique of Targets and Implementation,” *Small-Scale Forestry* 10 (March 2011): 87.-

⁵⁵ Sarad Kulkarni, "Forest Legislation and Tribals: Comments on Forest Policy Resolution," *Economic & Political Weekly* 22, no. 50 (12 December 1987): 2143.

main purpose of the act was to maximize the revenue generation from timber export and allowing clearance of natural forests for tea, rubber, and coffee plantations.

2.6.2 Impact of Colonial Forest Administration on Tribal Communities

The colonial forest governance had severely impacted to the tribal communities living in the forest. With the expansion of British forest laws, the tribal population gradually lost their customary rights to forests. Whatever little rights they exercised were subject to the regulation of the British government⁵⁶. The colonial forest acts and policies had ruinous consequences on the survival activities of the tribal communities, such as shifting cultivation, hunting, gathering, and livestock rearing, and collection of raw materials for construction and reparation.

The ban on shifting or swidden cultivation practices directly affected the tribal people lives. Shifting cultivation is a traditional form of agriculture primarily practised in hill areas, where the cultivators slash and burn the forest to prepare land for agriculture. After a few years of cultivation, the cultivator shifts to another patch of land and leaves the land to recover its natural flora, and the soil regains its lost nutrients. Such lands quickly grow grass, softwood, and bamboo, essential for the forest-dwelling community's daily lives, especially for women. In shifting cultivation, a cultivator returns to the same land after a 20-30 year gap. Such cultivations are collective, with the village community owning the land and the village head allocating it to each household based on their needs. Women played a more or less equal role in shifting

⁵⁶ Jagarnath dash, "Impact of Forest Policies on The Indigenous Peoples: A Case Study of Hill Kharias in Simolipal Hills, Orissa (India)", in *Tribal and Indigenous People of India: Problems and Prospects* (New Delhi: APH Publishing, 2002), 354.

cultivation, and the gender division of labour was not clearly defined. They shared equal responsibility for all aspects of labour, from field preparation to crop harvesting.

When the British outlawed shifting cultivation, tribal people transitioned to settle or ploughs farming. In settled agriculture, women's roles become less important than men, and the gender division of labour is clearly defined. Moreover, the community traditionally controlled land tenure and distributed it to a family as a unit, remaining limited to males only. The shift to settle farming exacerbated existing gender disparities and further worsened the status of women in tribal communities⁵⁷. The British government outlawed shifting cultivation, calling it “the most damaging activity for the forests”⁵⁸. However, the counter-narrative justifies it as a sustainable and environment-friendly method of agriculture that provides a means of survival to many indigenous people and is tied closely to their cultural and spiritual activities⁵⁹. The British did not prohibit shifting cultivation because they perceived it to be harmful to the environment; instead, they wanted to protect the precious timber. Also, calculating the tax on shifting cultivation was tedious work due to the changing location of the cultivation field.

The British forest laws also affected the hunting and gathering activities of the tribal communities. Hunting and trapping many game animals and birds and collecting edible roots, fruits, and leafy vegetables were the main source of food for them. For many tribal communities, it was the only activities for survival, as they had not relied on agriculture. Since forests were reserved and hunting was illegal, they lost all their

⁵⁷ Indra Munshi, “Women and Forest: A Study of the Warlis of the Western India,” in *Gender Relations in Forest Societies in Asia*, First (New Delhi: SAGE Publications, 2003), 266.

⁵⁸ Gadgil and Guha, *This Fissured Land*, 133.

⁵⁹ Lori Ann Thrupp, Susanna Hecht, and John Browder, *The Diversity and Dynamics of Shifting Cultivation: Myths, Realty and Policy Implications* (Washington: World Resource Institute, 1997), 7–28.

autonomy. Moreover, the British and privileged class hunters with modern firearms wiped out a vast population of game animals, challenging the livelihood of hunter-gatherer tribes that used bows and arrows for hunting⁶⁰. As a result, they were forced to do unfamiliar jobs for survival with a declined quality of life. For example, the Chenchus, a hunting-gathering tribe in Kurnool, Andhra Pradesh, were forced into a serfdom relationship with the dominant cultivating class. They were compelled to do unfamiliar and discourteous jobs. Out of depression, they turned to banditry, raiding pilgrims to the Srisailem temple regularly.⁶¹

While the forest laws prohibited tribals from hunting small animals for food, they were employed to facilitate organised “shikar” expeditions of British officers and royal families. The British saw large predatory animals as a sign of wildness, primitiveness, and savagery and their existence as a hindrance to a civilised society. The excretions of many predatory animals increased the number of plant-eating animals. Many forest-dwelling communities see herbivorous animals as crop raiders and believe that their crops are safe in the presence of predatory animals. Additionally, several tribal communities track the wild dogs to harvest the meat they kill. They regard them as meat providers rather than enemies and usually do not kill them. Hunting wild animals was a recreational practice for the British, while the ordinary cultivators and tribals living in the forests met the repercussions. The colonial era brought an ecological crisis and disrupted the natural ecosystems, which carried human-animal conflict to another level.

⁶⁰ Christoph Von von Furer-Haimendorf, *Life among Indian Tribes: The Autobiography of an Anthropologist*, First (New Delhi: Oxford University Press, 1990), 27–28.

⁶¹ Christoph von Furer-Haimendorf, *The Aboriginal Tribes of Hyderabad: The Chenchus*, First, vol. I (London: Macmillan & Co., Ltd, 1943), 311–12.

The cattle's restriction in the forest affected the lives of many tribal communities, as they usually practised agriculture and animal husbandry together. For several tribal groups, herding goats and sheep was a significant source of income. On the other hand, cattle were essential for cultivators in agricultural activities and fertilising their fields. However, forest officials maintained a deep anti-cattle sentiment, alleging that cattle destroy the sap of commercial plants. Despite all the efforts, it was difficult for forest department officials to ban cattle entirely. As a result, the government authorised the foresters to allow a part of the forest for grazing activities to prevent cattle from entering large areas. However, the authorities charged cattle owners with a grazing fee for allowing cattle into the forests. For example, in Nagpur, the sheepherders had to pay Rs 2 per hundred sheep⁶². Restricting cattle in forests created a shortage of fodder for cattle owners, and the forest department failed to provide them with alternative fodder sources.

The British economy was severely affected after World Wars I and II. Therefore, they exported massive amounts of timber from India to Britain to reinstitute their economy and military. As a result, the latter part of British rule caused much devastation to the Indian forests. However, timber extraction had little effect on tribal communities because their need for timber was minimal. The reasons for their vulnerability were complete alienation or restricted access to subsistence sources such as land, forest, and forest products. Many tribal families, after alienation from their habitats, either self-migrated or were transported to the British leased coffee, tea, and rubber plantation estates as labour⁶³. For example, the Santal, Munda, and Oran tribes

⁶² Mahesh Rangarajan, *Fencing the Forest: Conservation and Ecological Change in India's Central Provinces, 1860-1914* (New Delhi: Oxford University Press, 1996), 68.

⁶³ Ranjit Das Gupta, "From Peasants and Tribesmen to Plantation Workers: Colonial Capitalism, Reproduction of Labour Power and Proletarianisation in North East India, 1850 to 1947," *Economic and Political Weekly* 21, no. 4 (25 January 1986): 3.

of Jharkhand and West Bengal were transported to Assam to work in the tea gardens⁶⁴. Furthermore, the forest department also relocated many tribal villages to other forest areas to engage them in forest work. In the subsequent periods, many such villages were not settled or recorded during forest surveys and became victims of the forest department's harassment.

Although the British Empire successfully captured the Indian forest, it was not a smooth process. The tribal communities rebelled nationwide against the British administration for denying them forest rights. In many instances, the tribal insurgencies were uncontrolled, and the British used their army to suppress and punish their leaders. The significant tribal uprisings against the British forest policies were: the Mundas and Orans of Chhotonagpur in 1889 and 1915, the Chenchus of Nallamala Forest in 1921, the Koyas of Rampachodavaram in 1922, and the Gonds of Adilabad in 1940. Tribals have conducted several campaigns against centralised forest governance, demonstrating the importance of forests in their existence.

The British forest policies also faced opposition from various social organisations. In March 1878, the "Poona Sarvajanik Sabha", a nationalist organisation in Western India, strongly opposed the new forest act of 1878, citing it as an injustice to the "historical dependence" of the peasants and tribes on forests, and also be environmentally irrational⁶⁵. The "Sarvajanik Sabha", which mostly fought for cultivator's rights, noted that "the village and tribal communities had maintained their forest rights with the same tenacity with which private property and land have been maintained elsewhere". The Sabha suggested that a sustainable and righteous forest

⁶⁴ Paresh Borah, "Colonial State, Hegemony, History and The Identity of Tribes in Assam," *International Journal of Scientific & Technology Research* 8, no. 12 (December 2019): 1099.

⁶⁵ Ramachandra Guha, "The Prehistory of Community Forestry in India," *Environmental History* 6, no. 2 (April 2001): 216–17, <https://doi.org/10.2307/3985085>.

policy would take the villages into the government's confidence⁶⁶. From 1930-31, in the Central Province and Berar (now Madhya Pradesh), the Indian National Congress conducted "Forest Satyagraha" as a part of the Civil Disobedience Movement⁶⁷. The Satyagraha was spread across the country, protesting against establishing "reserved forests" and commercialising the forest resources⁶⁸. Villagers broke British forest laws to obtain forest products from reserved forests to claim their rights over them. The forest satyagrahas were primarily successful in the Himalayas and Western Ghats areas⁶⁹. Women also actively participated in the satyagrahas in a few areas⁷⁰. However, Congress did not continue the satyagrahas for long, as violence erupted in many places against forest officials in the central province.

Verrier Elwin, a pioneering ethnologist and tribal activist, precisely studied the relationship between tribal life and the forest world. He described the "tribals' heaven" by quoting a member of the Gond tribe as "miles and miles of the forests without any forest guard"⁷¹. Elwin criticised the British forest governance and said that the tribals had become "interlopers in their land" due to British forest and game laws. He added that the restriction of tribal life in the forest and the threat of hefty fines for violating forest laws have restricted, frustrated, and destroyed self-confidence of tribal people. Elwin quoted a forest official's statement, "Our laws are of such a kind that every

⁶⁶ Ramachandra Guha, "The Past and Future of Indian Forest," in *Deeper Roots of Historical Injustice: Trends and Challenges in The Forests of India* (Washington, DC: Rights and Ressource Initiative, 2012), 6–7.

⁶⁷ David Baker, "A Serious Time: Forest Satyagraha in Madhya Pradesh, 1930," *The Indian Economic & Social History Review* 21, no. 1 (1 March 1984): 71, <https://doi.org/10.1177/001946468402100103>.

⁶⁸ Vandana Shiva, *Ecology and the Politics of Survival: Conflicts over Natural Resources in India* (New Delhi: Sage Publications, 1991), 79–80.

⁶⁹ Shiva, 79–80.

⁷⁰ Anil Kumar Pandey, "Forest Satyagraha in Dhamtari Tahsil in Central Provinces," *Proceedings of the Indian History Congress* 59 (1998): 491.

⁷¹ Verrier Elwin, *Leaves from the Jungle: Life in a Gond Village*, Second (New Delhi: Oxford University Press, 1958), 12.

villager breaks at least one forest law every day to live their lives”⁷². In 1940s, when the Congress Nationalists recommended a ban on swidden cultivation, Elwin, with a broken heart, wrote, “The forest belongs to the aboriginal, and the nationalists should at least advocate Swaraj for the aboriginals”.

The colonial forest administration destroyed tribal autonomy over forests. The tribal chiefs, who were in charge of setting the local forest use and management rules, lost their authority under British rule. The long-privileged political structures of tribal communities for forest and land management collapsed within a few decades. The British forest laws ruined their traditional livelihood structures and almost regulated their survival. The established forest-based economy, which used to be their lifeline, was significantly destroyed during British rule. Many tribal groups came out of their forests searching for labour work, where they lost their dignity of life. Gradually, they fell prey to landlords and moneylenders, and their situation deteriorated. They were treated as “encroachers” and “forest enemies” in their forest by British forest officials. When the country achieved independence from the British in 1947, there was a hope of restoring the tribals’ traditional rights over forests. However, forest governance in the post-independence era followed the same format as the British.

2.6 Forest Governance and Tribal Communities in the Post-Independence Period

After independence from the British rule, India followed a democratic form of governance, prioritising justice, equality, and liberty for its population. As a result, there was a hope that tribal forest rights would be recognised as a remedy for the injustice committed during British rule. However, tribal communities faced discrimination when

⁷² Verrier Elwin, *Loss of Nerve: A Comparative Study of the Result of the Contact of Peoples in the Aboriginal Areas of Bastar State and the Central Provinces of India* (Bombay: Wagle Press, 1941), 12.

leaders and policymakers ignored their traditional forest rights. The government of the country followed the British Empire's forest governance model. As a result, the long struggle of tribal communities for forest rights became a never-ending struggle. On the other hand, the colonial period's forest crisis posed a significant challenge to the newly formed government. The few forests that survived the post-British period were contested by industrialisation, environmental issues, agricultural development, and the tribal people's rights. The new Indian leadership, however, prioritised the role of forestry in Indian industrial and agricultural development⁷³.

The forestry development in post-independence India can be understood in three phases. The first phase spanned during 1952-1980 when forestry was focused primarily on commercialising forest resources. The second phase, which lasted from 1980 to 2006, prioritised forest conservation to address environmental and ecological concerns. The third phase is the period since the enforcement of the Forest Rights Act (FRA) 2006.

2.7 Forest Governance and Tribal Communities, 1952-1980

In the post-independence development debates, the forest was considered one of the critical resources required to achieve environmental stability and economic progress and meet the rural settlers' basic needs. Experts proposed that forests cover required one-third of the country's total geographical area to meet the above demands. As a result, the government implemented the National Forest Policy (NFP) in 1952 to achieve the targets. The policy divided the forest into four categories: protective forests, national forests, village forests, and tree lands. The main goals were to provide environmental stability, supply timber to industry, the military, and other development

⁷³ Haeuber, "Indian Forestry Policy in Two Eras", 58.

projects, support the needs of rural people, and improve the country's forest cover area.

However, the national forest policy of 1952, like the British forest policies, prioritised national interests over other subjects. As a result, the destruction of forests for road construction, irrigation and hydroelectric project construction, mining, industrial establishments, and other development projects was justified in the name of “national interests”. On the other hand, the local communities, especially tribal people's claims on forests for survival, were ignored. Their livelihood received less attention than it did under colonial rule, as state policy favoured exporting raw materials to industries. Moreover, tribals were treated as “encroachers” and “forest enemies” by the forest department employees, and punitive actions were intended to discourage them from using the forest biomass⁷⁴. It should be noted that in a democracy, local interests are also national interests. There should not be a fundamental contradiction between national and local interests, so the term “national interest” is understood narrowly in this context⁷⁵.

“The Scheduled Areas and Scheduled Tribe Committee” of 1961 investigated the impact of forest policies on tribal life. The committee report found that forests provided subsistence, food, construction materials, and a well-organised culture and belief system for tribal communities. They had complete ownership of the forest where they lived. However, when the British government took control of the forests, tribal people lost their forest rights, causing a significant economic shattered. Therefore, corrective measures were needed to re-establish tribal forest rights in the post-independence period. The Commission regrets that the 1952 forest policy did not affirm

⁷⁴ Kulkarni, “Forest Legislation and Tribals: Comments on Forest Policy Resolution,” 2144.

⁷⁵ Buddhadeb Chaudhuri, “Forest, Forest-Dwellers and Forest Development”, in *Forest and Forest Development in India* (New Delhi: Inter-India Publications, 1989), 28.

this ethos and criticized by stating during the British period, tribal rights on forests became “rights and privileges”; in 1952, they became “rights and concessions”, and now they are being regarded as “concessions”⁷⁶. Jawaharlal Nehru prioritised forest rights in his “five principles” on tribals, but the Ministry of Food and Agriculture resisted recognising it, stating that the rights and concessions were numerous and too freely exercised. During the 1952 forest policy, forestry development was primarily focused on commercialization rather than conservation.

The state’s emphasis on rapid industrialisation for economic welfare caused heavy loss of natural forest. Construction of dams, mining, establishment of industries, and development projects destroyed thousands of hectares of forests and displaced millions of tribal people from their habitat. Furthermore, the constitution of reserved forests and wildlife sanctuaries aggravated the tribal peoples’ situation more. In between 1950 and 1990, 21.3 million people were displaced from their native place due to several development projects⁷⁷. However, only about a third of them were accorded resettlement⁷⁸. On the other hand, the increased in government control over forest areas resulted in the ban of shifting cultivation practised by tribal communities. The shifting cultivation lands were recorded as forest land, depriving the tribal people from their land and means of survival.

During the 1952 forest policy, wood-based industries made significant progress, such as the paper industry increasing its production from 92,800 tons in 1948 to one

⁷⁶ U.N. Dhebar et al., *Report of the Scheduled Areas and Scheduled Tribe Commission*, Scheduled Area and Scheduled tribe Commission (New Delhi: Government of India, October 1961), 125–31.

⁷⁷ W. Fernandes and V. Paranjpye, *Rehabilitation Policy and Law in India: A Right to Livelihood* (New Delhi: Indian Social Institute, 1997), 15.

⁷⁸ W. Fernandes, “Rehabilitation Policy for the Displaced”, *Economic & Political Weekly* 39, no. 12 (20 March 2004): 1192.

million in 1978⁷⁹. This led to the emphasis on quick-growing industrial trees through afforestation programs. However, many of these programs were conducted after clearing and thinning existing natural forests, affecting local tribal communities. For example, the World Bank-funded Madhya Pradesh Forestry Technical Assistance Project of 1975 harmed local tribal communities in the Bastar region by replacing local tree species with commercial species like eucalyptus or tropical pines⁸⁰. The project was halted due to strong opposition from local tribal people, who felt concerned about their survival system. Additionally, tribals in the Chota Nagpur area uprooted many trees planted through afforestation programs to show their dismay against the forest department⁸¹. Approximately 17.6 million hectares of land afforestation took place throughout the country during the 1952 Forest Policy⁸². The government's commercial forest policy and the forest department's anti-people and anti-tribal activities became a significant cause for dismay among forest-dependent tribal communities.

2.8.1 The Chipko Movement and the Rise of Women in Forest Conservation

In the 1970s, tribal and marginalized forest-dependent communities protested against government's commercial forest policies. The Chipko movement, initiated by peasants in Garhwal, Uttarakhand, aimed to assert their forest rights and stop timber merchants' commercial exploitation⁸³. The incident began when the forest department refused to use forests while allowing timber merchants to exploit them. The villagers erupted in rage, declaring that "trees were like their brothers and sisters and would not be harmed

⁷⁹ Guha, "Forestry in British and Post-British India: A Historical Analysis," 1888.

⁸⁰ Vandana Shiva, *Forestry Crisis and Forestry Myths: A Critical Review of Tropical Forests: A Call for Action* (Penang, Malaysia: World Rainforest Movement, 1987), 22–23.

⁸¹ Chaudhuri, "Forest, Forest-Dwellers and Forest Development," 23.

⁸² Jha, *India's Forest Policies: Analysis and Appraisal*, 66.

⁸³ Michael Reynolds, "Reviewed Work(s): The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya by Ramchandra Chandra Guha", *American Journal of Sociology* 98, no. 4 (January 1993): 924.

for the profits of the forest department and greedy timber merchants”⁸⁴. They protested against tree felling by hugging the trees in the forest. Women from the Garhwal region led the movement, adopting the tree hugging strategy, which became famous as “Chipko,” which means sticking to or adhering to something.

The Chipko movement gradually drew people from the cities, including activists, media persons, scholars, students, and intellectuals, transformed it into an environmental movement. It became an ordinary people’s response to environmental disasters like floods, droughts, landslides, climate change, and deforestation. The movement criticized the government for its destructive policies and spread throughout India and abroad. The government acknowledged its policy mistakes and ensured the preservation of Himalayan flora and fauna. The government praised the Chipko movement as a “civilisational response to the environmental crisis” and ordered a complete ban on tree cutting in the Himalayan region.

On the other hand, the environmental agenda of the movement shrouded the local people’s voice for forest rights. Instead of prioritising local forest-based livelihoods and employment, Chipko instigated the government to justify centralised environmental policies and laws⁸⁵. As a result, in the subsequent years, the Forest Conservation Act of 1980 was enacted, giving absolute power to the central government to make decisions about even the tiniest patch of forestland. Some scholars believed that the outcome of Chipko was the “Department of Environment’s victory over the

⁸⁴ Haripriya Rangan, *Of Myths and Movements: Rewriting Chipko into Himalayan History*, First (New Delhi: Oxford University Press, 2000), 5.

⁸⁵ Madhu Sarin, “Empowerment and Disempowerment of Forest Women in Uttarakhand, India,” in *Gender Relations in Forest Societies in Asia*, First (New Delhi: SAGE Publications, 2003), 292.

Ministry of Agriculture at the Centre”⁸⁶. In 1985, a separate “Ministry of Environment and Forests” was established to look after the environment and forest subjects.

The total ban on tree-cutting negatively impacted poor forest-dependent people, as the forest department refused to allow them to take wood from the forest. A Chipko activist, Gayatri Devi, stated that “the movement worsened their life in the valley, as they could not obtain wood to build or repair houses due to the forest guard’s restrictions”⁸⁷. This restriction limited livelihood opportunities and affected the economy of forest-dependent villagers, who were forced to migrate for work⁸⁸. According to a United Nations developmental bulletin, the “enlightened ecologist” led the movement to an environmental path that ignored the primary interests of local villagers⁸⁹. The environmentalist dimension of the Chipko movement also misled several tribal uprisings across the country in pursuit of their forest rights. Every small and significant tribal uprising for survival in the forest has been misconstrued as tribal people’s environmental and ecological concerns, obscuring their ground realities.

Women of Garhwal have a distinguished reason to join the Chipko movement. They usually care for agriculture and domestic work, relying on forests for firewood, food, fodder, water, and other essential materials. The disappearance of forests has increased their workload, and frequent floods and landslides in the Himalayan region harm their agriculture. When the Chipko activists spread the message about how

⁸⁶ Shinya Ishizaka, “Re-Evaluating the Chipko (Forest Protection) Movement in India,” *The South Asianist* 2, no. 1 (March 2013): 11.

⁸⁷ Emma Mawdsley, ‘After Chipko: From Environment to Region in Uttaranchal,’ *Journal of Peasant Studies* 25, no. 4 (1998): 47.

⁸⁸ Haripriya Rangan, “From Chipko to Uttaranchal: Development, Environment, and Social Protest in Garhwal Himalayas, India,” in *Liberation Ecologies: Environment Development Social Movements*, 2nd ed. (London: Routledge, 2004), 213.

⁸⁹ Thomas Weber, “Is There Still a Chipko Andolan?,” *Pacific Affairs* 60, no. 4 (1987): 623, <https://doi.org/10.2307/2759186>.

deforestation causes ecological disasters, women saw a link between their victimisation and deforestation, leading them to support the Chipko movement to preserve the area's ecology⁹⁰. Despite opposition from men, women participate in community decision-making processes to support forest conservation and overcome their long-standing alienation from the community. Through forest conservation, women assert their practical gender needs. On the other hand, they claim their strategic gender needs by participating in the decision making process, rejecting their long-term position as societal subordinates.

The Chipko movement highlighted several gender issues in the forestry sector, which were previously overlooked by social thinkers, scholars, policymakers, and activists. It led to the emergence of ecofeminist studies in India and Bina Agarwal's "feminist environmentalism" theory. Many "gender and environment" theories and approaches were rooted from the Chipko movement. However, the focus on ecological protection and environmental security overshadowed these issues and needs. Instead, the message that "forests could be better protected under the care of women" was widely spread. Later, central and state governments mobilised women's groups to protect forests for environmental purposes, but forest management policies often ignored gender issues and women's needs.

The results of Chipko favoured women by acknowledging their importance in the forestry sector. It also inspired young people all over the country to think about the environment as a significant national concern. It pushed the government to shift from a pro-commercialisation forest policy to a pro-conservation one, prioritising

⁹⁰ Shobhita Jain, "Women and People's Ecological Movement: A Case Study of Womens Role in the Chipko Movement of Uttar Pradesh," *Economic & Political Weekly* 19, no. 41 (13 October 1984): 1788.

environmental security. As a result, the government acted more centrally regarding forest conservation. Chipko, on the other hand, brought nothing to the tribal communities' struggle for forest rights. Instead, it presented several challenges for them. The tribals' long fight against forest commercialisation re-challenged them in the form of forest conservation.

2.9 Forest Governance and Tribal Communities from 1980-2006

In the 1970s, forests became the focal point for all contested topics. Forest exploitation for industrial and other development objectives emerged as a threat to the country's ecology, environment, and the survival of millions of people. According to satellite image mapping from 1972-75 and 1980-82, the country's forest has been reduced by 16.4% due to widespread deforestation⁹¹. The tribals and the rural population, which relied on the forests, were the first to feel the growing scarcity of forest resources, particularly women, who had to walk long distances to get firewood.

In 1972, the United Nations held the first "United Nations Conference on Human Environment" in Stockholm, Sweden, to address environmental issues. The Stockholm Declaration emphasized the importance of maintaining air, water, land, forests, flora and fauna, and wildlife habitats. As a participant, India adopted the conference's environmental protection principles, which were incorporated into the 42nd constitutional amendment in 1976. Article 48A mandates environmental protection and improvement, while Article 51A (g) urges individuals and nations to protect and improve the natural environment, including forests, lakes, rivers, and wildlife, and have compassion for living creatures.

⁹¹ A. M. Khusro, *Evaluation Report on Social Forestry Programme* (New Delhi: Planning Commission, Government of India, 1987), 1.

The decisive decade of the 1970s forced the government to abandon its commercialised forest policy, favouring forest conservation. As a result, the Indian Parliament passed the “Forest (Conservation) Act 1980” on December 27, 1980, to ensure effective forest conservation and control over non-permitted human activities in forests.

2.9.1 Forest (Conservation) Act 1980

The FCA 1980 is a significant legislation and a regulatory mechanism to check deforestation and improve ecological imbalances and environmental degradation. Under this act, the states must get the centre’s approval before de-reserving or diverting forest lands for non-forest purposes. Thus, the centre became the legal authority to reject or allow any project or request, established at the cost of forest land. “Non-forest purpose”, according to the act, is “clearing or breaking up of any forestland or portion thereof for any purpose other than reafforestation”. The “non-forest activities” include the cultivation of coffee, tea, spices, rubber, palms, oil-bearing plants, and horticulture crops of medicinal plants. However, building infrastructure or doing work relating to conservation, development, and forest and wildlife management is not a non-forest activity.

The implementation of FCA 1980 was a strong effort to halt deforestation and ensuring environmental and ecological security. However, apart from “environment and ecology,” the act did not address the various other factors contributing to its emergence. Remarkably, the long-standing demands for forest rights by forest dwellers and tribal communities received no attention. Women’s stake and presence in forests, which they had claimed through various forest-related movements in the recent past, were ignored by the framers of the act. Instead, the act imposed more restrictions on

the local communities' use of forest biomass by centralising forest management. The government works to protect forests with the ethics of “Keeping the local communities away from forests”. Despite the restrictions on use of forest resources, keeping people away from forests was impossible because their dependence was genuine and unavoidable. As a result, the government accelerated the “social forestry programme” to alleviate pressure on traditional forest areas.

2.9.2 Social Forestry

Social forestry is better known as “participatory forestry” or “forestry for local community development”, as it requires the active participation of local people. In 1976, the National Commission of Agriculture (NCA), Government of India, recommended that “social forestry” be implemented in response to the rural population’s growing reliance on natural forests for fodder, fire wood, and small timber. Based on the NCA’s recommendation, the government introduced “social forestry” in the fifth five-year plan (1980-85). Through social forestry, the NCA aimed to “supply rural areas with fuelwood, small timber, and fodder; protect agricultural fields from the wind; and meet rural people’s recreational needs”⁹². The goal of the social forestry programme was to plant a mixed variety of trees (including bamboo, grass, and legumes) in both “private” and “village common lands” outside of forest areas to benefit the rural population while also protecting the land’s ecological integrity.

Social forestry worked on farm and extension forestry to achieve its goal. Farm forestry provisioned for plantation of trees on private lands, whereas extension forestry on community and other common lands. Social forestry grew into a multibillion-rupee

⁹² Government of India, *National Commission on Agriculture, 1976* (New Delhi: Government of India, Ministry of Agriculture and Irrigation, 1976), 439–40.

afforestation project by spending around 1000 crores of rupees during the first half of the 1980s, with the amount doubled in the seventh five-year plan (1985-90)⁹³. Hence, the afforestation programme gained substantial importance in this period. Furthermore, social forestry received massive aid from international bodies like the World Bank, the United States Agency for International Development (USAID), the Swedish International Development Corporation Agency (SIDA), the Canadian International Development Agency (CIDA), and the Overseas Development Agency (ODA). Their financial assistance afforested around 14 million hectares of relatively small land during the 1980s⁹⁴.

The provision of social forestry emphasised to meet the needs of poor and underprivileged groups, tribal communities, including tribal women. However, in practice, it worked as a significant source of raw material for wood-based industries. Social forestry strongly emphasised farm forestry and landowners were encouraged to plant industrially-valued trees, such as eucalyptus to maximise the profits. Under the World Bank-funded social forestry programme, 60 per cent of afforestation occurred on private land, with eucalyptus as the dominant species⁹⁵. In the Rayagada district of Odisha, small and marginal tribal farmers were promoted to plant eucalyptus on their land to supply pulpwood to the “JK paper mill”. Previously they grew rice, millet, and pulses on those lands to feed their families. However, it was found that wood production gradually decreases with the frequency of harvesting, raising concerns about its long-

⁹³ Roger H. Slade and J. Gabriel Campbell, *Monitoring and Evaluation of Social Forestry in India: An Operational Guide* (Rome: Food & Agriculture Org, 1987), 1.

⁹⁴ Eric D. Larson and Sivan Kartha, *Bioenergy Primire: Modernised Biomass Energy for Sustainable Development* (New York: United Nations Development Programme, 2000), 128.

⁹⁵ Vandana Shiva, J Bandyopadhyay, and N D Jayal, “Afforestation in India: Problems and Strategies,” *Springer* 14, no. 6 (1985): 331.

term returns to farmers⁹⁶. There were also issues with soil degradation and groundwater depletion after frequent harvest of eucalyptus trees. The farm forestry primarily benefited wealthy farmers and the wood-based industries rather than the poor people discussed in the programme's objectives⁹⁷.

On the other hand, the extension forestry too promoted the plantation of eucalyptus and other exotic trees in the community lands. The wood of eucalyptus is unsuitable for firewood as it causes burning sensation in eyes. However, other varieties of trees established on the community lands became a source of firewood for locals, but failed to meet people's multipurpose needs, such as fodder for cattle, raw materials for rural artisans, and fruits, honey, and tubers that they were deriving from forests⁹⁸. Furthermore, the forest department relaxed timber transition rules to persuade the village community to sell mature timber to industries at a low cost to fulfill its commercial interests.

In the tribal area, the social forestry programme did not help the tribal people, who depended on the forest for multiple purposes. Moreover, the arable land available for people in the tribal areas was minimal. Therefore, the growth of exotic species on the private land where they used to cultivate millets, pulses, and various other food grains, hampered their food supply system. Furthermore, the community lands taken for tree plantation were primarily used as communal grazing grounds, and no alternative grazing grounds were made available to them, which burdened their livestock-based

⁹⁶ Binimaya Mohany and Bikash Rath, "From Cash-Crops to Carbon Sinks: A New Identity to Virtual Land Alienation in Odisha" (Regional Centre for Development Cooperation, 31 May 2012), 34–35.

⁹⁷ D. M. Chandrasekhar et.al, "Social Forestry in Karnataka: An Impact Analysis," *Economic & Political Weekly* XXII, no. 24 (13 June 1987): 936.

⁹⁸ S. R. Ramaswamy, "Social Cost of Social Forestry," *Economic & Political Weekly* 23, no. 26 (25 June 1988): 1314.

livelihood. The social forestry programme largely ignored the presence of women, despite women's significant role in fodder and firewood collection, livestock rearing, and agriculture⁹⁹.

2.9.3 National Forestry Policy (NFP) 1988

Looking at the necessity of forest conservation, the Ministry of Environment and Forest (MoEF) implemented national forest policy (NFP), 1988 to replace the NFP of 1952. The NFP-1988 is continuing till date, focusing on ensuring environmental, ecological, and atmospheric stability. Apart from environmental and ecological safeguards, the policy aims to meet the requirements of rural and tribal populations for fuelwood, fodder, minor forest produce, and small timber, and to mobilise a massive people's movement involving women to conserve and develop forests.

The NFP of 1988 recognised certain rights and concessions for forest-dwelling tribal communities, such as cattle grazing, use and management of forests, and access to minor forest products. The policy for the first time in the history of state forest governance acknowledged the inclusion of local community in forest conservation through participatory forest management programmes. Hence, in June 1990, the MoEF launched Joint Forest Management (JFM) programme to achieve the policy's overall objectives. The tribal communities, whom the forest department historically branded as destroyer and enemy of the forest became taken as co-partner in forest management activities.

⁹⁹ Slade and Campbell, *Monitoring and Evaluation of Social Forestry in India: An Operational Guide*, 52.

2.9.3.1 Joint Forest Management (JFM) 1990

The Joint Forest Management programme (JFM) is a forest conservation partnership between the forest department and the local forest-dependent communities based on management, responsibility, and cost-benefit sharing. By launching the JFM, the government initiated the institutionalisation of the participatory forest management. The main goal of JFM was to ensure the sustainable use of forests to meet local needs while maintaining environmental stability. Under this programme, the government calls on the forest-fringed villages to co-manage their nearby forests along with the forest department. In return, they were assured provisions of firewood, fodder, non-timber forest products, small timber, and a share of the profits from timber.

The structures, nomenclatures, and guidelines of JFM vary from state to state. It is primarily implemented at the village level by a Joint Forest Management Committee (JFMC), also known as the Forest Protection Committee (FPC), Vana Samrakshana Samiti (VSS), Eco-Development Committee (EDC), and by other local names. The formation of a JFMC requires the approval of 60% of the total adult population of a village via the Gram Sabha or Palli Sabha. It is governed by an executive committee (EC) democratically elected or selected by the members. The EC consists of a president, vice president, secretary, treasurer, and 11 members. In addition, ward members of the concerned village and the local forest guard serve as ex-officio members. The JFM has also provision for maximum women representation in the JFMC and 33 per cent in the EC. However, Odisha, under the JFM resolution 2011, has mandate 50 per cent women representation in the EC. The representation of SC and ST members in the EC should be according to their proportion in the JFMC.

Generally, one JFM covers a village or a group of villages. However, depending

on the population, the number of Sahi/hamlets and the availability of forest land, multiple JFMCs can be established in a village. In tribal areas, due to scattered settlements and overwhelming reliance of communities on the forest, one JFMC is allotted to a hamlet or group of hamlets rather than to a village. A forest official of at least forester rank usually liaises between a village and the forest department to form a JFMC. After a JFMC is approved, the village communities are assigned a specific forest area for management. The JFMC, established in a reserved, protected, village, and revenue forest, is known as Vana Samrakshana Samiti (VSS). In contrast, the same function in a national park or sanctuary (except core areas) is called Eco-Development Committee (EDC). The primary goal of VSS and EDC is to protect the designated forest area while also ensuring that communities use it in a sustainable manner.

According to a national workshop on JFM held in Dehradun on the 27th and 28th of June 2011, 1,18,213 registered Joint Forest Management Committees were allotted 2,29,38,184 hectares of forests for protection. The programme has enrolled 1,45,18,219 families, with 46,92,314 of them being tribal. The above database demonstrates the scope of JFM programmes and the extent to which village communities are involved. Despite accounting for only 8 per cent of the country's overall population, the tribal communities manage roughly 30 per cent of the total forest granted through the JFM programme. However, it is also a fact that many of the registered JFMCs remain inactive for a variety of reasons.

There are two key stakeholders in the JFM programme: the forest department and the local community, each with its own set of goals and expectations. The core principle of the forest department is to conserve the natural forest, increase forest areas, and maximise revenue through timber production. To achieve the goals, the forest

department has merged the National Afforestation Programme (NAP), National Mission for Green India (GIM), Compensatory Afforestation Fund Management and Planning Authority (CAMPA), and with JFM. Most of the afforestation programmes sponsored through JFM have promoted commercial plantations instead of local trees. However, to maintain local people's continued involvement, the government integrated several social welfare schemes with JFM, such as Watershed Development Programme, World Food Programme (WFP), and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

On the other hand, the native communities, particularly the tribal communities, have a century-old rivalry with the forest department. Historically, tribal communities have experienced numerous hurdles and humiliations in accessing forests they have traditionally used for subsistence. Therefore, they regarded JFM as an opportunity to regain their authority and autonomy over the forests. Furthermore, through JFM, the government offered financial assistance, office infrastructure, television, tent house accessories, wage-generating activities, and other village developments. As a result, in addition to the state backing them to protect their forests, the local communities saw JFM as a means to procure other benefits and wages. However, the wage benefits offered to the villages are limited in duration. There are also concerns with the management and utilisation of the funds and appliances provided to the JFMCs. The JFM activities standstill when financial assistance is no longer available¹⁰⁰. Furthermore, the afforestation of the degraded forest and other community-used areas did not improve villagers' livelihoods. Instead, it displaced the herders and marginal

¹⁰⁰ Prodyut Bhattacharya et.al, "Joint Forest Management in India: Experiences of Two Decades," *Resources, Conservation and Recycling* 54, no. 8 (1 June 2010): 473, <https://doi.org/10.1016/j.resconrec.2009.10.003>.

farmers who previously relied on them¹⁰¹.

The Joint Forest Management programme has also merged several community-managed forests that the villagers traditionally protected. In eastern and central India, the village community, particularly the youth organisations, had autonomously protected such forests before JFM was launched. Although not everyone in the village, notably women, participated in community forest management, they usually recognised the use rights of all villagers¹⁰². However, the forest department's mass advertising, financial support, and other benefits attracted village communities to merge their community forests with JFM. However, when they merged their community forest with Joint Forest Management (JFM), the forest department gained significant control over decision-making processes and implementation. This disrupted the villagers' established management ethics and created conflicts between their traditional practices and the newly introduced institutionalised framework.

The JFM has significantly done well in the forest conservation. One positive development in the programme is the emphasis on women's participation in forest management, who were historically overlooked. Women are usually viewed as the weaker gender and often excluded from community decision-making. Therefore, women's participation would significantly change their existing status quo. Furthermore, a community event cannot be meaningful without women's active and equal participation, who make up half of the total population. However, women's mere involvement would not be effective until the underlying gender issues and needs of

¹⁰¹ Nandini Sundar, "Violent Social Conflicts in India's Forests," in *Deeper Roots of Historical Injustice: Trends and Challenges in the Forests in India* (Washington, DC: Rights and Resource Initiative, 2012), 17.

¹⁰² Bina Agarwal, "Participatory Exclusions, Community Forestry, and Gender: An Analysis for South Asia and a Conceptual Framework," *World Development* 29, no. 10 (1 October 2001): 1626, [https://doi.org/10.1016/S0305-750X\(01\)00066-3](https://doi.org/10.1016/S0305-750X(01)00066-3).

women are addressed adequately. The Joint Forest Management programme's implementation mechanism has significantly failed in this matter. Women's effective participation in management committees depends on their membership, participation in meetings, and the extent to which their opinions are given consensus¹⁰³. However, despite their membership in the JFMC and EC, women rarely attend meetings and those who do seldom speak. Their perspectives are hardly taken seriously by other members and meeting conveners.

Several circumstances have constrained women's effective participation in the programme. However, the supremacy of patriarchal or male-dominated societal structures is the foundation of all barriers to women's access to communal spaces. In the JFM meetings, men usually take the lead in the discussions, while women rarely stand up in front of men. They also feel shy about attending meetings and reluctant to speak, especially if a forest department or any other NGO staff is present. Such shyness and gender norms of behaviour are considered cultural barriers to women's meaningful participation¹⁰⁴. Their participation is also not taken seriously by the male members and forest department employees, who view it as a formality. Women are rarely informed about the provisions, roles, and responsibilities under the JFM programmes. Even at meetings, women often miss highlighting crucial topics because they were unaware of the meeting agendas. The forest department staff usually pays more attention to the male voices. They have also lack of knowledge and awareness about gender issues. Indeed, adequate gender planning is absent in the Joint Forest Management

¹⁰³ Bina Agarwal, "Environmental Action, Gender Equity and Women's Participation," *Development and Change* 28, no. 1 (1997): 19–20, <https://doi.org/10.1111/1467-7660.00033>.

¹⁰⁴ Sophie Maksimowski, "Joint Forest Management in India: Implications and Opportunities for Women's Participation in Community Resource Management," *Studies by Undergraduate Researchers at Guelph* 4, no. 2 (2011): 27.

programme¹⁰⁵.

2.8 Forest Governance and Tribals since 2006

Despite recognising the tribals' issues since colonial times and instituting policies and interventions to uplift them in independent India, nothing has significantly improved their lives¹⁰⁶. Instead, their living conditions have deteriorated because of displacement caused by development projects and establishment of wildlife sanctuaries. Their alienation from their ancestral land and forests was one of the causes of the emergence of many tribal uprisings and the Naxal movement in the tribal areas of India. Dr B. D. Sharma, a well-known civil servant and the then SC & ST commissioner in 1990, identified the lack of land settlement and forest rights as the leading cause of tribal unrest¹⁰⁷. However, the immediate cause that sparked the forest rights movement was the MoEF's circular of May 3, 2002, which directed all states and union territories to evict the forest encroachers. The notice was supposed to evict millions of forest-dwelling tribal people whose land and settlements were unrecorded. The government's action sparked outrage among forest rights activist groups, which demanded justice for forest dwellers. As a result, the government passed the "Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act" in December 2006. The Act is commonly known as the Forest Rights Act (FRA) and came into force on January 1, 2008. The Forest Rights Act covers all the states and union territories except Jammu & Kashmir.

¹⁰⁵ Catherine Locke, "Constructing a Gender Policy for Joint Forest Management in India," *Development and Change* 30, no. 2 (April 1999): 267, <https://doi.org/10.1111/1467-7660.00117>.

¹⁰⁶ Indranil Bose, 'How Did the Indian Forest Rights Act, 2006, Emerge?', *IIPG*, Discussion Paper, May 2010, 16.

¹⁰⁷ Bose, 16.

2.8.1 Forest Rights Act 2006

The FRA 2006, is widely regarded as undoing the “historical injustice” done to tribal and other forest-dwelling communities. The Act ensures land tenure, livelihood, and food security for forest-dwelling communities. The FRA primarily focused on three significant rights of forest dwellers in all categories of forest land, including protected areas (wildlife sanctuaries & national parks). They are:

Individual Forest Rights (IFRS): This grants the forest dwellers “rights to live and hold forestland for habitation and cultivation”. Under this section, the FRA grants legal title to the forest land occupied by individuals or families for cultivation, homestead, or other community purposes. However, the Act does not provide a title to any newly cleared forest land, and the claimant should possess the land before December 13, 2005. The Scheduled Tribe communities are immediately eligible for the claims, whereas other traditional forest dwellers should hold the land for three generations or 75 years. The land title shall be registered jointly in the names of spouses in the case of a married couple and by an individual name in the case of single-headed households. The limitation of each claim should not exceed more than four hectares of land, and that land is only inheritable and not saleable or moveable.

Community Rights: This includes rights of ownership, collection, use, and disposal of minor forest products (MFPs) obtained within or outside village boundaries. Minor forest produce includes bamboo, brushwood, stumps, cane, tussar, cocoons, honey, wax, lac, kendu leaves, medicinal plants and herbs, roots, tubers, and other NTFPs. There are no rights given for timber extraction to avoid deforestation. The Act also recognises other community rights, such as grazing, fishing, access to water bodies in forests, biodiversity, intellectual property and traditional knowledge, and habitat rights

for PVTGs. Furthermore, the Act grants communities the right to convert and settle the forest villages, old habitations, unsurveyed villages, and other unrecorded villages established in the forestland into revenue villages.

Community Forest Resource Rights: According to Section 2(a) of FRA, “community forest resource” means “customary common forest land within the traditional or customary boundaries of the village or seasonal use of landscape in the case of pastoral communities, including reserved forests, protected forests, and protected areas such as national parks and sanctuaries to which the community had traditional access”. Section 3(1)(i) of the act grants rights to the community to “protect, regenerate, conserve, or manage any community forest resource that they have been traditionally protecting and conserving for their sustainable use”. The Act also imposes an obligation on Gram Sabhas and rights holders to conserve and protect biodiversity, wildlife, water sources and catchment areas, and ecologically sensitive areas and stop any destructive practices that harm these resources or the tribals’ cultural and natural heritage. The FRA does not grant certain traditional rights to tribal communities, such as hunting or trapping wild animals.

Furthermore, FRA empowers the state governments to use forest land for basic infrastructural facilities such as schools, anganwadis, dispensaries or hospitals, water tanks, roads, community centres, and other facilities mentioned in Section 3(2) of the Act. The government’s main obstacle in providing these facilities was the centralised forest diversion process for non-forest activity under the Forest Conservation Act of 1980. However, the land use for the above purposes should not exceed one hectare, and the number of trees removed should be limited to seventy per hectare. The proposed development activity also requires the approval of the concerned Gram Sabha.

The Ministry of Tribal Affairs (MoTA), Government of India, is the nodal agency for enforcing the FRA. The process of an individual's or community's claim for forest rights passes through three levels of verification: Gram Sabha, the sub-divisional level committee (SDLC), and the district level committee (DLC). However, only Gram Sabha has the rights to initiate the FRA process by accepting, consolidating, verifying, and preparing area maps for each individual and community's claims for forest rights. The forest and revenue department staff facilitates the proceedings of the FRA process in Gram Sabha, but not authorised to interfere in the decision of Gram Sabhas. The Gram Sabha forms a Forest Rights Committee (FRC) to facilitate the process. The FRC comprises 10 to 15 members, two-thirds of whom should belong to the Scheduled Tribe community, and one-third of the members should be women. Once the individual and community forest rights claims are received, the FRC verifies them and holds a meeting with the Gram Sabha to pass a resolution on the claims. The resolution is then sent to the SDLC for further verification before being submitted to the DLC for final review and approval. There is also a state-level committee (SLC) to monitor the overall implementation process of FRA. According to the MoTA's monthly progress report on FRA, 42,52,545 claims (41,02,437 IFR and 1,49,108 CFR) have been filed, and 19,83,504 titles (19,07,126 IFR and 76,387 CFR), distributed till March 2020 in 20 leading states¹⁰⁸.

2.8.2 Criticism and Challenges of the Forest Rights Acts

Despite the necessity of forest rights for the survival of millions of tribal peoples, the Act has been debated due to ideological differences among forest conservationists.

¹⁰⁸ "Monthly Updates on Status of Scheduled Tribes and Other Traditional Forest Dweller (Recognition of Forest Rights) Act, 2006." (New Delhi: MoTA, 24 August 2020), 3.

Remarkably, the pro-environmentalists, pro-wildlife conservationists, and pro-forest-rights activists, have different viewpoints. Environmentalists and wildlife conservationists are the most vocal critics of the Act. Many environmentalists regard the Act as a land distribution programme, claiming that extending forest rights to humans will put ecosystem preservation at risk. Wildlife conservationists are mainly concerned with creating “human-free spaces” for wildlife conservation, especially tiger conservation. They believe the wildlife could be better protected in “no-human zones” or “inviolate regions”¹⁰⁹. Based on the above hypothesis, the wildlife conservationists petitioned the Supreme Court in 2008 to challenge the FRA’s validity.

On the other hand, the pro-forest-rights groups argued that the Act would assist both forest conservation and the tribal population. The act would not harm the forest ecology because the title provided is only for pre-possessed land. Moreover, the community rights under the FRA do not allow tree cutting or the killing of wild animals. Instead, the provisions under community forest resource (CFR) rights foster community-oriented forest and wildlife conservation. The forest rights activists assumed that the Act would boost the sustainable livelihoods of forest-dwelling tribes, protect them from unlawful evictions, and revive their symbiotic relationships with the forest.

The FRA is criticised primarily for its sluggish and inefficient implementations. One of the primary reasons for the Act’s poor implementation is the lack of political and bureaucratic interests. The forest bureaucracy hesitates to acknowledge forest rights because they think it jeopardises their authority. In addition, there is a lack of teamwork

¹⁰⁹ Manju Arora Relan, “The Forest Right Act, 2006: Victory and Betrayal,” *Journal of the Indian Law Institute* 52, no. 3/4 (2010): 510, <https://doi.org/10.2307/45148536>.

among government departments engaged in the FRA implementation process, such as forest, revenue, and tribal welfare. Another downside of the FRA implementation is the high rejection rate of claims, mainly at the SDLC level. There is also a lack of communication with claimants about rejecting their claims. Subsequently, the rejected claimants have been threatened with eviction from their lands. For example, in February 2019, the Supreme Court, based on a 2014 petition, ordered that those whose claims under the Act were rejected by July 2019 be evicted. The order expected to evict about twelve lakh individuals from their land.

Moreover, in many cases, the land area granted in the title is smaller than the acreage claimed by the claimant. Individual forest rights (IFR) also precede the Act's other provisions throughout implementation. The other rights of the Act have received little attention and are inadequately discussed with the locals. Politically, individual forest rights are portrayed as a land grant programme of the government to create pro-Adivasi images. Politicians use the IFR to improve their public image by distributing land titles through village public meetings. Such occurrences demonstrate that the title granted to the claimants is not their customary right but is subject to the whims of political parties, undermining the tribal communities' historical struggle for rights to forestland.

Recognising "community forest resource rights (CFRR)" is another vital issue with the FRA. The CFRR is crucial because it fosters "community forest governance" locally. It allows local people the freedom and independence to manage their customary forests for their livelihood and needs. Furthermore, it would generate grass-roots democratisation of forest governance by distributing forest management rights to the weakest and most marginalised forest dwellers. Forest-dwelling communities can also

conserve the resources on which they rely. However, the forest department is reluctant to share its forest and biodiversity conservation control with local people. It could be noted in the forest department's recent activities and attempts, such as unethical afforestation programmes, growing control of the FD in decision-making, the PPP (Public-Private Partnership) model of forest conservation, and exclusion of local communities from various forestry programmes. The FRA has attempted to decolonise India's colonial forest governance by giving forest management responsibility to the local communities through CFR rights. On the other hand, the forest department is an offshoot of colonial administration. As a result, the department sees granting a large scale of CFR rights as a challenge to its prominence and existence.

The CFR rights also lack suitable institutional framework for their efficient implementation. Forest rights committees have merely recognised community rights and have done little to promote forest resource conservation. There is also a lack of community awareness of forest resource rights, and the implementing authorities have not provided adequate information. Putting the CFR rights into practice also requires a deep understanding of the forest-tribal relationship. The tribal cultural heritage has close ties with the forest. As a result, all facets of tribal life, including the cultural and spiritual relationship with the forest, must be thoroughly explored and accounted for when exercising CFR rights. The country has around 85.6 million acres of potential CFR forests that extend to 1,70,000 villages, but only 2.7 million acres or 3% of CFR

have been utilised¹¹⁰. While Odisha has about 2.7 million hectares of forests with CFR potential and only 0.1 million hectares have been recognised¹¹¹.

2.8.3 Forest Rights Act through Gender Lens

Colonial forest governance has been founded on a patriarchal platform that prioritises the centralisation of power and the commercialisation of forest resources. Therefore, using FRA to decolonise colonial forest governance necessitates dismantling all gender-biased mechanisms and rebuilding gender equity foundations. The FRA has provisioned several rules to ensure women's rights and involvement. They are:

Joint names of spouses on land titles, and the title must be recorded in the woman's name in the case of a widow or single woman.

Women have unrestricted participation in the Gram Sabha, with a mandatory one-third representation.

One third of the members of the forest rights committee must be women.

In SDLC and DLC, among the three members, one woman representative is mandatory.

However, merely including women would not be adequate to justify their rights and participation in FRA. Gender equality requires special consideration and incorporation in FRA implementation. However, the implementation of the FRA has significantly overlooked a gender perspective. The forest rights act or regulations do

¹¹⁰ Kundan Kumar, Neera M Singh, and Y Giri Rao, "Promise and Performance of the Forest Rights Act: A Tenth Year Review," *Economic & Political Weekly* LII, no. 25 & 26 (24 June 2017): 41.

¹¹¹ Sailen Routray, ed., "Promise and Performance of Forest Rights Act, 2006 (Odisha): The Tenth Anniversary Report" (Rights and Resource Initiative & Oxfam, 2016), 7.

not guarantee that women's voices will be prioritised in the Gram Sabhas. Also, the FRA has not specified any strategies, plans, or mechanisms to address and resolve fundamental gender issues. Although the FRA allowed unrestricted involvement of women in the Gram Sabhas, their self-participation is complicated due to social taboos and restrictions. Women's reserved representations in various committees (FRC, SDLC, and DLC) maintain the Act's formality. Apart from reservation, their number is neglected in most committees. Also, the dominant representation of men in various committees underrates women's views.

Furthermore, men play a dominant role in the implementation of FRA. They give preference to IFR or land-related matters over community and CFR rights. The land has traditionally been considered a man's domain, with men holding greater authority over it regardless of ownership. Culturally, women have had restricted access to land. Although formal laws protect women's rights to land, they rarely own or inherit the land, and inheritance usually passes through the male line. Therefore, simply having a woman's name on the FRA land document does not secure her land rights. In addition, the FRA land is only inheritable and cannot be alienated or sold, so it will predominantly fall into the hands of men.

Women, especially tribal women, depend primarily on forest resources (especially non-timber forest products) to support their domestic and financial requirements. They also have a thorough knowledge of the surrounding forest ecology. Therefore, it is critical to safeguard women's wisdom and preferred forest resources. Adopting community forest governance through CFR rights could protect women's vital resources while allowing women's groups to use their knowledge and experience to protect their traditionally used forest area. Despite the importance of CFR rights for

women, the Gram Sabhas have given them secondary consideration. Women rarely speak in the FRA meetings, and if they do, their voices and opinions are given little recognition. Men's dominance barely gives space to women in community meetings. Since FRA lacks a gender perspective, women play a minor role in recognising CFR rights. However, women's meaningful participation is essential for a positive outcome from FRA.

For millennia, tribal women have played a critical role in protecting forests. They have a different knowledge of and concern for forests than men because of their various dependencies. Therefore, women's forest perspectives must be thoroughly researched and considered when implementing FRA. Furthermore, to enable a tribal woman to file an independent claim under FRA, she needs adequate policy support, timely information, and significant backing from her family and community. Once a woman has surmounted these early obstacles, the authorities must recognise her rights on an equal footing with the men's rights in the family.

2.8.3 Compensatory Afforestation Vs Forest Rights

One of the significant challenges in FRA practice is compensatory afforestation (CA). Compensatory afforestation is the rehabilitation of forests to compensate for the loss of forestland diverted for non-forest use. The Forest Conservation Act (FCA) of 1980 defined compensatory afforestation as "afforestation done in lieu of the diversion of forest land for non-forest use". In India, to use forest land for non-forest purposes like industrial establishments, mining, infrastructure facilities, and other development initiatives, the users must undertake compensatory afforestation in an equal area of non-forestland or twice the area in the degraded forestland. The user agencies have to pay the monetary cost of the "net present value (NVP)" of diverted forest land along with

the rehabilitation expenditures. The forest department determines the cost of the diverted forest land, typically ranging from five to eleven lakh rupees per hectare. In 2004, a “compensatory afforestation fund management authority (CAMPa)” was created to receive and manage such funds and regulate forest regeneration activities. However, in the initial decade, the funds received by CAMPa were barely utilised for afforestation or forest regeneration activities. There were 36,000 crore rupees deposited in the CAMPa fund until 2014, with an interest rate of 6,000 crores per annum. In 2015, under the “Paris Agreement on Climate Change”, the Indian government committed to bringing 33% of its total land area under green cover by 2030. To achieve the target, the government passed the compensatory afforestation fund act (CAFA) in 2016 to use the CAMPa fund for afforestation and forest regeneration. Since the CAMPa fund was released, the forest department has been working hard to make the most of it by expanding afforestation activities.

However, land availability is the forest department’s primary concern in executing the compensatory afforestation. Over the years, the central and state governments have diverted vast amounts of forest land for non-forest purposes. In comparison, non-forest or degraded forest land is scarcely available to meet the provisions of compensatory afforestation. As a result, the forest department is intruding in Adivasi land to use the CAMPa fund. Such land includes patta land, podu (shifting cultivation) land, pastureland, community land, common land, and potential CFR rights areas. These are the principal capitals of tribal communities in the hilly areas and are vital to their survival.

On the other hand, the forest department is de-signifying those resources for tribal communities by changing the land use pattern and modifying the area’s flora.

They are emphatically grabbing the tribal land and planting non-indigenous tree species like teak, acacia, chakunda, karanja, and other fast-growing plants. Such species are neither beneficial to local people nor ecologically suitable. Moreover, the barrier erected around the plantation area prevents people and animals from accessing the forest and pasture grounds. The dominance of non-local species may also threaten the existence of local flora, necessitating the survival of local forest-dependent communities.

2.9 Forest Governance and Tribals in Odisha

Before establishing the British forest administration in Orissa, there were no restrictions on using forest resources¹¹². Tribal communities had substantial freedom on access to the forest. The British government made the first attempts in 1871 to control forest resources by prohibiting tree felling, removing specific kinds of forest produce, and shifting cultivations. However, proper forest administration in Orissa came into focus when the British established a separate Orissa Forest Division in 1883. At that time, Orissa was part of the lower provinces of Bengal and Assam. The Orissa Forest Division was under the supervision of the conservator of forests based in Darjeeling.

The first government forests in Orissa were established in the Angul region's forests in 1883. Around 229 square miles of reserved and 384 square miles of protected forests were demarcated in the Angul region¹¹³. The formation of reserved forest severely impacted the native people. L. S. S. O'Malley analysed the impact of the formation reserved forests in his Bengal District Gazetteer, Angul, in 1907. He says,

¹¹² L.S.S. O'Malley, *Bengal District Gazetteers, Puri* (Calcutta: Bengal Secretariat Book Depot, 1908), 139–40.

¹¹³ L.S.S. O'Malley, *Bengal District Gazetteers, Angul* (Calcutta: Bengal Secretariat Book Depot, 1908), 82.

“Before forest conservancy started in Angul estate, many people who had no arable land used to clear forest land to cultivate paddy, early rain crops, and oil seeds. Such cultivation was their mainstay of living, as they managed to harvest some food grain for themselves, and they exchanged clothes and extra rice with the oil seeds to feed their family throughout the year. The domestic cattle were unrestrictedly grazing in the forests. The landless families managed their lives by selling forest products, bamboo, and small timber. The service class people, such as washer men and blacksmiths, obtained charcoal and iron stone from the forests. However, the rigid rules of the Forest Department stopped not only the food sources of many families but also restricted raw material sources of many non-agricultural professions. The aboriginal and landless people were forced to do miscellaneous work to obtain a livelihood as they faced starvation and their means of living ceased. The privileges people in the forest of Angul enjoyed for many years were not of much monetary value, but they enabled the people to live”¹¹⁴.

A separate Orissa state was formed on April 1, 1936, by merging parts of the Bengal Presidency, the Madras Presidency, and the Central Provinces. As a result, both the Indian Forest Act 1927 and Madras Forest Act 1882 were in operation in the state. The state established a separate forest department under the supervision of a conservator of forests. With the formation of forest department, more and more forest areas were brought under the control of the state by forming reserved and protected forest, exacerbating the tribal peoples' lives.

Looking at the complicity of maintaining two separate forest acts, the state implemented its own forest act; the Orissa Forest Act 1972, by defunct the Indian Forest

¹¹⁴ O'Malley, 87–88.

Act 1927 and the Madras Forest Act 1882. However, the Act replicated many provisions from the Indian Forest Act of 1927. It did not include any special provisions for forest-dependent communities. Instead, it continued the colonial legacy. The Act classified the total forests of the state into three categories: reserved forests, village forests, and protected forests. The provisions of the reserved and protected were same as it was in the Indian forest act 1927. The purpose of village forests was to benefit village communities. The Act granted management responsibility for such forests to the village communities. However, the Act did not include any management details, such as how to involve villages in forest management, the formation of a forest management/protection committee, its responsibilities, duties, rights, and how it will share benefits of the forest.

The government introduced the guidelines for managing village forests in the “Orissa Village Forest Rules” (OVFR) of 1985. According to the OVFR, village forests should be managed by a Village Forest Committee (VFC) of the concerned villages. The VFC consisted of the Sarpanch (Chairman of the Committee), Ward Members, the Forester, the Revenue Inspector, and three to five village members. One woman member’s representation was mandatory in the committee. For the first time, local people, particularly women, were given priority in forest management. However, women’s representation in village forest management was minor and neglected. The management of the village forest was top-down or bureaucracy-centric instead of people-centric. The foresters were responsible for constituting the village forest committee and deciding the management responsibilities and resource usage. Furthermore, the ownership and legal rights of the village forest were with the government, not the villages. The government also had the right to extend reserved forest regulations to village forests or to integrate them with reserved forests.

Orissa was a crucial state in hosting community forestry programmes. In 1983, Orissa hosted the Social Forestry Project (SFP), which received significant funding from the Swedish International Development Agency (SIDA). Between 1983 and 1996, the SIDA-funded SFP spent around 148.35 crores rupees and distributed 22.80 crores of seedlings to cover 1.6 lakh hectares of forests. Social forestry focused on plantation activities such as creating nurseries, village woodlots, plantations in barren hills and strip plantations, reforestation of degraded forests, farm forestry, and participatory protection. Around 15 thousand hectares of forests created through the social forest were designated as village forests as per the Orissa Village Forest Rules, 1985¹¹⁵.

The state government passed the Joint Forest Management (JFM) resolution on July 3, 1993, following the Government of India's (GoI) Joint Forest Management guidelines issued on June 01, 1990. The programme extended to all forest areas, including reserved forests, protected forests, revenue forests, and village forests. However, Protected Areas (Wildlife Sanctuaries and National Parks) have been included after JFM Resolution 2008 of the Odisha Government. The JFM committees in the protected areas are known as the Eco Development Committee (EDC) instead of VSS. According to the Regional Centre for Development Corporation (RCDC) publication, there are 12,494 JFMCs in Odisha, conserving 11,48,686 hectares of forest and benefitting 16,42,982, including 6,45,741 ST and 2,71,139 SC families. The Odisha government launched Ama Jungle Yojana (AJY) in 2014 to strengthen the state's JFM programme. Under this programme, the government tied the JFM institutions with other welfare departments, such as the Department of Agriculture, Animal Resources Development, Rural Water Supply and Sanitation (RWSS), Odisha Renewable Energy

¹¹⁵ N.C. Sahu and B.N. Das, "Forest Policy of Orissa: A Third Visit," in *Forest Management in Tribal Areas*, First (New Delhi: Concept Publishing Company, 1997), 49.

Development Agency (OREDA), Horticulture, and the PM Ujjwala Yojana.

Odisha is one of the first states to implement the Forest Rights Act (FRA). The law is especially important for the state because tribal and other forest dwellers rely heavily on forest resources. Forests cover 37.34 per cent of the state's land, and tribal people make up 22.8 per cent of the total population. The process of FRA recognition in Odisha started in 2008. According to a report from MoTA, the state has received 6,20,785 IFR and 14,106 CFR rights claims until 31.01.2020, and 4,37,184 IFR and 6,577 CFR titles have been distributed so far. The total land area allotted under IFR is 6,52,928.80 acres, and CFR is 2,35,483.40 acres.

2.10 Conclusion

Historically, tribal communities belonged to the forests and had substantial control over them. Forests were central to their economic activities and way of life. They were free to use forest land and products. The land was communal property, usually governed by the village or hamlets, and the forest provided them with food and other essential resources. Of course, such privileges were exercised within the traditional boundary and were governed by each tribe's culture and customs¹¹⁶. Since the nationalisation of forests and the implementation of the British forest laws and management policies, the situations of the tribals changed drastically. The British took entire forests under their control and imposed several restrictions on forest use restrictions which affected the tribal people severely. Their forest policies deprived the tribals of their land and forest rights, and seriously harmed their subsistence systems and economies. As a result, the tribals were pushed into a struggle against poverty and marginalisation. The British

¹¹⁶ P.C. Mohapatra, 'Forest Policy and Tribal Deprivation', in *Forest Management in Tribal Areas: Forest Policy and Peoples Participation*, First (New Delhi: Concept Publishing Company, 1997), 71.

forest governance primarily focused on exploiting forests to supply raw materials to industries and railways in the name of national welfare.

Even after India's independence, little had changed regarding tribal forest rights. The tribal continued to be displaced from forests due to the government emphasis on rapid economic growth and revenue generation. Moreover, expanding reserved areas and establishing sanctuaries, national parks, and biosphere reserves further exacerbated the tribal's plight. Since 1980s onwards, the government shifts its forest management perspectives and emphasised local forest-dependent communities, particularly women in the forest management activities through Social Forestry (SF) and Joint Forest Management (JFM). However, such programmes have promoted commercial growth rather than providing tribal communities with rights to the forests. The Forest Rights Act (FRA) of 2006 was a landmark step taken by the government to restore the rights of the tribals and other traditional forest-dwelling communities. However, the forest department's lack of interest, improper institutional mechanisms, and the Act's sluggish and improper implementation marred its success. In addition, these government initiatives have neither addressed the underlying gender issues nor have they been structured in a gender-sensitive and gender-responsive manner. Women's participation in such programs is intended only to meet the requirements of the program.

Monopoly of states over natural resources has continuously harmed the disadvantaged and marginalised communities, mainly tribals, who depend heavily on natural resources such as forests. Forest laws and policies have always attempted to limit tribal rights in one way or another. As a result, forest policies have always been perceived as anti-tribal¹¹⁷. However, tribal communities continue to depend on forests

¹¹⁷ Mohapatra, 71.

despite legal restrictions and punishment for breaking the law. It shows how forests are essential to the tribals for survival. The purpose of the present chapter is to bring a broader perspective to understanding the status of tribals, especially women, in the forest and its governance.

CHAPTER 3

The Desia Kandha Community of Kandhamal District

3.1 Introduction

The Kandhas are one of the principal tribes of Odisha, mainly living in the Rayagada, Kalahandi, Kandhamal, Boudh, Nayagarh, and Bolangir districts of the state. They are numerically the largest tribe, constituting around 17 per cent of the total tribal population of the state. As per the Census data of 2011, the total population of Kandha is 16,27,486 (female: 8,36,927; male: 7,90,559) with a sex ratio of 1059 females per 1000 males. Most of the Kandha population resides in rural areas (96.77%). The overall literacy rate of the Kandhas is 46.95% (female 35.57%, male 59.17%), which is below the overall tribal literacy rate of the state (52.24%).

The Kandha sub-groups are Desia Kandha, Dongria Kandha, Jhamia Kandha, Jharia Kandha, Kutia Kandha, Malua Kandha, Nanguli Kandha, Raj Kandha, and Sitha Kandha¹¹⁸. The Kandha people occupy the hilly region of the Eastern Ghats mountain range and primarily adopted agricultural and forest-based livelihoods for their sustenance. They have a rich cultural heritage and diversity. Their religious structure is based on animism and nature worship. However, due to their conversion into Hinduism and Christianity, their belief system is now reflecting a blend of Hinduism, Christianity, and animism. The proselytization of the Kandha people to other religions has substantially influenced their tradition, culture, belief systems and practices.

¹¹⁸ Ota A B, Mohanty S C, *Demographic Profile of Schedule Tribes in Odisha (1961-2011)*, (Bhubaneswar: Schedule Castes and Schedule Tribes Research and Training Institute, 2015), 206.

3.2 The Kandha Community of Kandhamal

The Kandhas are the principal community in the Kandhamal district. They are the earliest settler of the region and regard themselves as the owners of the land and the forest. They are also mentioned as Khond, Kond, Kondh, and Kandh by British and Indian scholars¹¹⁹. According to the 2011 Census, their number is 3,66,784, constituting approximately 50 per cent of the district's total population and 94 per cent of the district's total tribal population. Around 22.53 per cent of the total Kandha population of the state lives in Kandhamal. The district gazetteer of Kandhamal has reported two types of Kandha communities in the district, i.e., Kutia Kandha and Desia Kandha¹²⁰. The Kutia Kandhas are settled in the hill area of the Belghar and Kotagarh regions and belonged to the PVTG category. The Desia Kandhas are spread over the mountain valleys and the plains of the district. Also, Captain MacPherson, a British officer who came to the region around 1836, reported the existence of the Maliah Kandhas. He has identified the Kandha community of G. Udayagiri and Baliguda region as Maliah Kandhas.

During the fieldwork, the researcher came across two sections among Kandhas, that is, Sabara Kandha and Basuba Kandha. The Sabara Kandhas adhere to the Jagannath culture. According to the belief associated with the Jagannath culture, the Sabara community once worshipped Odisha's prominent deity in their hilly country. However, in a conspiracy, the region's then-ruler shifted the deity from their location to the present location of Puri. The Sabara Kanda people are mainly settled in the lower

¹¹⁹ Barbara M Boal, *The Konds: Human Sacrifice and Religious Change*, First (Bhubaneswar: The Modern Book Depot, 1982), 1.

¹²⁰ Taradatt, ed., *Odisha District Gazetteers: Kandhamal*, First (Bhubaneswar: Government of Odisha, 2016), 108.

hill settlements of the Chakapadu region. They are the completely Hinduised sections of the Kandha tribe.

On the other hand, the Basuba Kandhas are the worshippers of the earth. They are settled in the villages of the Tikabali region. The earth, or Dharni Penu, is their principal deity. The Basuba Kandhas have still retained their old belief system. However, they are also adopting the Hindu belief system rapidly. The Kandhas celebrate famous Hindu festivals and rituals such as Dussehra, Holi, Janmashtami, Ram Navami, Kartika Purnima, Ganesh Puja, Laxmi Puja, Sani Mela, Trinatha Mela, and Savitri Amavasya. Those who converted to Christianity observe festivals like Good Friday, Easter, and Christmas.

The Kandhas prefer to identify themselves and their people as Kui, Kuienju, Kuiloka, or Kuinga, which are associated with their mother tongue, “Kui”¹²¹. The present study concentrates on the Desia Kandhas of the field chosen for research.

3.3 Structure and Composition of Kandha Villages

Kandha people have traditionally settled in areas with easy access to water, fertile land, and a healthy forest cover. These are the necessary components for them to survive and thrive. When a village becomes overcrowded, the Kandha people split up and form a new village in another area with similar resources. Thus, their settlements are distributed and established throughout the forest. The Kandha people pay less attention to communication while establishing a new village. As a result, many villages are located far from main roads and deep within mountain valleys, linked by narrow forest paths or kutchra roads. Despite the state government’s efforts to provide an all-weather

¹²¹Rath Raghunath, *The Kandhas and the Kandhamal: Studies in the History and Culture*, (Bhubaneswar: Amlan Publication, 2010), 10.

road to every village, many remain without such facilities. One of the major hindrances for road construction is the process of getting environmental clearance from the Ministry of Environment and Forest.

In a typical Kandha village, houses are constructed in a row on both sides of the village streets. The streets are wide and spacious, allowing for easy passage of large herds of cattle to the sheds. The streets, traditionally sandy, are gradually being replaced with concrete roads by the government. At the village entrance, the Kandhas erect a wooden pole symbolising their chief deity, “Gram Devi” or “Dharni Penu” (earth goddess). Another goddess, known as ‘Pitabali,’ can also be found in many villages. In addition to the Kandha deities, Tulsi (Basil) trees are planted by the people at the centre of the village or in front of their houses. Hindu and Christian religious institutions are gradually encroaching upon tribal villages, influencing the Kandha people’s traditional culture and belief systems. Many villages have VSS houses, community halls, and temples where villagers, primarily men, spend their leisure time engaging in discussions on various socio-political issues or playing cards.

Kandha houses are typically small in size, with a spacious living room, a storeroom, and a kitchen. The ventilation is inadequate, with only one small window (not wider than one square foot) installed for the entire house. However, houses are constructed in such a way that they feel cool in summer and warm in winter. Each house has a large and spacious front veranda where the women spend their leisure time stitching leaf plates and processing forest products while men spend their recreational time or play cards. Some homes have a back veranda that leads to the backyard. The houses have a cattle shed and a fowl pen on the side or backyard of the house. Some villages, however, have community cattle sheds at the far end of the village. The cattle

sheds are fortified with solid poles to keep wild animals like leopards, wolves, and hyenas at bay. The villagers fence their backyards with wooden poles and bamboo railings. The Kandhas build their house with locally available materials. However, the traditional housing pattern is being replaced with brick and asbestos houses. The central and state governments also provide eligible households with concrete houses through schemes such as the Pradhan Mantri Awas Yojana (PMAY; previously known as Indira Awas Yojana) and the Biju Pucca Ghar Yojana (BPGY; earlier known as Mo-Kudia Yojana).

Typically, Kandha villages are seen to be surrounded by agricultural fields, small streams, hills and forests. The spring water is used for cultivation, bathing, drinking, and other domestic purposes. Villages have at least one or two community wells and public tube wells, which meet the drinking water needs of the villagers. A narrow, unpaved road connects the interior villages to the main road, making it perfect for cycling or two-wheelers. However, nowadays, the government has provided concrete roads to many villages. Apart from the main village road, a wide road and some footpaths connect the village with the forest, which the villagers use to communicate and take their domestic animals to the forest. Kandha villages and hamlets are usually surrounded by fruit trees such as mango, jackfruit, jamun, coconut, custard apple, and mahula, indicating their interest in horticultural activities. Many villages have electricity, but some villages are yet to get it. However, the electricity supply is erratic, especially in summer and in adverse weather, when the supply is frequently interrupted.

3.4 Social and Political Structure of the Kandha Community

The socio-political structure of the Kandha village is founded on patriarchal values, where the family serves as the fundamental unit and is headed by the father or the oldest male member. Men predominantly hold power in private as well as public spheres. However, women wield significant influence within the domestic sphere, potentially stemming from their crucial contributions to the family's economy. However, men exercise control over public affairs of the village through the traditional village councils. The village council is headed by the village headman, known by various titles such as Saonta, Patmajhi, Pradhan, and Malika. Other important members of the council include the Jani (religious head), Disari (medicine man), Mati Guru (performs rituals during the worship of Dharni Penu) and Jhankar (performs healing practices and certain religious events). Additionally, each family is represented in the village council by one male member, typically the family head.

The village council traditionally made unanimous decisions on various matters including land disputes, forest use and management, conflicts, issues related to marriage and divorce, and the organisation of religious ceremonies. However, women were prohibited from participating in the council and were only allowed to attend meetings if the subject directly concerned them. Over time, the significance of these traditional village councils diminished due to the establishment of state-supported local governance institutions such as the Gram Panchayats and Vana Samrakshana Samitis (VSS). The Sarpanch, Ward members, and Samiti members now exert influence on the decision-making process of the traditional village councils. Similarly, the executive members of the VSS now oversee forest use and management. Women's political

participation is now prioritised in the modern institutions of local governance, which was absent in the traditional ones.

The “Kui Samaj” serves as the contemporary political representation of the Kandha community in the district, with an apex executive body comprising a president, secretary, and treasurer at the district level. Additionally, each Gram Panchayat has its own committee within the Kui Samaj, consisting of a president, secretary, and a representative from each village or hamlet. The primary focus of the Kui Samaj is on addressing social, political, and cultural matters concerning the Kandha community.

However, it is important to note that the management and decision-making within the Kui Samaj are exclusively carried out by men, with women being excluded from participation. Consequently, issues related to women are also represented, discussed, and decided upon solely by male members. This exclusion of women from the decision-making processes within the Kui Samaj hinders their ability to effectively advocate their rights and interests, and perpetuates gender disparities within the community.

3.5 Economic Situation of Kandha People

The Kandha people are primarily settled in the rural areas. Majority of the Kandha families are economically poor, with poor access to education, employment, health and sanitation, market, communication, and infrastructure facilities. Their settlements are hamlets with small population ranging from 50 to 150 people. There are only a few large, Kandha-dominated villages with a population of more than 500 people. The sex ratio among the tribal people is good with women slightly outnumbering men. Kandha people have no tradition of prioritising male offspring, and female and male childbirths are equally accepted and celebrated. Female foeticide or infanticide is rare in Kandha

society, resulting in a healthier sex ratio among them. Although the Kandhas are the majority in most tribal villages, other castes, such as the Pano (scheduled caste), Gauda (pastoralist), and Lohar (ironsmith), have coexisted with them. People of these castes have traditionally played a central role in the Kandha people's lives in various ways.

3.5.1 Education

The tribal population's literacy rate is 44.46% which is lower than the district's overall literacy rate of 64.1%. Especially, women's literacy rate is marginal compared to that of men. The district has 1277 primary schools, 577 middle schools, 154 secondary schools, and 17 colleges. The student-teacher ratio in primary, middle, and secondary schools and colleges is 45, 15, 29, and 42, respectively (District statistical handbook 2011). Rural students suffer from lack of quality education due to the shortage of teachers. Education of the tribal people is one of the critical sectors on which the government requires to focus in Kandhamal. Every child has the right to good education, and Kandhamal lags far behind in this regard. As many villages are sparsely populated and lack in infrastructure, transport and communication, students face difficulties in commuting to distant schools and colleges for higher education. Therefore, the government needs to devise an alternative approach to facilitate education for all up to the college level, regardless of their location or socioeconomic status. Furthermore, awareness of the importance of education needs to be created in the villages, particularly about girls' education.

Although the Kandhas are educationally backward, they are advanced when compared to their fellow tribes in the district. Their attendance in higher education is gradually increasing. A few of the Kandha people have worked well in the government

sectors. On the other hand, majority of the Kandha people are yet to access better education, higher education, infrastructure, communication, and healthcare facilities

3.5.2 Access to Healthcare Facilities

The Kandha people rely on traditional healing and herbal medicinal treatment for many of their health problems. They do not go to hospitals unless their health is seriously deteriorated. Failure to diagnose diseases early is a significant cause of declining health or the death of many patients. However, the Kandha people are increasingly aspiring to attain institutional healthcare. Local people mainly depend on Anganwadi Centres, Sub-centers, Primary Healthcare Centres (PHCs), and Community Healthcare Centres (CHCs) for health-related check-ups. In severe cases, they visit the District Headquarters Hospital (DHH).

There are 172 sub-centres, 35 primary health centres (PHCs), 14 community health centres (CHCs), one district headquarters hospital (DHH), one sub-divisional hospital (SDH), two general hospitals (GH), and two mobile health units (MHUs) operating in the district to provide healthcare services to people. There are also 17 ayurvedic and 19 homoeopathic dispensaries operating in various parts of the district. Furthermore, one private hospital (Santoshi Nursing Home) in Phulbani town and one Christian Mission Hospital at G. Udayagiri are also in operation. Although several healthcare institutions operate in the district, they have failed to circulate services to remote areas. Some of the major problems in hospitals are lack of medical staff, necessary equipment, and proper infrastructure. Other critical issues include irregular visits of the doctor and shortage of specialists. Only CHCs function well because they have ambulances and more qualified medical personnel to provide healthcare. In the

interior villages, people also depend on unauthorised medicinal practitioners, with doubtful credentials, who exploit them financially.

3.5.3 Livelihood and Economy

Agriculture is the primary occupation of the Kandha people. Apart from agriculture, they depend on daily wage labour, collection of non-timber forest products (NTFP), and livestock farming for their livelihood. They also work as daily wage labourers in government and private construction sites and in the agriculture sector. The number of agricultural wage labourers is significantly lower because many work in their fields and sometimes barter labour with other families.

Labour migration is a lesser-known trend among the Kandha people, but youth's migration to other states has been increasing recently. People migrate primarily to the urban areas of Tamil Nadu, Telangana, and Kerala for work and better wages. During the fieldwork, the researcher observed that the migration trend was most noticeable in the villages of Chahali GP. The majority of migrants are men, while women do not migrate. Manual crushing of stones is another job opted for by both men and women in the field study area. They generally do the work during unemployment or leisure time. Usually, they sell the stones and rocks to construction contractors, who require them for various construction projects.

The Kandha people have established their agricultural land in valleys and on hill slopes. Rice cultivation dominates the valley lands, while pulses, millets, maize, oil seeds, and turmeric are grown on the hill slopes. Turmeric is an important cash crop for Kandha people, which they have been growing for generations. Turmeric grown in this region is well-known for its deep colour and distinct aroma. Vegetables are also grown throughout the district and are a significant source of income for the tribals. The tribals

primarily cultivate cauliflower, cabbage, brinjal, ginger, potatoes, and beans for cash. Except for rice, which they grow mainly for domestic consumption, they sell the other agricultural goods they produce.

Aside from agriculture, the forest is the Kandha people's leading source of income. They gather both timber and non-timber forest products for commercial purposes. Weekly markets, urban areas, and roadside vending are a few platforms for the Kandha people to sell their agricultural and forest products. Women could be seen selling various forest products and vegetables on the major road sides in the district. The roadside vending attracts regular commuters, employees, brokers, and sometimes tourists from other districts and states to purchase the products. Goat farming is another principal forest-based livelihood for the Kandha people. Because of the taste of the meat and its reasonable price, goats of the Kandhamal region are in high demand in the neighbouring districts. The Kandhas get a good deal for their goats, especially during marriage seasons. Goat farming is an ordinary and widely accepted profession by Kandha families due to the abundant availability of grazing option in the nearby forest.

3.5.4 Communication and Transport Facilities

The district is well connected by two recently constructed national highways (NH-59 and NH-157). However, the communication system was worse in the past, primarily through the dangerous Ghat roads. Aside from the national highways, one state highway (SH-1) and numerous district roads are interconnected with the national highway. The national and state highways are in excellent condition, but the district roads are in poor shape. While Prime Minister Gram Sadak Yojana (PMGSY) connects the larger villages, many interior villages and hamlets are yet to get proper roads and bridges over rivers and streams. During the rainy season, residents of such villages face significant

difficulty communicating with hospitals, markets, schools, and other offices. According to a former panchayat secretary of Chahali Gram Panchayat, many small hamlets inside the dense forest fall under their Panchayat's jurisdiction. There is no proper road connectivity to those hamlets. To reach there, one must walk 7 to 8 kilometres through rough and hilly terrain. Due to the difficulty of accessing the locations, those hamlets are excluded from government facilities and schemes. Even government officials are not interested in travelling or inquiring about the condition of people living there. Lack of communication and transport facilities is one of the primary reasons for the underdevelopment of tribal communities living in the villages.

3.6 Language

Kui is the native language of the Kandhamal region and is spoken by the Kandha people for generations. Even the few non-tribal Odia-speaking communities that have co-existed with Kandhas for generations are familiar with the Kui language. The Odia language has grown in popularity due to the continuous migration of Odia people to the region since the British regime. The Odia language is dominant because it is the state's official language and has numerous applications in every sphere. Access to necessary services such as the media, educational institutions, markets, and other essential institutions and offices requires Odia knowledge. Therefore, it has become indispensable for all Odisha residents, mainly non-Odia-speaking tribal people, to learn Odia to benefit from government services and connect with the larger society. As a result, the Kui-speaking people have been forced to learn Odia.

The Kandha people observe their religious rituals in Kui language. However, it is gradually losing its importance. The deterioration of Kui language is one of the factors behind the decline in the Kandha people's tradition and culture. In some areas,

like in Chakapad area, the Kandha people do not speak or understand Kui. Since 2006, the state government has made it mandatory to teach Kui to the tribal students in elementary schools under the Multilingual Education (MLE) programme, to protect the language. Several Kandha community organisations, including the Kui Kula Samiti, the Akhil Bharatiya Kui Samaj, and the Kui Bhasa Sahitya Surikshya Samiti are working to preserve the Kui language through writings, and to develop a Kui script. Retired teachers, administrative officers, political leaders, and influential personnel are associated with these organisations to promote Kui language among the upcoming generations. The Kandha people communicate within their community in Kui, while they communicate with outsiders in Odia. However, the Kui speaking among the younger generation is declining, as they prefer to communicate in Odia.

3.7 Food Habits of the Kandha People

The Kandha people's typical food is rice, dal, and leafy vegetables. Along with that, they consume a curry of seasonal vegetables grown in their kitchen garden, varieties of mushrooms, tubers, and bamboo shoots. Millets are also a significant food of the Kandhas, but their production and consumption have substantially reduced after the ban on shifting cultivation. Many people prefer to eat water-rice with green chilli and onion for breakfast. In contrast, tea with puffed and pressed rice and popcorn is also relished by many Kandha people. They also collect various edible items from the forest and those regularly to add to their food. Alcoholism is a common practice among the Kandha communities. They extract a kind of liquid from the salap and date trees and brew them to produce alcohol. They also consume liquor made from mahula flowers and rice. The Kandhas usually manage their food requirement from their agricultural fields and backyards or from nature. However, the food grains and other items the poor

Kandha families received through government PDS system immensely help them to manage their food scarcity.

3.8 Religious Beliefs of the Kandhas

The Kandhas primarily believe in animism. They worship all natural objects such as soil, sun, rain, hills, streams, water sources, trees, forests, rocks, and agricultural fields. Their religious thought and beliefs are based on the essential components of the natural and social structures. The Kandha priests such as Jani, Jhankar, Dehury, and Guru, worship the deities by performing various rituals. According to the British documents, the Kandhas of the region were once infamous for Meriah practice (also known as “Kedu”) or human sacrifice. However, the British abolished such practices by substituting a buffalo for a human for sacrifice. The Dharni Penu is their principal deity to whom they offer blood and liquor. Including Dharni Penu, there are 84 other deities in Kandha’s polytheist belief system. A few prominent deities are Saru Penu (mountain deity), Suga Penu (fountain deity), Piju Penu (rain deity), Gosa Penu (forest deity), Nanju Penu (village deity), Pidari Penu (ancestor deity), Bela Penu (sun deity), and Ruju Juka Penu (calamity deity)¹²². Among the Kandha rituals, Kedu puja, Burbi puja, Matughar puja, Parbata puja, Khala puja and Mati puja are prominent. The Kandha people have great faith in the occult, such as shamanism, witchcraft, and therianthrope. During the fieldwork, mainly the older generations were found strongly believing in shamanism and therianthropy.

¹²²Pattnaik N K, *History and Culture of khond Tribes*, (New Delhi: Commonwealth Publisher, 1992), 198-217.

3.9 Profile of the Forest and the Dependence of Kandha People

The forest is extensively spread in the Kandhamal district, with diverse flora and fauna. However, it is not distributed evenly throughout the entire region. The lower hill areas have dense forests with greater diversity of species than the higher hill areas. The forests under the Tikabali and Chakapad blocks are in the jurisdiction of the Phulbani forest division. The forest is established in more than 70% area in both the region. However, climate and trees in these two regions differ slightly due to their location at different altitudes and forest conservation histories.

The Tikabali block is located at higher altitudes, and the climate here is cooler and more pleasant than in lower hill areas. Here, forests mainly occupy the mountains and hills and are dominated by sal trees. Sandalwood trees, a vulnerable species, can be found growing wild in a variety of locations. Around 1960s, deforestation was a primary concern due to shifting cultivation and exploitation of timber by wood industries¹²³. However, the forest department's ban on shifting cultivation and community mobilisation for forest conservation has regenerated the forest in the hills¹²⁴. The young forests located in many of the hills here are examples.

On the other hand, most of the areas of the Chakapad block fall in the lower hill areas. The climate here is slightly hotter. Shifting cultivation has been legally banned here since the British times. The forests are dense, abundant, and dominated by sal and other mixed vegetation. It has a vast depository of mature Sal, Piasal, Teak, and other valuable timber. Deforestation is a significant challenge in the region, mainly due to the

¹²³ Bailey F G, *Caste and the Economic Frontier*, (Manchester: Manchester University Press, 1957), 16.

¹²⁴ Barbara M. Boal, *The Konds*, 7.

active movement of wood mafia. The forest department has also been unable to control their activities. Locals in the region vehemently oppose forest department employees for their ill-treatment of forest-dependent people, their lack of cooperation with local people in forest conservation, and their passive attitude towards wood mafia.

3.9.1 Important Flora and Fauna

The natural forest in the study area has numerous plant species, and each one is important for maintaining the region's ecology and providing direct or indirect benefits to forest dwellers. Identification of the plants and the details of their significance are complex tasks. However, a few important tree species the local people use in their regular life are given below.

A List of Useful Trees for the Locals

Local name of the tree	English Name	Botanical name	Importance and Uses
Sal	Sal	Shorea robusta	A sacred tree for tribals. It is important for timber. The trunks are used for construction of houses, leaves are used for leaf plates, and tiny branches are used as toothbrush. Lac and seeds produced from the tree have good market value.
Piasal, Bija	Indian kino tree	Pterocarpus marsupium	A vital timber, it is used in the construction of houses and agricultural implements.
Saguan	Teak	Tectona grandis	Commercial trees with high demand from sawmills and wood

			industries. They are used for making household implements.
Amba	Mango	Mangifera indica	The fruit trees along with the seeds have commercial value in the market. The British exploited its timber for use in the construction of boats due to its light weight.
Mahula (mahua)	Honey tree/ Butter tree	Madhuca longifolia	Its flowers are used for the extraction of country liquor. Dried flowers are used as food during the dry season. The local people consume the pulp of ripe fruit; seeds are collected to extract oil for cooking and applying on hair and skin.
Panas, Kathal	Jackfruit	Artocarpus heterophyllus	People consume both raw and ripe fruits. The fruits and seeds also have commercial value. The dried seeds are kept to use as an alternative to vegetables in the dry season.
Amla	Gooseberry	Phyllanthus Emblica	The fruits of the trees have many medicinal uses. Recently, their commercial value has risen as many companies collect the fruits directly from the community.
Harida	Chebulic Myrobalan	Terminalia chebula	The fruits have medicinal properties; they have commercial value in the market.
Bahada	Myrobalan	Terminalia bellerica	The fruits have medicinal properties. The tree timber is used in the construction of houses and

			has commercial value in the market.
Halanda	NA	Haldina cordifolia	The timber is significantly used as beams of houses. It is also used for making agricultural machinery, such as ploughs and handles of agricultural equipment.
Bandhana	NA	Qugeinia oojeinensis	- Do -
Baunsa (Grass)	Bamboo	Bambusoideae	Bamboo is used in the construction and reparation of houses. The tender shoots are delicious food for the locals. Bamboo is also used as a ladder to climb the salap tree, date tree, and the machan made on a tree to watch the crops.
Siali (Climber)	NA	Bauhinia vahlii	Siali leaf plates are used for domestic and commercial purposes. The thread of siali is used as ropes in construction work. Its seeds are roasted and eaten by people.
Salap	Indian sago palm	Caryota urens	This date tree is commonly found in the forest of the Eastern Ghats. The liquid extracted from the tree is a healthy drink if taken fresh. However, the local people mix a kind of root to make it alcoholic. The inside of the tree is extracted, dried, and consumed on dry days.
			The fresh leaf of the tree is used for manufacturing <i>beedi</i> . The fruits

Kendu	Coromandel ebony	Diospyros melanoxylon	are a sweet and delicious food for the forest dwellers, and the timber is used for making household equipment.
Jamukoli	Black Plum	Syzygium cumini	The fruits are sweet and have many health benefits; it has commercial value in the market. The leaves have medicinal value.
Dimiri	Fig	Ficus carica	The local people consume the fruits of the tree. They also consider the tree as sacred.
Tentuli	tamarind	Tamarindus indica	The fruits of the tree are used for making pickles. It is also used in a few curries and has commercial value.
Bhalia	Marking nuts	Semecarpus anacardium	The ripe fruits are sweet and edible. The seeds are used as medicine for some diseases; however, it causes allergies in some people.
Sissoo	Indian rosewood	Dalbergia sissoo	The tree's wood is used for making the bed frame. It is also preferred in making ploughs due to its weight and sturdiness. However, it is disappearing from forests due to over-exploitation.
Charkoli	Charoli, Chironji	Buchanania lanzan	The ripe fruits are delicious and are consumed by the local people. Seeds are in high demand in the market.

Table No: 3.1 Important Trees for Local

Aside from the above trees, there are many other valuable trees, such as asan (*Terminalia tomentosa*), salai (*Boswellia serrata*), simili (*Bombax ceiba*), palas (*Butea monosperma*), kas (*Bridelia retusa*), kumbhi (*Careya arborea*), genduli (*Sterculia urens*), arjun (*Terminalia arjuna*), sunari (*Clasia fistuala*), siddha (*Lagerstroemia parviflora*), dhaman (*Grewia tialiaefolia*), gambhari (*Gmelina arborea*), and bheru (*Chloroxylonswietenia*) in the forest. The wood of these trees is used for firewood, construction material, furniture material, and for many other purposes. Also, the local people collect flowers, fruits, bark, roots, leaves, gum, and other parts for specific purposes. The above-listed trees are the natural flora of the region. However, through afforestation programmes, many exotic fast-growing species, such as karanja (Pongame oil tree), chakunda, nilgiri (*Eucalyptus*), acacia (*Acacia auriculiformis*), simarouba (*Simarouba glauca*), sirisa (*Albizia lebbeck*), mahogany, and krishnachura (*Royal Poinciana*), are planted in the forest and on the road sides. In the long term, these trees can endanger the natural ecology and impact the locals' lives and livelihoods.

The forest of the study area is home to numerous wild animals. According to the local people, wild boar, spotted deer, barking deer, mouse deer, porcupine, bear, jackal, hyena, peacock, wildfowl, hornbill, quill birds, grey francolin, python, monitor lizard, and fox are commonly found in the forest. They also reported the presence of leopards, as their livestock was killed many times. The presence of tigers is doubtful, but the forest department suspects a few tigers in the Chakapad forests. During my stay in the field, locals informed me that a tiger was seen on the road to the field area. Elephants occasionally visit the lower hill areas of the Chahali Gram Panchayat, but the forest is not their permanent home, and they sometime migrate from the Daspatha elephant sanctuary.

3.9.2 Forest Conservation and Deforestation

The Kandhamal region employs various approaches for forest conservation. The local tribal communities, specifically Kandha community, conserved and maintained the forest for hundreds of years through sustainable use of forest resources with the help of their traditional ecological knowledge. There are also number of self-initiated community forest management measures operating in villages of the study area to protect their local forests. The sacred groves maintained by many tribal villages are an attempt by the tribal communities to preserve the forest and maintain biodiversity. Many villages in the study area have got CFRR under FRA 2006 to conserve the local forest. However, they are yet to be brought into operation. There also a number of joint forest management institutions operating and conserving thousands of hectares of forest under the supervision of the forest department. Apart from all the above, the forest department is the competent authority for managing and conserving the district's entire forest area. They have absolute jurisdiction over all the forests except the community-protected forests.

Deforestation is a significant challenge in the Kandhamal district threatening the existing forest ecology. The situation is particularly precarious in the lower hilly areas of the district. Both natural and human-made factors are responsible for deforestation. Natural disasters like cyclones and flash floods have extensively damaged the forest in the recent past. On the other hand, human activities are the most widespread cause of deforestation. Some of the notable causes of deforestation are forest fire, infrastructure development, commercial exploitation of timber, wood smuggling, brick factories, and firewood requirements.

3.9.3 Kandha People's Reliance on Forests

The Kandhas are the early settlers of the Kandhamal region and have learned sustainable use and management of forest resources for securing a living. The forest plays a crucial role in their economic, social, and cultural well-being. Both women and men rely extensively on the forest for domestic and commercial purposes. Except in the rainy season, the Kandha people regularly go to the forest to meet their various requirements. During the rainy season, the Kandha people mostly spend their time in agricultural activities and it is regarded as the off-season for forest-based activities. When the harvesting season ends and the dry season begins, the forest reopens to the community. Below are some of the ways the Kandha people rely on the forest:

Economics and Subsistence: Forests are a rich source of non-timber forest products that the Kandha people rely on for various purposes. These products include fruits, nuts, tubers, medicinal plants, bamboo, honey, fibres, and resins. They gather these resources from the forests and utilise them for subsistence, trade, and income generation. NTFPs not only serve as a source of food but also as raw materials for handicrafts, traditional medicines, and other locally valued products.

Agriculture: The Kandha tribe practices shifting cultivation, also known as podu cultivation or slash-and-burn agriculture in the past. Forests provide the necessary land for such agricultural practices, allowing them to grow crops like millet, maize, rice, pulses, and vegetables. The Kandha people also depend on the forest for water and organic manure to carry out their settled agricultural activities.

Livestock Grazing: Forests provide valuable grazing areas for the livestock owned by the Kandha tribal people. Cattle, goats, and sheep are reared by the community, and they graze in the forest areas, utilising the natural vegetation as a food source.

Firewood and Timber: Forests supply the Kandha tribe with fuelwood for cooking and heating purposes. They collect firewood from the forests to meet their household energy needs. Timber from the forests is also used for the construction and reparation of houses, making agricultural tools, and crafting traditional items.

Hunting: Wild meat is an excellent source of nutrition and protein for poor Kandha people. Although hunting and trapping of wild animals are legally banned, it is a regular activity in many rural areas of Kandhamal. People use locally made guns for hunting of wild animals. Some of the hunters also sell wild boar and barking deer meat discreetly in nearby towns and villages.

Cultural and Spiritual Significance: Forests hold immense cultural and spiritual significance for the Kandha people. They consider the forests as sacred spaces and home of their deities and ancestors' spirits. Forests are often the settings for their rituals, ceremonies, and traditional practices, connecting them to their cultural heritage and ancestral beliefs.

The reliance on forests by the Kandha tribal people is deeply intertwined with their cultural identity, sustainable practices, and their close connection to the natural environment. They have traditionally maintained a symbiotic relationship with their local forests and the environment.

2.10 Forest Governance and Kandha Tribal People in Kandhamal

The Kandha-dominated Kandhamal district was historically an autonomous region governed primarily by Kandha chiefs. During the British period, both the Madras Presidency and Bengal Presidency extended to the Kandhamal region. As a result, both the Madras Forest Act of 1882 and the Indian Forest Act of 1927 covered the region.

The British government constituted two forest divisions in the district: Baliguda in 1938 and Phulbani in 1945. However, despite the constitution of forest division and the applicability of the forest acts, the British government did not form any legal or government forests in the areas. The forests were open to the local tribal communities.

The constitution of government forests in Kandhamal was initiated in the post-independence period only. It was legislated through the Madras Forest Act of 1882, the Indian Forest Act of 1927, the Orissa Forest Act of 1972, or through surveys and settlements of the villages. The first reserved forest was established in the district in the year 1954. Until the Orissa Forest Act (OFA) of 1972 came into force, the legalisation of forests in the Baliguda division was carried out under the Madras Forest Act of 1882 and in the Phulbani division under the Indian Forest Act of 1927. The forest inside the village boundaries was surveyed by the revenue department and categorised as a revenue forest. At present, the forests of the district are regulated under the provisions of OFA-1972. The demarcation of the government forest was mainly carried out between 1955 and 1985.

The governmentalisation of the forest ended the Kandha people's age-old shifting cultivation practice, particularly that of the Kandha tribe. Shifting cultivation was widely practised by the Kandha people and was their common livelihood source. During the constitution of the government forests through surveys and settlements, tribals' shifting cultivation (podu) lands were included under the forest land category, depriving them of their land and source of survival. Although shifting cultivation is still practised in a few areas of Belghar, Kotgarh, Brahmanigaon, and Daringbadi, the forest department is doing everything possible to stop it. The effects of the criminalisation of

shifting cultivation on tribal communities' livelihoods, social relations, food and nutrition security, and gender relations have not been paid attention.

During surveys and settlements of villages, the revenue department classified around half of the area within the village boundaries as "forest land", designating them as "revenue forests". Such forests fall under the jurisdiction of the revenue department. However, the forest laws effectively ensure that the villagers have no legal rights or claims over them. Since very little land is available for agriculture and settlement, and a significant portion of land is under the possession of non-tribal people, it can be understood how the survival of the tribal people is under threat, who account for more than half of the district's population.

The Kandha autonomy over the forest was eroded by the state control on the forest. Although the forest department initially granted limited rights and concessions on collecting certain forest products such as timber, firewood, bamboo, and MFPs in reserved and protected forests for domestic use, they later revoked them. Furthermore, the rights and concessions of all reserved forests are not the same but vary depending on their carrying capacity and the decision of the forest department officials. In terms of land and forest rights, the status of tribals, particularly Kandhas, has deteriorated compared to the colonial period.

Apart from government forest management, the local people manage a substantial portion of forests through Community Forest Management (CFM) and Joint Forest Management (JFM) Institutions. CFM is a people-led forest conservation effort in which the local community manages their peripheral forests. The CFM is recorded to have existed in the region since 1970s and 1980s, after the ban on shifting

cultivations¹²⁵. Local people through youth clubs, yubak sanghas, or village committees, brought large patches of previously shifting cultivation areas under forest regeneration. According to a study by Food and Agriculture Organization (FAO) in 2005, around 916 CFM institutions were operating in the Kandhamal district¹²⁶. Women were not represented in such institutions but were free to use the biomass of the protected forests

Kandhamal is one of the leading districts in Odisha to host JFM programme. According to RCDC (an NGO working on forest protection), there were 1187 Vana Samrakshana Samiti formed in the district by 2011. These institutions are expected to protect 86,506.24 hectares of forest areas. However, many Vana Samrakshana Samitis have discontinued or ceased to exist. Notably, in the Chakapad region, nearly all have dissolved within four to five years of formation. According to the villagers, the forest department's lack of cooperation is the primary cause of the ineffectiveness of many VSS. On the other hand, in the Tikabali region, a good number of VSS function well in the protection of forests.

Kandhamal is one of the leading districts to implement the Forest Rights Act 2006. As on May 2015, a total of 57,657 individual forest rights titles were distributed covering an area of 87,227 acres of land. Under community forest rights, 852 titles were given to the villages covering 34,080 acres of land.

¹²⁵ Kailas Sarap, *Participatory Forest Management in Orissa: A Review of Policies and Implementation*, Understanding Livelihood Impacts of Participatory Forest Management Implementation in India and Nepal 2 (Norwich: Overseas Development Group, University of East Anglia, 2004), 6.

¹²⁶ Dr K D Singh, Dr Bhaskar Sinha, and Mr S D Mukherji, 'Exploring Options for Joint Forest Management in India' (Rome: FAO, 2005), 27.

3.11 Conclusion

The Kandha people predominate in the Kandhamal region. They typically live in rural areas, relying on agriculture and the forest for a living. Usually, Kandha settlements are small, hamlet-type, situated inside the forest. The socio-economic condition of the Kandha people is very poor. Most of them need more basic amenities like proper roads, transportation facilities, educational infrastructure, electricity, telecommunications, drinking water, sanitation, and healthcare facilities.

Kandhas mainly depend on agriculture and forests for their survival. Both women and men contribute significantly to agricultural and forest activities to earn a living. They also do other wage labour if available in their locality. Labour migration to other states is marginal among Kandhas, but the trend is growing. The Kandhas are expert cultivators of the hilly terrain. They grow varieties of crops on different types of land, mainly paddy, maize, millet, pulses, oil seeds, turmeric, and ginger.

The forests of Kandhamal district are abundant in biodiversity, encompassing a diverse range of plant and animal species. These forests serve as a vital resource for the Kandha people, providing them with essential elements such as food, fodder, construction material, and various sources of livelihood. Given the challenges associated with poor living standards, limited employment opportunities, low agricultural productivity, and inadequate access to nutritious food, the forest plays a crucial role in supporting the survival of the Kandha community. Both women and men collect a wide array of forest products, which they utilise for domestic consumption and sell in the market. However, it is worth noting that women primarily gather various non-timber forest products, making a significant contribution to their family's sustenance and economic well-being. The forest not only satisfies the material needs of

the Kandha people but also serves as a backdrop for their cultural practices and spiritual beliefs. The forest represents a vital lifeline for the Kandha community, fulfilling their basic requirements while providing a setting for their cultural heritage and spiritual connections. The preservation and sustainable management of these forests are paramount to ensure the continued well-being and livelihoods of the Kandha people.

Before the extension of forest acts and policies to the Kandhamal region, the Kandha people enjoyed significant control over the land and forests. They engaged in their traditional practices, such as shifting cultivation and gathering forest products. However, with the centralisation of the forest in the 1960s and 1980s, the Kandha people gradually lost their autonomy over the forest resources. Their shifting cultivation practices were deemed illegal, and the land was merged with the forest, recorded as forest land.

The centralisation of the forest also imposed restrictions on the Kandha people's access to forest resources. Forest department employees began monitoring their forest-based activities closely. Restrictions were imposed on the extraction of timber and firewood, which were essential for the daily lives of the Kandha people. Additionally, limitations were placed on cattle access to reserved forest areas. Any violation of forest laws, such as extracting timber for domestic needs, allowing cattle inside reserved forests, or cultivating on forest land, resulted in punishment from the forest department. Some cases even reached the courts, as documented during the field study.

The implementation of forest laws hindered the Kandha people's basic subsistence needs and eroded the traditional cultural practices associated with forests and hills. The restrictions placed upon them gradually undermined their connection with the forest and the cultural significance they attributed to it.

However, since the implementation of forest laws, numerous self-initiated community forest conservation institutions have emerged throughout the district. As the restrictions were imposed on larger forest areas, the local tribal communities began taking the initiative to protect their local forests in order to meet their food, fuel, and essential needs from these resources.

CHAPTER 4

Desia Kandha Women and the Forest

4.1 Introduction

The previous chapters discussed the changing status of forest in Kandhamal district and the growing distance between the forest and the Desia Kandha community. As discussed in the Introduction chapter, the forest is in transition and so are the forest dwellers. The present Chapter examines the transition of the Desia Kandha women in their association with the forest. The growing distance between the forest and the Desia Kandha women has led to several changes and challenges in the women's lives. Some changes have led to livelihood challenges and increased hardships, while some others have opened the doors to the outside world thus contributing to the aspirations of the Desia Kandha women for education, employment, healthcare and housing.

The present chapter focuses on the relationship between Kandha women and the forest, their active participation in forest conservation efforts, and the numerous challenges they face in maintaining their forest-based lifestyle. The information presented in this chapter is based on extensive fieldwork conducted in the Tikabali and Chakapad Blocks of the Kandhamal district in Odisha, as outlined in the methodology section. During the research process, data was collected from approximately 110 respondents, primarily belonging to the Desia Kandha community. To ensure a representative sample, a combination of purposive and snowball sampling methods was employed. Data collection was carried out using various tools and techniques, including focus group discussions (FGDs), in-depth interviews, case studies, transect walks, and observations. These methods facilitated a comprehensive and nuanced understanding of the complex dynamics between Kandha women and the forest.

4.2 Profile of the Respondents

Number of Respondents

Category	Number of Respondents
Male	80
Female	30
Total	110

Table No: 4.1 Profile of the Respondents

This study interacted with 80 women and 30 male respondents from various villages. The interviews with women aimed to gain insights into their association with the forest and the challenges they encounter in maintaining it. Conversely, the interviews with men sought to capture their perspectives on the relationship between the forest and the tribe, as well as their views on the association of women with the forest. This mixed-gender approach allowed for a comprehensive understanding of the dynamics between tribal women, men, and the forest, shedding light on gender-specific experiences and perspectives within forest-based livelihoods.

The table given below profiles the age groups of the women respondents.

Age Group	Number of Respondents
20-30	20
31-40	22
41-50	22
51 above	16
Total	80

Table No: 4.2 Age Group of Respondents

The respondents belonged to various age groups, starting from twenty years and above. The rationale behind selecting respondents from different age groups was to trace the changing patterns of women's dependence on the forest over time. However, a larger proportion of the respondents were from the age range of thirty to fifty. This particular age group was chosen because women in this category were observed to be more actively engaged in forest-based activities.

Another important aspect of the respondents' profile is their marital status. This gives a clue to the changing status of family in the Desia Kandha community. Also, it reflects the choices made and not made by Desia Kandha women with regard to marriage and family.

Marital Status	Number of Women
Married	74
Unmarried	3
Widow	3
Total	80

Table No: 4.3 Marital Status

The study primarily focused on women working in agriculture, forest product gathering, and other income-generating activities. Most respondents were married, which aligns with the cultural norms and practices of the Kandha community, where girls tend to marry at a young age. Consequently, the number of unmarried working women was relatively low. However, there were a few widowed women who participated in the study. These women were typically above the age of sixty, had extensive knowledge of the forest, and had significant experience with forest-based lifestyles. Their insights and experiences provided valuable perspectives on the interconnectivity between the Kandha community, women's livelihoods, and the forest.

4.2.1 Educational Status of the Respondents

Education is a critical aspect that demands significant attention in Kandhamal. Every child has the right to access quality and equal education. However, Kandhamal significantly lags in this regard. In the villages chosen for this study, a considerable portion of the population did not attend school. The table below illustrates the educational status of the respondents:

Gender	No Education	Primary Education	Middle Education	Secondary Education	Higher Education	Total
Female	45	17	12	5	1	80
Male	11	5	7	7	0	30
Total	50	22	23	14	1	110

Table No: 4.4 Education Status

The data presented in the table highlights many women respondents who have not received formal education. This trend is particularly evident among women over the age of forty. The absence of adequate school infrastructures in the past played a crucial role in the high illiteracy rates among the older generations. During the fieldwork, an older woman from Ragapaju village shared her experience, explaining that she discontinued her studies during her primary schooling after witnessing her brother severely beaten by a teacher for failing to answer a question correctly. Witnessing this incident, she refused to attend school, stating, “Why should I go to school to be beaten up by the teacher?” Punishment in schools was identified as one of the reasons for many girls dropping out in the past. Some older women respondents also mentioned that education was not prioritised during their time. Instead of attending school, they were engaged in household and economic activities from a young age. Although many women below forty have received primary or middle school education, their participation in secondary or higher education remains relatively low. This

suggests the need for intervention to address barriers to education, improve educational infrastructure, and promote equal opportunities for girls and women to access higher levels of education in the region.

Several young women respondents expressed their desire to attend high school or pursue higher education. However, they have encountered various difficulties in achieving their educational aspirations. Their challenges include the absence of schools in their vicinity, lack of support and interest from their families, early marriage, and financial constraints. Field observations revealed that while people in the community are aware of college education, there is a need for counseling and guidance regarding higher education, technical education, and vocational training. Specifically, career counseling is crucial for high school students, as it can help them explore and aspire for the diverse opportunities available to them. By addressing these barriers and providing comprehensive support, including access to schools, counseling services, and financial assistance, the region can empower young women to pursue their educational goals and unlock their full potential.

Apart from the factors discussed above, other factors such as proper road connectivity, infrastructure, transport facilities, supply of electricity, access to information technology, boarding schools and colleges, awareness, vision, and value placed on girls' education can further facilitate the presence of Kandha girls in higher educational institutions. The following chart illustrates the availability of educational facilities in the studied villages.

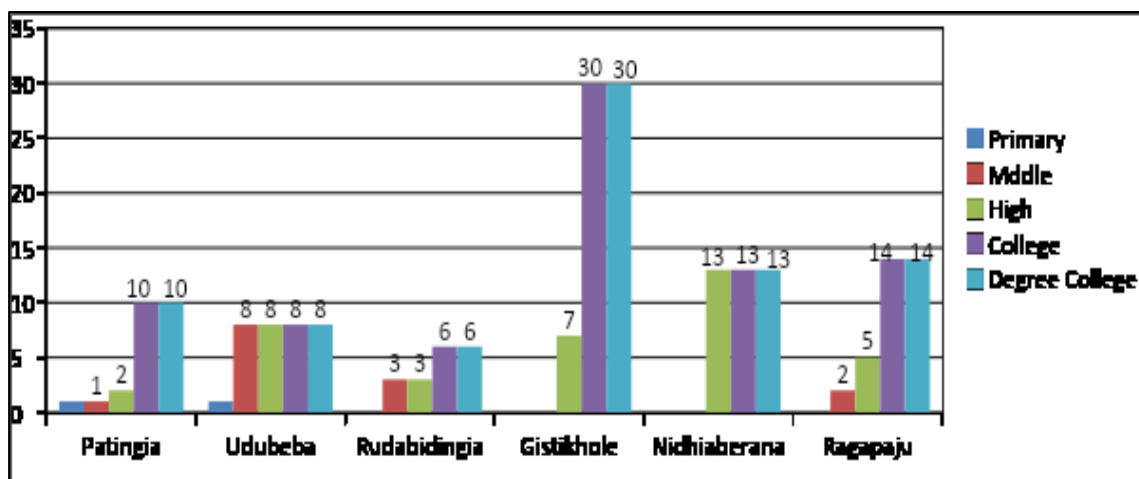


Figure: 4.1 Distance of Educational Institutions

In the above chart, it is evident that most of the villages have good access to primary school facilities. However, when it comes to pursuing further education, students, especially girls, face challenges as they have to travel long distances away from home. This often becomes a significant reason for early dropout rates among them. The villages near higher educational institutes also encounter similar challenges, including poor communication and transportation facilities.

4.2.2 Livelihood of the Respondents

Kandha women have adopted agriculture, gathering of forest products, and engaging in daily-wage labour as their primary means of livelihood. They participate in various informal sectors as daily-wage labourers, including the National Rural Employment Guarantee Scheme (NREGS), government initiatives, private construction sites, and agriculture. Notably, the number of women working as agricultural wage labourers is relatively lower, as many individuals work in their fields or participate in labour exchange systems with relatives and neighbours through a barter system. The table below depicts the number of women depending on different types of work.

Livelihood	Number of Women
Agriculture	17
Agriculture/Wage Labour	9
Agriculture/Forest Product Collection	18
Agriculture/Wage Labour/Forest Product Collection	28
Forest Product Collection	8
Total	80

Table No: 4.5 Livelihood of Women

In the Kandha villages and hamlets, the majority of families possess agricultural land. Kandha women actively engage in agricultural work, diligently tending to their land to ensure a successful harvest. Alongside agriculture, gathering forest products holds great significance for Kandha women. As per a respondent, approximately 50 per cent of their basic needs are fulfilled through the resources obtained from the forest. Kandha women collect a diverse range of items from the nearby forest, utilising them for both domestic use and commercial purposes. While older women tend to avoid physical labour, they still play a vital role in processing the forest products brought by other family members. The chart below provides the percentage of women respondents who rely on various livelihood sources.

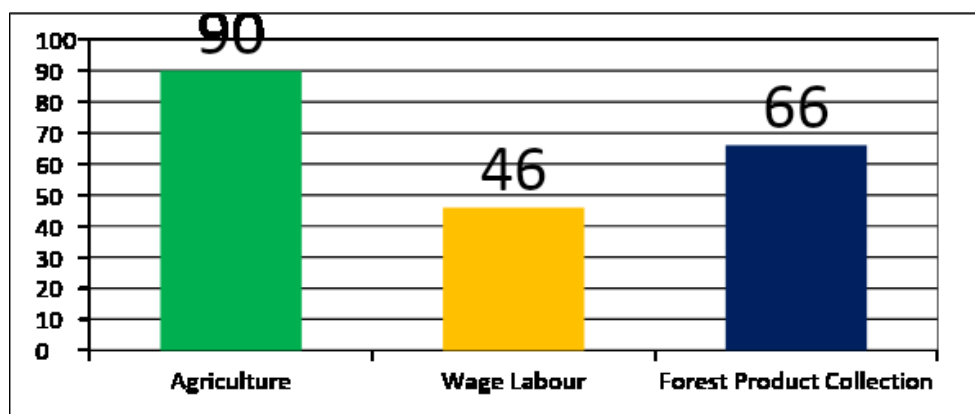
Women in Different Livelihoods (Percent)

Figure No: 4.2 Different Livelihoods of Women

Kandha women primarily rely on locally available jobs and resources to earn a living, with land and forests being the two major sources that play a crucial role in their livelihoods. However, many respondents have expressed that the income generated from land and forest activities is insufficient to meet their needs. While agriculture helps to address their basic food requirements, it remains vulnerable to adverse weather conditions. Similarly, the income generated through the sale of forest products falls short of meeting their needs. Although the availability of NREGS work provides an additional income option for women, these opportunities are limited.

Self-Help Groups (SHGs) have provided financial support to women for income-generating activities. Women actively participate in various livelihood endeavours, including poultry farming, goat farming, procuring and marketing forest products, cultivating hill brooms, operating small mills, and engaging in micro-credit activities facilitated by SHGs. Several respondents have expressed that their livelihoods and income could be improved through the availability of NREGS work, access to irrigation facilities, and procurement of their forest products by the government.

4.2.3 Health and Sanitation of Kandha Women

Malnutrition is a significant concern among Kandha women, especially pregnant women. According to the NHFS-4 2015-16 reports, more than 50% of rural women in Kandhamal suffer from anaemia. Although hunger may not be visibly evident among the Kandha people, there are deficiencies in their nutrient intake. Their diet primarily consists of rice, leafy vegetables, and occasional dal. Additionally, they consume seasonal vegetables grown in their kitchen gardens. However, the availability and consumption of wild foods, which used to provide additional nutrition, have declined

over time due to the ban on shifting cultivation, hunting restrictions, unavailability of forest food, and changes in the forest landscape.

There is a noticeable lack of animal-based food consumption among Kandha women. Several respondents have mentioned that married women traditionally abstain from consuming chicken or eggs for unknown reasons. At the same time, consumption of goat or pig meat is limited to ceremonies and festivals. Milking cows was not traditionally prevalent among the Kandha people. Although this trend has changed, due to past taboos, many women still refrain from consuming cow milk or dairy-based products. Furthermore, in Kandha society, women often have their meal after everyone else is done with eating, which results in compromised quantity and quality. The prioritisation of males in terms of food intake over women also contributes to nutrition deficiencies among women.

The lack of nutritious food has a detrimental effect on women's health during pregnancy. The provisions made by the government for food and essential medical services are insufficient to meet the nutritional needs of pregnant women. According to an Anganwadi employee, many women do not consume the iron and folic acid tablets the government provides them during their pregnancy due to social taboos, lack of awareness, and mistrust of medicines. Additionally, many women choose traditional healing and treatment practices instead of following institutional healthcare. An employee of the PRATHAM NGO, who has extensive experience of working in Kandhamal, has noted a practice among Kandha women of consuming less food during pregnancy to prevent the baby from growing too large, as they believe it reduces labour pain during childbirth. However, such practices increase health risks for both women and the child.

Kandha women encounter various taboos and restrictions during puberty and menstruation. During this time, they are expected to remain within their homes for three to seven days. They are considered untouchable and cannot interact with male members. During such time, women wake up early in the morning, carry out their regular tasks, and confine themselves to their houses. Using sanitary napkins is not widely practised among women, and many continue to rely on traditional methods to manage menstruation (Information sourced from male respondents). Limited awareness and the cost of sanitary napkins are significant factors contributing to their low usage. Additionally, the government does not provide free sanitary napkins to women, further exacerbating the risk to their reproductive health.

The lack of health consciousness among the population, coupled with the challenges of transporting patients to hospitals, significantly contributes to the deteriorating health conditions among women. Financial constraints further limit access to healthcare facilities. Within the Kandha community, the concept of disease is often attributed to biological causes and the interference of supernatural powers. Specific to their locality, these malevolent spirits and deities are believed to inflict harm on individuals as a form of punishment or displeasure or due to disrupted social and spiritual harmony. Consequently, the Kandha people primarily rely on ethno-medicine and traditional healing practices in pregnancy, fever, diarrhoea, and skin diseases, instead of seeking medical treatment at hospitals. During a group discussion, respondents mentioned that traditional healers in villages initially attempt to cure diseases, and only if their efforts prove unsuccessful do patients consider going to hospitals. The following table provides the locations of various healthcare institutions in the studied villages.

Access to Healthcare Facilities

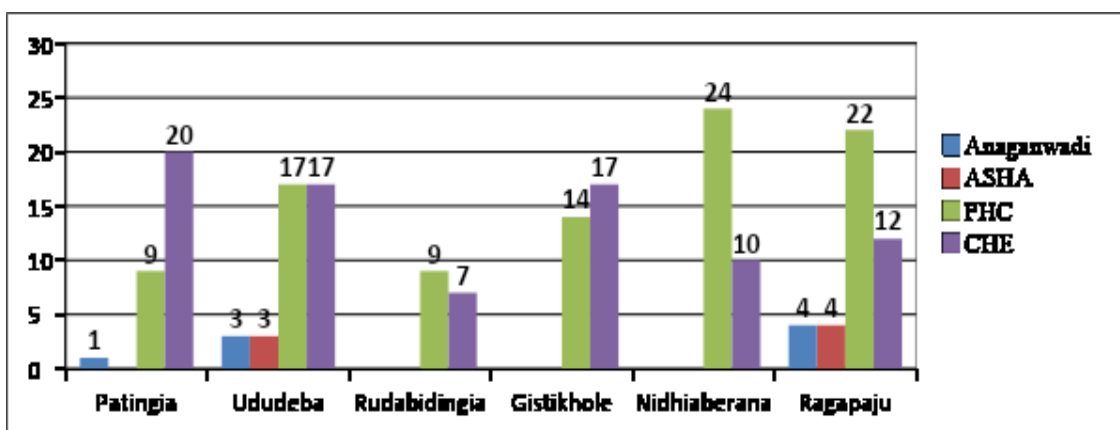


Figure No: 4.3 Healthcare Facilities

The Anganwadi centres provide first aid to the patients and also distribute medicine and food to the pregnant women and infants. Locals visit the nearest PHC (Primary Health Centre) for less critical health concerns. However, when confronted with serious health issues, they seek medical care at CHC (Community Health Centre). Despite the healthcare institutions being within a reasonable distance, regular visits can be challenging due to poor road conditions and limited transportation options. Moreover, many interior villages lack telecommunication networks, making it difficult to call for an ambulance or arrange transportation during emergencies, posing risks to the patients' life.

Another primary concern in the villages is the lack of sanitation facilities, which is closely tied to the health of the people. Most villagers practice open defecation near riverbanks, ponds, and streams, contaminating water. These areas are also commonly used for bathing and drinking purposes. Open defecation significantly contributes to diarrhoea, especially during the rainy season. Although the government has provided low-cost latrines to some houses, these structures are often used for keeping poultry and goats. Several factors, such as the habit of open defecation, discomfort and taboos associated with using latrines within house premises, lack of water facilities, and poor

quality of latrines, contribute to the non-usage of latrines by the people. The absence of adequate latrine facilities and lack of awareness regarding their use significantly impact women, especially in terms of their health, hygiene, and privacy. This issue is particularly challenging for older women who may have difficulty travelling long distances to access sanitation facilities. Moreover, during emergencies or at odd hours, venturing outside for natural calls is unsafe for them.

4.4 Women and Forest from Past to the Present

Many women, particularly from the villages of the Chakapad region, shared that their life in the forest was challenging, requiring hard work to ensure their survival in the past. They experienced acute poverty and food shortage, and both men and women had to engage in various forms of labour for minimal wages. Men worked as Mulia (daily wage labourers), while some were subjected to Halia (bonded labour) in farmlands. In contrast, women had limited work opportunities, and besides agriculture, the forest served as their primary source of livelihood. They would regularly venture into the forest to gather food items and other forest products for consumption and commercial purposes, with no fixed schedule but going whenever they had time during the day. The nearby forest was rich in diverse forest products and edible items, which both men and women collected. Men primarily collected resin, honey, lac, and various marketable gums. Women mentioned that hunting was a regular activity during that time, exclusively conducted by men, while women supported them by providing food and water during midday. An older woman from Nidhiaberana village said they were getting something from the forest for their living in any situation and season. While the forest was not their primary source of survival, it provided them with additional support to meet their basic needs and financial requirements.

In the recent past, shifting cultivation was practised in the region, particularly in the Tikabali area. The Kandha people cleared and burned the hillsides to cultivate pigeon peas and beans. In this form of cultivation, women played an equal role alongside men, from preparing the fields to harvesting the crops. However, due to intervention from the forest department, shifting cultivation has been discontinued, and the lands are now being utilised for forest regeneration. After this change, women continue to gather resources from these areas, including siali leaves, firewood, and leafy vegetables. These activities remain vital for their sustenance and resource collection, even after shifting cultivation discontinues.

The forest continues to hold a significant place in the lives of the Kandha people, especially Kandha women, although their dependence on the forest has changed over time. Activities such as cultivation in forest lands, shifting cultivation, selling firewood, and hunting animals have been significantly curtailed due to increased surveillance by the forest department. The availability of government-supplied food grains through the Public Distribution System (PDS) has reduced the need to forage for wild food for survival. However, Kandha women continue to gather various resources from the forest to meet their domestic and economic conditions.

4.5 Imagination of the Forest by Kandha Women

The perception of forests varies depending on how an individual, community, organisation, or state is connected to them. A layperson living outside the forest typically imagines it as an area covered in trees, mostly home to wildlife. Those who run wood industries value the forest due to the deposits of substantial timber required for their factories. Environmentalists prioritise the forest because of its critical role in combating various environmental issues, including climate change, carbon

sequestration, biodiversity conservation, arresting desertification and land degradation, and much more. Forests are essential to the state because of their vast natural resources and mineral deposits, whose investment is crucial for development in contemporary times.

Those who relate to the forest from the outside have a predominantly materialistic view. However, forest-dwelling communities, especially tribal communities who have traditionally lived in the forest, have a unique understanding of the forest. Their relationship with the forest is more than just materialistic; it is intimate and pristine. Many scholars often discuss forest-tribe relationships or the issues faced by tribal women without delving into the true significance and meaning of the forest in their lives. Here are some pragmatic views of “forest” from Kandha women in the study area. A woman from the Bidingia village said, “Their (referring to Kandha women of the village) day starts with exchanging breath with the forest”. Another woman from Ragapaju village said, “The forest is their life, and they cannot imagine their existence without it”. An elderly women from Karukata village said, “Mountains and forests are the abode of their deities and ancestors’ spirits, and they are like family members to them”. Many informants throughout the study area have described the forest in various ways that reflect their material, cultural, and sentimental relationship with the forest. The forest, in their imagination, is not an object but a living body. A forest with biodiversity, containing a variety of valuable flora and fauna, is meaningful for tribal people, particularly women.

4.5 Association of Kandha Women with the Forest

A middle-aged woman from Rudabidingia village expressed, “We bring wood and food, everything from the forest, to sell in the Tikabali market to earn a living. We are

poor people; we have nothing in our homes; everything is in the forest. The forest gives us life and security.” The study revealed that the forest is an integral part of every Kandha family living in rural areas, regardless of their social and economic status. They are socially, culturally, and economically connected to the forest for various purposes. However, for the impoverished Kandha families, forest is a crucial and indispensable resource for their survival and economic needs. Particularly for Kandha women, the forest plays a vital role in managing their domestic responsibilities as well as providing financial support. While travelling through the Kandhamal district, one can observe women selling a variety of forest and agricultural products on the roadsides and in weekly markets. These women independently gather, process, transport, and determine the prices of their products in the market. They have the autonomy to decide how to spend their earnings and for what purposes, though they often prioritise food, clothing, and their children’s education.



A woman processing mangoes in her veranda



A woman selling mangoes on the roadside

Picture No: 4.1 Kandha Women’s Life

Kandha women are known for their hardworking nature and following of a strict daily schedule. They wake up early, typically around 4:30 to 5:00 AM, and proceed

with their regular tasks, such as freshening up, cleaning the house and cattle shed, preparing food, taking care of children, and sending the cattle for grazing. Following this, they engage in agricultural work on their land or head to the forest to gather various products. The Kandha women regularly visit the forest unless they have agricultural or wage labour commitments. Generally, they head to the forest between 7 to 8 AM and return before noon. However, the timing may vary depending on the season and weather conditions. During summer, they go early to collect forest products like mahula, while in winter, they wait until the fog clears and the dew evaporates. Even in the rainy season, if the weather is clear, women venture into the forest. On average, they have to walk 3 to 4 km to gather forest products, often requiring them to climb hills and mountains. While they usually go to the forest in groups of five to ten women, sometimes they accompany men to gather firewood. The men cut the trees, and the women carry them back home. The forest has provided ample opportunities and independence for Kandha women to support their livelihoods. They hold the largest stake in non-timber forest products in Kandhamal and play a critical role in the survival of the Kandha people through utilising forest resources.

The forest also serves as a social gathering place for Kandha women, where they interact with each other while gathering forest products. Despite their busy schedules, the forest provides them with a space for both economic and recreational activities. During their time in the forest, they share their problems, discuss various socio-political issues, and talk about the well-being of the village. Such interactions strengthen their social bonds and facilitate the exchange of information. Additionally, older women play a vital role in passing down their knowledge of forest resources, sustainable harvesting practices, and ecological wisdom to the younger generation.

4.5.1 Forest as a Source of Livelihood for the Kandha Women

The forest plays a crucial role in the economy of the Kandha tribe in Kandhamal, particularly for women. Mainly the economically weak Kandha families residing in rural areas gather and sell a diverse range of timber and non-timber forest products to sustain themselves. Cultural norms exclude Kandha women from owning land, which could have improved their status in relation to men. However, the abundant presence of forests in Kandhamal grants economic self-reliance to Kandha women and reduces their dependence on men for livelihood. This aspect significantly contributes to bridging the gender gap and enhancing the financial decision-making power of Kandha women within their families. Kandha women are the primary gatherers of non-timber forest products. Throughout the year, they collect, process, and sell various forest products. The local forest serves as a source of employment for Kandha women during periods of limited work availability. Given below are the details of the forest products collected and sold by Kandha women in the study area.

Siali Leaf (*Bauhinia Vahili*): Siali leaf is a vital forest product that women regularly collect. Siali is a large climbing plant that grows throughout the year and can grow as large as a mature tree if left undisturbed, covering numerous trees in the forest. However, locals regularly clone the plants to harvest the leaves and prevent them from growing further. The broad leaves are primarily used for making plates and bowls. Siali leaves are available in the forest throughout the year, except during the peak summer when the plant sheds its leaves. A siali leaf plate is created by joining 4 to 5 leaves together side by side and attaching them with a thin bamboo twig. Kandha women skilfully make siali leaf plates for both domestic use and commercial purposes. It is a regular source of income for many Kandha women in the study area. The demand for

siali leaf plates is particularly high in urban areas within and outside the district. Temples, restaurants, hotels, and roadside dhabas frequently use siali leaf plates to serve food. They are also used for serving food in religious ceremonies, social functions, and weddings. Siali leaves also hold cultural value, as Kandha people consider them sacred and use them to offer food to their deities during religious ceremonies. Women usually sell their plates to local traders or brokers. Sometimes they sell them in the market or roadsides. Some Self-Help Groups (SHGs) also procure siali plates from local women and sell them to traders at better bargaining prices. Siali leaf plates are eco-friendly, sustainable, and biodegradable, providing a preferable alternative to non-eco-friendly and expensive plastic and Styrofoam plates. Additionally, Kandha women cook the tender siali fruits as vegetables, and the nuts are consumed after frying or light roasting.

Sal leaves and Seeds (*Shorea Robusta*): Sal trees play an important role in the lives of the Kandha community. They consider the Sal tree sacred and worship it on many occasions. It is extensively present in abundance in the study area. Women gather sal leaves to make plates and bowls. Sal leaf plates do not have the same market demand as siali plates, and women mainly stitch them for domestic use. The forest department has also restricted the commercial use of sal leaves. However, many Kandha women make plates for sale if they receive a pre-order. Sal seed is another commercially valuable forest product. In May and June, tribal women and men manually clean the sal tree's ground or burn the fallen leaves to gather its seeds. The extraction of nuts from sal seeds requires a long hectic process of sun-drying, burning and chopping of the fruits. Women are typically responsible for the collection, processing, and marketing of sal seeds. They usually sell them to brokers and in the nearby retail shops at 5 to 10 rupees per kilogram. The oil extracted from the seeds is used primarily for chocolate and soap production. The tiny branches of the sal tree are popularly used as chewing

twigs, and locals use them to clean their teeth due to their medicinal properties. In the study area, the Kandha women have been seen selling them in urban areas like Tikabali, Chakapad, and Sankarakhole. However, their market demand is reduced due to the increasing popularity of toothbrush and paste.

Mahula (*Madhuca longifolia*): The local tribal community considers the mahula tree as life-giving due to its multiple services. The trees play a vital role in the economic and cultural life of the Kandha people. It is considered an essential asset during the division of properties in a family. Kandha women collect mahula flowers in March and April and sell them after sun-drying. During the mahula season, Kandha women and children go to the mahula trees early to protect the flowers from cattle and wild animals. An average size tree can produce 70 to 150 kilograms of flowers in a season. The mahula trees are controlled mainly by women and it plays a vital role in their economy. They can make between thirty and forty rupees per kilogram on dried mahula flowers. However, a significant portion of collected mahua flowers is kept for domestic consumption. Mahula flower is used in brewing country liquor (locally called mahuli), which is widely consumed by poor people. Usually, licensed brewers have the legal right to make country liquor from mahula flowers. However, the Kandhas extract mahula liquor using their traditional brewing method for self-consumption and selling. They also offer liquor to all of their deities during their worship. Mahula liquor is also culturally significant during festivals, marriage ceremonies, death rituals, and other major events of the Kandha community. The dried mahula flowers are also consumed by the Kandha people. An old lady from Ragapaju village said, “Earlier, they used to cook mahula flower by mixing horse gram, pigeon pea, and cowpea seeds, which was their family’s regular breakfast. Those things were healthy and provided enough energy to work half a day in their agricultural land”. Mahula seeds (tola) have good marketing

value. Kandha people traditionally extract oil from its seeds for cooking and massaging their bodies.

Mango (*Mangifera Indica*): Mango is an important fruit tree that grows plentifully throughout the district. Mango trees can be found in both private and public lands, as well as in the forest. They typically grow along the banks of streams and water channels. In Kandhamal, the trees are abundant on roadsides, common lands, wastelands, and hills. The Kandha women collect raw and ripe mangoes to sell in nearby urban areas or main roadsides. They also process the mango into ambula (dried raw mango), ambasadha (mango jelly), champeita (dried ripe mango) for self-consumption and for sale in the market. The local mango varieties are inferior in quality compared to the hybrid varieties, so the price is also lower. Moreover, the wild varieties of trees do not yield fruit regularly. The price of the mangoes depends on fruit-bearing in a particular season. Usually, women sell the mangoes in baskets rather than by weight. Mango kernels also have a market value. People earn additional income by selling them to merchants.

Jackfruit (*Artocarpus heterophyllus*): Jackfruit, locally called *panasa*, is a delicious fruit widely available in the district. It is a summer fruit and a significant source of nutrition for the poor. The tree is found in private lands, village commons, roadsides, and the forest. In every Kandha village and hamlet, one can see jackfruit trees around them. Due to the suitable climate condition of Kandhamal, jackfruit grows naturally in the forest. Women play a significant role in gathering and selling jackfruit. Both tender and ripe jackfruits have a high market value since people eat the raw one as a vegetable and the ripe one as a fruit. The seeds are also used as a vegetable and have market value. Many respondents in the field said there was very little market demand for jackfruits,

and the price was also less. They were mainly bringing them for their consumption. Monkeys and bears were often eating them. However, their market value also increased as road connectivity and transport facilities improved. Local traders now export jackfruits to the neighbouring districts and urban areas. A mature jackfruit typically weighs between 5 and 15 kilograms but can weigh up to 25 kilograms. The locals sell the tender jackfruit weighing one to three kg at 20 to 30 rupees per piece, while the matured one at 50 to 100 rupees, depending on the size and variety.

Hill Broom (*Thysanolaenamaxima*): Hill broom, locally called *Phula Jhadu*, grows abundantly in the forest of Kandhamal district. It is a perennial grass that typically grows along the river and stream banks, can survive in harsh environments, and does not require fertile soil. Kandha women regularly collect them during their harvesting season to make brooms and sell them in the market. The plant is also grown by local people in the backyards and along the embankment of their agricultural lands. The district cooperative societies export manufactured hill brooms to adjacent districts, states, and cities. Women mainly prepare brooms by tying the broomsticks with siali threads or synthetic ropes. The forest department has also provided land and financial assistance to some SHGs constituted under the VSS in the Tikabali area to grow hill broom. Women from such SHGs are making good profits from the hill broom business, adding extra income to their households.

Firewood: The selling of firewood is a significant source of income for many Kandha families in the study area. They mainly sell them in the nearby towns. However, the demand for firewood has significantly decreased recently due to increased use of cooking gas. Kandha women primarily collect dry firewood from the forest for domestic consumption. However, they sometimes bring large amounts of firewood with

men to sell in the market or urban areas. Women of Bidingia village said that selling firewood in Tikabali was a regular women's activity of late. They used to carry firewood on their head to sell them door to door and earn 50 to 100 rupees by selling them. Now, only the hotels and restaurants occasionally demand firewood, to which the men supply by carrying the firewood by cycle or auto rickshaw.

Palua (Arrowroot): Palua is a wild tuber found abundantly in the forest of the study area and is in high demand at the market. Women mostly collect, process, and sell them. Women of the Ragapaju village said that two types of palua are found in the forest: fine white and slightly yellowish. The white one has good market value, while the other has little bitter taste but has many medicinal values. The processing of palua is time-consuming and requires hectic work. However, a kilogram palua, according to the locals, costs 500 to 600 rupees. Many families in the study area are found cultivating palua in their backyards. The women of Patingia village said that due to its high demand, local merchants pre-contact them to supply it.

Bhalia Seeds/marketing nut (*Semecarpus anacardium*): Bhalia seeds are also extensively collected by women in the study area. While the fruits are edible, consuming the seeds can lead to severe health problems. Furthermore, the oil extracted from the seeds can cause skin irritation and painful blisters upon contact. Women sell the seeds to nearby shops or traders for 20 to 25 rupees per kilogram. Marking nut seeds are used in traditional medicines and the fabric industry.

In addition to the above forest products, the Kandha women gather mushrooms, tubers, leafy vegetables, bamboo shoots, and wild fruits from the forests, all of which have economic value. Some medicinal fruits collected from the forest, such as harida, bahada, amla (gooseberry), masani bark, bidingia, and various medicinal plants, also

have decent market value. Furthermore, goat rearing is done by many Kandha women individually or through SHGs. Women earn money by selling goats, which is a major source of support for them and their families. One of the respondents compared the goat to gold, as both can provide financial support in times of emergency. An SHG in the Bidingia village was rearing more than 50 goats. Although the Kandha people do not hold much gold, almost all families in rural areas rear goats. The forest significantly empowers the Kandha women economically and increases their status in their family and society.

4.5.2 Forests as the Source of Survival for Women

Traditionally, the Kandha people have regarded the forest as an alternative food reserve and a source of raw materials for construction and repair work. The forests of Kandhamal hold a vast array of fruits, nuts, medicinal plants, and edible items that are crucial for the survival of the community. Kandha women, in particular, have traditionally taken on the responsibility of providing food for their families. To fulfil this role, they rely on agriculture and the forest. Kandha women periodically gather various edible items from the forest and possess knowledge of different forest edibles and their processing methods. During the fieldwork, several women informants emphasised the importance of forest food for survival during times of seasonal drought, hunger, and unemployment. Many of them expressed the belief that as long as the forest remains abundant, they can face any adverse situation.

Forest foods are highly nutritious and meet many nutrition requirements of the local people. They are also organic and free from chemical fertilisers and pesticides. They grow naturally and are ecologically adaptable and healthy for consumption. The food habit of local people differs in various seasons according to the availability of

forest foods. Women have traditionally learned to identify, collect, process, preserve, and prepare various forest foods. They also have a thorough knowledge of the nutritional and medicinal values of many forest foods. Women are also the carriers of that knowledge from generations. Various forest foods collected from forests by Kanda women in the study area are described below.

Edible Fruits Collected by the Kandha Women

Local Name	English Name	Botanical Name	Available Period	Uses	Market value
Amba	Mango	Mangifera Indica	April-June	Raw mangoes are used to make pickles and dried salty mangoes. Ripe mango is widely consumed, and the pulps are sun-dried to make Amba Sadha, which is stored and consumed year round. The kernel powder is also consumed during food shortage.	Good
Ankoli	Sage leaf Alangium	Alangium Salviifolium	June-July	It is not a popular fruit but is eaten in rural areas. The fruit has a sour flavour.	No
Bael	Stone apple	Aegle marmelos	April-May	Summer fruit with high medicinal properties. The pulp is used to make sharbat.	No
Burukoli	Jujube	Ziziphus jujube Mill.	September-October	The locals consume the ripe fruit. It is also used to prepare pickles. The fruits are sun-dried and stored for consumption.	No
Char	NA	Buchanania cochinchinensis	April-May	People enjoy eating the fruit because it has a sweet taste. The nuts derived from the seed have a high market value.	Poor

Dimiri	Fig	<i>Ficus carica</i>	March-May	This fruit is harvested from the forest for home consumption.	No
Jamukoli	Indian Blackberry	<i>Syzygium cumini</i>	June-July	A delicious summer fruit in the area. The fruit has medicinal properties.	Poor
Kantei Koli	Jackal jujube	<i>Ziziphus oenopila</i>	December-January	It is a thorny tree with sour mixed fruits. Sloth bears' favourite fruit.	No
Kendu	Malabar Ebony	<i>Diospyros melanoxylon</i>	April-May	The fruit is popular among the locals. Children are also seen selling fruits on the main road side.	Medium
Khajuri	Date palm	<i>Phoenix dactylifera</i>	April-May	The fruit is edible. People intoxicate themselves by drinking the juice extracted from the tree.	Medium
Kushum	Ceylon oak	<i>Schleichera oleosa</i>	July-August	The fruit has a sour mixed flavour and is popularly consumed by the locals.	No
Mahula	Honey Tree	<i>Madhuca longifolia</i>	March-June	The sun-dried flower is boiled and eaten. It is also the raw material for country liquor. Tender and ripened fruits are eaten after processing. The oil extracted from the seed is used in cooking.	Good
Panasa	Jackfruit	<i>Artocarpus heterophyllus</i>	April-July	Raw fruit is eaten as a vegetable. Ripe fruit is consumed, as well as sun-dried for later consumption. The seeds are used in the preparation of curries. Roasted seeds are also consumed.	Good
Tala	Asian palmyra palm	<i>Borassus flabellifer</i>	April-June	Talgola (ice apple) is widely consumed during the summer. People eat the fully ripe fruits. Its pulp is used in making cakes.	No
Valia	Marking Nut	<i>Semecarpus anacardium</i>	January-March	Locals consume the fully ripened fruit. However,	No

				seed oil can cause skin allergies in some people.	

Table No:4.6 Different Fruits Collected by Women

The Kandhamal forest offers a variety of edible fruits that women gather during their respective seasons. Women often collect these fruits while engaging in other activities, such as gathering leaves and wood. They primarily gather fruits that have fallen naturally from the trees. However, there are instances where men climb the trees and shake the branches to help dislodge the fruits, while women collect the fallen ones. Occasionally, women may climb small and medium-sized trees to harvest the fruits directly. Forest fruits serve as an essential source of nutrition for the tribal people.

Edible Tubers collected by women

Local Name	Botanical Name	Available Period	Uses	Status
Gandi Kanda	NA	Nov-Jan	The tuber is fried or cooked as a curry. Boiled tubers are also eaten.	Wild/Cultivated, frequently found and has good market value
Kasa Kanda	Dioscorea puber blume	February-March	Tubers are adequately washed and cooked as a vegetable.	Found in Wild. Collected for self-consumption.
Khajuri Kanda	Phoenix dactylifera	May-June	Tubers are extracted from young trees and consumed raw.	Self-consumption only
Khamba alu	Dioscorea alata L.	Nov-Dec	The tubers are large and can be fried or added to curries.	Both wild and cultivated varieties. High in demand.
Lahari Kanda	D. tomentosa J.	Mar-Apr	Tubers are boiled and eaten.	Found in the wild and has fair market value
Masia Kanda/ Bana alu	Dioscorea pentaphylla	Feb-March	The tubers are boiled and eaten.	Found in the wild, collected for self-consumption

Palua / arrowroot	Curcuma angustifolia	Oct-Nov	The raw ones are boiled and consumed. Tubers are processed, dried, and stored for sale and consumption. They possess medicinal properties.	Found in the wild and also cultivated. High market value
Pita Kanda	Dioscorea oppositifolia	Nov-Dec	Before consumption, tubers are sliced and kept under running water overnight to wash away the toxic properties.	Found in the wild. Self-consumption only.
Sana Saru	NA	Oct-Nov	The tubers are commonly added to dal and local dishes.	Found in the wild and cultivated. Good market value.
Shankha Saru	Colocasia esculenta l.	Oct-Nov	Tubers are boiled, sliced, and fried in oil for consumption.	Found in the wild and cultivated. Good market value.

Table No: 4.7 Edible Tubers Women Collected from Forest

The Kandha women play a significant role in the collection of tubers. Wild tubers are found primarily underground. Some grow beneath the surface and are easily harvested, whereas others require digging three to four feet and collecting them is tedious. Tubers come in various shapes and sizes; some can weigh up to 7 kg. The precise location, identification of a matured tuber, and sustainable extraction process require special knowledge that the Kandha people have inherited, with women knowing more about them. However, women have a thorough knowledge of how to process the tubers to make them edible and store them for a long time. Kandha women also plant some varieties of wild tubers in their backyard and agricultural land. It helps them survive in the face of droughts and other natural catastrophes.

Edible Mushrooms Collected by Women

Name	Available Season	Description	Availability & Uses
Bali Chhatu	September-October	There are two varieties, large and small. The large one is found in sandy soil, whereas the small one is found in a cluster near termite hills or bamboo bushes.	The small varieties are packed in siali or sal leaves and roasted in the fire to prepare as food. It has good market demand. The large one is cooked or fried and self-consumed.
Baunsa Chhatu	July-September	This variety of mushrooms is found in decayed bamboo bushes. Their sizes are large and milky in colour.	Good availability, but it easily attracts insects. So people carefully collect them. No market demand and locals use them for self-consumption.
Bideni Chhatu	August-September	Also called as srabani chhatu. It commonly grows in sandy and fertile soil. The mushroom is found in a cluster in an area and usually grows in the same place every year.	The mushroom is hugely available but for a limited time. It has high demand and cost and is widely consumed by everyone in the region.
Guchha Chhatu	September-October	The mushroom grows under the trim and bushy sal trees. It is a tasty mushroom.	The mushroom availability is medium. It has no market demand, and the locals collect it for self-consumption.
Jammu Chhatu	June-July	It is usually found among small bushes under the jamun trees. The mushroom comes out from the decayed jamun fruits.	It is rarely available and usually collected for self-consumption. Only a few people know about this mushroom.
Majurdimba Chhatu	June-August	The mushroom looks like a peacock egg. It is found under the sal tree.	It is available in good amounts and also has good market demand. Kandha people prepare fries and curries with these.
Patru Chhatu	August-September	The mushroom usually grows on the fertile soil in the forest. Especially where the small streams deposit the organic soil. It	The mushroom is not abundantly found. Only a knowledgeable person can identify and collect it. It is

		is found half covered under the soil.	collected for self-consumption
Putukuli Chhatu	July-September	The mushroom is found in the forests under the sal trees. It lies under the soil, and the collector has to uncover and collect them carefully.	The mushroom is abundantly found and has a high market price and demand. Local tribes make it into a curry.
Hunka Chhatu	August-September	They are known as termite mushrooms. It grows on the termite hills on some particular days and weather, and it is rarely found.	The mushroom has a good demand and high price. Locals prepare a curry or fry it.

Table No: 4.8 Edible Mushroom Collected by Women from Forest

Wild mushrooms are good protein, vitamin, and mineral sources for poor Kandha people living in rural areas. However, the gathering of wild mushrooms requires thorough knowledge. Eating the wrong type of mushroom can lead to severe health issues and could lead to death. According to a woman of Ragapaju village, “Many edible and non-edible mushrooms grow in their forest during the rainy season. Some edible and non-edible mushrooms look similar and are difficult to distinguish. If they pick the wrong mushroom, they may suffer the consequences. Therefore, they take great care while gathering them”. Wild mushrooms do not grow as regularly as cultivated mushrooms. They grow during specific seasons, locations, and weather conditions and are only available for a limited time. Generally, mushrooms grow in the rainy seasons. The Kandha women have traditionally learned the necessary weather conditions, time, proper growing location, identification, detoxification, and processing of the correct variety of wild mushrooms. Before cooking the wild mushrooms, they properly wash them, soak them in turmeric water, and boil them to detoxify and kill the bacteria. Women usually gather mushrooms in their surrounding forest areas, whereas

men gather in deep forests. Wild mushrooms are in high demand in markets due to their limited availability. Some mushroom varieties can cost up to Rs. 1000 per kg.

Edible Leafy vegetables Collected by Women

Local Name	Botanical name	Available period	Description and Uses
Badali saga	NA	Rainy	The plants can only be found in the deep forest. Its stem and leaves are collected and used as a vegetable. It is gathered for self-consumption.
Bahal saga	<i>Cordia oblique</i> Willd.	Mar-April	Bahal is a medium to large tree that grows in the village commons and forest. During spring, the tender leaves and flower buds are cooked and eaten by locals. It also has a market value.
Barada saga	<i>Bauhinia purpurea</i>	Feb-March	In some parts of the state, it is also known as “Kuler.” The tree is of medium size. Tender leaves are highly demanded leafy vegetables among tribal and other people in the area. During the seasons, they have high commercial value.
Bhaji saga	<i>Amaranthus viridis</i> L.	August-November	It grows in the wild, usually in backyards, open spaces, roadsides and forests. People gather it for self-consumption. Another variety known as bhaji (<i>Amaranthus graecizans</i>) is grown and available in markets all year.
Budbudia saga	NA	Rainy	It is a rare leafy vegetable found primarily in the deep forest. People who visit the forest in search of wood, medicinal plants, and other forest products commonly collect them. The leaves and stems are cooked for consumption.
Gudari Saga/ Water amaranth	<i>Alternanthera sessilis</i> DC	Rainy	The plant grows in wet and marshy lands. It grows on paddy fields as well. According to locals, the Gudari

			plant grows more in paddy fields where the kendu and karada trees coexist. Stems and leaves are used to prepare curry.
Kanta saga	<i>Amaranthus spinosus</i> L	Rainy	It grows wild in backyards, open areas, roadsides, and near agricultural land. Locals prepare and eat the leaves.
Kena saga	<i>Commelina benghalensis</i> L	Rainy	During the rainy season, it grows everywhere. Locals cook and eat leaves and stems collected from clean places.
Luni Saga, Kulfa, Purslane	<i>Portulaca oleracea</i>	Rainy, Winter	It grows in the backyards and near stream sides. Locals consume it deliciously.
Madaranga saga	<i>Alternanthera sessilis</i> Linn.	August to December	The plant grows in wet soil near lakes, marshes, river banks, ponds, and paddy fields. The plant's leaves and stems are cooked and eaten by the locals. People also collect the leaves to sell in the market, as they are in high demand in towns and weekly markets. It has powerful medicinal properties and is used in traditional medicine to treat various health issues.
Puruni/ Khapri saga/ spreading hogweed	<i>Boerrhavia diffusa</i> L.	August-November	The plant is typically found in backyards, vegetable fields, and the moist soil of stream banks. It can also survive the winter if it is regularly watered. The leaves are thick and round and have a red-green mix. Possess medicinal properties. The leaves and stems are cooked with tomato.
Poi saga	<i>Bassela alba</i> L.	Rainy	It is a climber plant that many locals have in their yards. It also grows in the forest. The leaves are thick and broad, and edible. It has a high market value in the surrounding towns.
Sunsunia/ Pani saga	<i>Marsilea quadrifolia</i> L.	Rainy	It grows in wetlands, marshy areas, low-water bodies, and rice fields. Four leaves can be seen on each stem of the plant. The leaves are fried and eaten.

			Locals believe the plant has numerous medicinal properties.

Table No: 4.8 Edible Leafy Vegetable Collected from Forest by Women

Leafy vegetables, known locally as *saga*, are a regular recipe in the Kandha tribe's diet. When no vegetables are available, they eat rice with a curry made from wild leafy vegetables. The poor people's favourite breakfast is *pakhala* (water rice) with *saga bhaja* (leafy vegetable fry). Leafy vegetables are vital sources of nutrition for the tribal population. In addition to edible leaves collected from wild, the Kandha people consume pumpkin leaves, cowpea leaves, spiny gourd leaves, and bitter gourd leaves planted in their backyard or vegetable field. These are primarily collected by women. During the *Barada saga* (*Bauhinia purpurea*) season, women can be seen collecting and carrying the leaves in bamboo baskets from the forest. They keep the leaves in siali leaf bowls and sell them in the nearby town or market—each bowl of leaves costs five to ten rupees.

Apart from the above fruits, leaves, tubers, and mushrooms, Kandha women collect neem flowers, drumstick flowers, wild bitter gourd, spine gourd, and bamboo shoots from the forest for consumption. Women also catch small fish, crabs, tortoises, and snails from the rivers and forest streams, an important source of protein and nutrition for their families.

Most of the Kandha people in the Kandhamal district who reside in rural areas are financially poor, and they cannot afford to buy expensive fruits, vegetables, and other ready-made food regularly from the market. Their little income is typically spent on purchasing essential goods, including potatoes, cooking oil, salt, sugar, spices, soap, and clothes. In this situation, the forest offers them accessible food sources to meet their

needs for critical nourishment. Forest foods are especially essential for women, as they are mostly responsible for the food and nutrition of their families. Forest foods are also a symbol of food sovereignty because everyone, regardless of caste, race, or gender, can access them without seeking permission from anyone.

Despite the importance of forest foods for tribal communities' survival, they have not received much attention in tribal studies. Eating wild food is stigmatised by mainstream society and the media as a sign of backwardness, a subhuman state, and poverty. Even government departments or civil society organisations have not given significant attention to the wild food rights of tribal communities. The significance of forest food rights, which should be prioritised in forest conservation policies, has been understated.

Climate change, deforestation, forest fires, monoculture of trees, plantation of exotic trees in forest areas, shrinking of grassland ecosystems, and the invasion of invasive species like lantana primarily threaten forest foods. In the Kandhamal area, all the above causes are firmly established in forest management. The forest department is prioritising the monoculture of commercial trees in afforestation programmes. Its management programmes ignore the complexity of the ecosystem and its importance for local communities' existence. However, combining wild food rights with forest protection would improve tribals' deteriorating symbiotic relationship with the forest. The promotion of wild food in forest conservation programmes could provide livelihood women throughout the year.

4.5.3 Forest and Agricultural Activity of Kandha Women

Agriculture serves as the primary livelihood in the Kandhamal district. The Kandha people engage in cultivating various crops such as paddy, pulses, millets, legumes,

oilseeds, maize, turmeric, ginger, and a variety of vegetables to sustain themselves. Kandha women play a significant role in agricultural activities. In the past, the Kandha people in the study area practised shifting cultivation, also known as Podu cultivation, and cultivated cash crops to meet their financial needs. Shifting cultivation allowed the forest to naturally regenerate soil fertility after the cultivator left the land to fallow. Women played an equal part alongside men in various stages of shifting cultivation, from land preparation to crop harvesting. However, shifting cultivation is no longer practised in the study area, and the Kandha people have transitioned to settled cultivation methods.

In settled cultivation, women's role is limited to certain activities, but they contribute significantly to growing different crops. Except for tilling the land, Kandha women do all other activities like planting, weeding, manuring, and harvesting crops. Women usually play a major role in taking care of the cattle. They graze the cattle in the forest and supply them with fodder collected from the forest. Women keep the cattle shed clean and dispose the animal waste in a specific place to prepare organic manure to fertilise the agricultural land. Women play a significant role in processing the manure into organic fertiliser. In this approach, women benefit agriculture while saving money on chemical fertiliser purchases. Furthermore, organic farming practises promote biodiversity and help to maintain soil fertility. Cattle play a primary role in transferring green manure from the forest to the agricultural land.

Kandha women also play a significant role in turmeric cultivation. Turmeric is an important cash crop that the Kandha people cultivate traditionally. It has also received a GI (geographical indication) tag for its medicinal values and cosmetic properties. The growing of turmeric needs to fertilise the soil, and women bring small

branches from the forest and burn them in the turmeric field to manure the soil. Furthermore, they also collect sal leaves from the forest to cover the tender turmeric plants. Kandha women in the Bidingia village were found planting turmeric in the nearby forest. Forest provides the turmeric plants with organic fertiliser and shade, which are required for the better growth and productivity of turmeric. Women also bring various roots from the forest to cultivate them in their backyards and on agricultural land. Whether it is shifting or settled cultivation, Kandha women play a crucial role, and the forest provides them with the necessary material.

4.5.4 Forests and Women's Traditional Medicinal Practices

The forest is a treasure trove of medicinal plants. Before modern healthcare and hospital facilities were introduced, the Kandha communities relied entirely on traditional herbal treatments. The forest of Kandhamal is abundant with medicinal plants, and the Kandha people have traditionally learned about them to cure various diseases. In Kandha villages, the *Dishari* (only male person), or medicine man, who also possesses astrological knowledge, is extensively knowledgeable about various medicinal plants. The medicinal plants are mainly used to cure common health problems such as fever, cold, cough, headache, stomach pain, skin diseases, sunstroke, diarrhoea, deworming, dental issues, joint pains, common injuries, infections, and pregnancy and menstruation-related issues. In the forest, medicinal plants do not grow uniformly. They require various ecologies, altitudes, and specific plant varieties to thrive. So the original ecology of an area must be protected to keep the plants available. Even though tribal people increasingly use hospitals and institutional healthcare, medicinal plants still play an essential role in their healthcare system.

Kandha women possess knowledge of many necessary medicinal plants to cure common diseases. During the field work, women named varieties of medicinal plants such as *harida*, *bahada*, *amla*, *neem*, *bhuin neem*, *arakha*, *masani*, *bisarya karani*, *bana tulsi*, *bidinga*, *giridhani*, *gangasiuli*, and so on. However, the practice of ethnomedicine has been gradually decreasing in the Kandha community due to the increasing reliance on the modern healthcare system. Most of the women, especially the younger generation, were unaware of the medicinal plants in their local environment. Only a few older women know about identifying and using some medicinal herbs. The Kandha people customarily pass the knowledge of ethnomedicine only to their male children. Therefore, women's knowledge of medicinal plants is limited to a few commonly known herbs.

4.5.5 Forest as the Source of Material Needs for Women

Forests are the primary source of raw materials of Kandha people for constructing and repairing houses, sheds, pens, household implements, and agricultural equipment. In the construction of a house both women and men equally contribute their labour. However, some of the works like making of roof is exclusively done by the men. On the other hand, women work hard for the construction and polishing of walls and floors. Men mostly bring the wooden materials, ropes, and bamboo from the forest, whereas women bring sabai grass, soil, cow dung, twigs, and date leaves to use them in construction of house. Sal, piasal, and bandhan wood are used for household and agricultural implements, such as doors, windows, stools, string cots, pestles, troughs, ploughs, yokes, levellers, cowbells, and handles for various iron equipment. The wooden pole of the sal tree is used to make the sacrificial post, or the maria pole, which is used for animal sacrifice during the worship of Dharni Penu, or the earth goddess.

Bamboo is used in making of roof, shutters, fish traps, animal and bird cages, and baskets. The date and palm leaves are used for making of mats and small baskets. Dried bottle gourds are collected from the forest to use as containers for carrying water, filling salpa rasa, and storing grains.

The forest meets many of the material needs of the Kandha people. Though the traditional materials are gradually being phased out and replaced by modern equipment, many of them are still used by Kandhas in the interior villages. The materials also have cultural significance for them, connecting them with their past and traditional livelihoods. Both men and women from the Kandha community collect different materials from the forest. However, the men collect most of the materials that require cutting and chopping, while women collected sabai grass, soil, date leaves, palm leaves, etc. that caused less harm to the forest and trees.

4.5.6 Kandha Belief System, Forest, and Women

The Kandhas are polytheists with an animism-based belief system. They worship the earth, sun, forests, mountains, streams, water pools, trees, and all natural objects surrounding them. Their deities are usually associated with nature. They believe that every natural object around them is possessed by a spirit (Goddess/God) and that they control human life in all spheres. The Kandhas worship all their deities with great reverence and strictly follow traditional rituals. However, the Dharni Penu (earth goddess), Soru Penu (mountain god), and Gosa Penu (forest goddess) hold an important place in the Kandha belief system. Dharni Penu, also known as Tari Penu and Tana Penu, is the supreme deity in the Kandha community who presides over all other deities. The Kandha people worship her before every auspicious occasion.

During the fieldwork, women shared information about key festivals and religious ceremonies associated with their deities.

Burbi Puja: The festival celebrated in August, where the local Kandha people worship the mountain deity. As part of the event, they observe the Puja before consuming wild mushrooms.

Matughar Puja: The festival is observed by the Kandha people, where they worship the seeds they cultivate in their agricultural land. This festival does not have a specific day, and villages celebrate it during the onset of the first rain. The Kandha people worship the earth goddess during this festival and commence their agricultural activities. A ritual is performed involving two boys symbolising bullocks, initiating the ploughing work, and later actual bullocks are used for tilling the soil. Sal and kendu leaves are also worshipped during the festival to seek protection from thunder and lightning.

Parbata Puja: Parbata Puja is a festival dedicated to the worship of mountain and forest deities. During this celebration, offerings of eggs, wine, chicken, goat, and rice are made. The Kandha people worship the mountains and forests, seeking their well-being, and offer prayers to the deities for protection against wild animals, particularly tigers.

Mati Puja: The festival primarily focuses on promoting better agriculture. The rituals of the festival are performed by a Jhakar, (a priest with some magical power). The festival involves the worship of Dharani Penu, also known as the earth goddess. As part of the rituals, a pig is sacrificed to offer blood to the deity.

Kedu Puja: Kedu Puja is a significant festival among the Kandha people, typically celebrated once every 12 years. However, if there are prolonged droughts, erratic rainfall, or poor harvest, the Kandha people organise Kedu to address these natural calamities and improve soil fertility. As part of the rituals, a male buffalo is sacrificed to Dharni Penu to seek her blessings. The blood of the buffalo is offered to the soil, and the flesh of the sacrificed animal is buried in the agricultural land. Previously known as the Meria festival, the Kedu festival involved human sacrifices. However, due to the intervention of the British government, the practice was replaced with buffalo sacrifice.

Jantala Puja: The festival is celebrated after the harvest season, in January or February. The festival is closely associated with the hunting tradition of the Kandha community. Following the worship of Dharani Penu with proper rituals and seeking her blessings, local villagers venture into the forest for hunting. They go in groups, and while in the past they utilized tools such as arrow-bows, axes, spears, and traps for hunting, they now employ guns. The Kandha people believe that it is necessary to offer the flesh of a wild animal to their deity Benta Penu, and that the failure to do so may result in his curse upon them.

Most Kandha festivals and rituals are closely associated with agriculture, as they worship deities at every stage of agricultural activities. The Kandha people hold the soil in the highest regard, considering it the most sacred and life-giving element. In addition to the earth, the mountains and forests are significant holy elements for the Kandhas. The hills and forests surrounding them are deeply respected and revered, seen as the dwelling places of their deities and ancestral spirits. According to Kandha beliefs, Soru Penu is the presiding deity of mountains, while Gosa Penu is associated with the forests. The local tribes assign names to every hill and peak in the region, addressing the deity

residing on that hill by its designated name. The Kandhas worship these deities to seek protection against wild animal, safeguard their shifting cultivation practices, and ensure a bountiful yield of forest products.

The Kandha worship ceremonies are conducted by priests known as Guru, Jani, Dehuri, Mati Guru, and Jhankar. Among them, the Guru holds a higher position. Only Kandha men are eligible to hold the title of a priest, while women are not allowed to assume such roles. The primary offerings in Kandha rituals include eggs, rice, mahula liquor, and animal blood obtained from buffaloes, goats, pigs, and poultry birds. During festivals, Kandha women clean and polish the shrines of the deities using mud and cow dung. They also prepare and arrange the necessary ingredients required for the festivities. Women gather specific leaves, fruits, and flowers from the forest for the worshipping ceremonies. Women are permitted to participate in all festivals except the Parbata Puja, where only male members go to the nearby mountain to offer prayers to the deity. The reason for women's exclusion from this particular festival remains unknown, as it is a traditional practice.

Apart from the dedication and respect for the mountains and forests, the Kandha people consider many species of trees as sacred. The trees such as sal, salap (sago palm), pipal, banyan, kushum, and dimiri (fig) have socio-cultural and religious importance in the Kandha life. An older woman from Chahali village said, "These trees are shelters of some of their deities, so they do not harm them. If it is necessary to cut the trees, they must have to perform specific religious rituals before cutting them". The Kandha culture is built on coexistence with nature rather than exploitation. The symbiotic relationship between the Kandha people and the forest is constructed on deep understanding and respect for the natural world.

However, the Kandha people's cultural practices are fading over time due to the influence of many socio-political and cultural factors. New generations are no longer interested in following many rituals and festivals Kandhas used to observe in the past. This development was observed during the Parbata Puja, where all participants were above 40 years. However, there was no restriction on the participation of younger people. Since the British took over the Kandhamal region, they have consistently denigrated the Kandha cultural heritages by characterising them as barbaric, uncivilised, primitive, and savage. The same feeling for the Kandha people was continued by various social, political, and cultural groups who migrated to Kandhamal in the 19th and 20th centuries. They never acknowledged the Kandha tradition or prioritised them. Instead, they continued to portray the Kandhas and their culture as degenerated and inferior. As a result, Kandhas started feeling inferior to their cultural practices. They persuaded the Kandhas to abandon their traditional customs and follow those they propagated as genuine manifestations of culture. The conservation of nature and sustainability, at the heart of Kandha culture, has historically been ignored and misconstrued. One could consider the cultural deterioration of the Kandhas an act of cultural attenuation.

Furthermore, acculturation, modernisation, and globalisation have been significantly affecting the Kandha communities' cultural practices. Additionally, factors such as the loss of language, the education system, and the influence of media culture are diverting tribal communities' attention away from their cultural heritage. Furthermore, the degradation of forests, the ban on shifting cultivation, the prioritisation of forests from an economic perspective, the shifting perspective on forests and the environment, and the alteration of tree species by replacing natural forests have severely undermined their cultural connection with forests.

4.6 Kandha Women in Forest Conservation

Forest conservation in Kandhamal has garnered significant attention from the government and NGOs due to its abundant forest cover, extensive forest land (constituting 71% of the total geographical area), and biodiversity. A substantial portion of the forest is protected by local village communities, particularly tribal communities, who responsibly safeguard the forest either independently or through the government's Joint Forest Management (JFM) programme. Tribal women, especially Kandha women, actively participate and contribute to the community forest protection initiatives. The women in the studied villages recognise the importance of forest conservation as it is deeply intertwined with their lives. They know the social, cultural, economic, and environmental significance of preserving the forest. Some women also emphasise the necessity of forest conservation in mitigating the impact of climate change. Regardless of their dependence on the forest for their livelihoods, most of the women respondents express their support for forest conservation, highlighting the vital role that the forest plays in their lives. During a group discussion with the women of Bidingia village, they emphasised, "The forest must be protected to meet the needs of future generations and ensure the survival of the Adivasi people."

4.6.1 Self-Initiated Community Forest Management and Women

Before the implementation of institutional forest management, the Kandha communities had been actively involved in protecting and managing their local forests, utilising their indigenous knowledge, cultural practices, and governance systems. Over time, the Kandha people developed sustainable methods for utilising forest resources, avoiding overexploitation, and ensuring the regeneration of extracted resources. Even in shifting cultivation, the village council regulated and distributed land to families

based on their size and needs. The cultivators were mindful of minimising harm to the forest during shifting cultivation. However, despite their efforts, many respondents in the study area attributed shifting cultivation as a significant factor contributing to deforestation in the past. Following the ban on shifting cultivation imposed by the forest department, local communities in many villages have taken up the responsibility of protecting the forests on those hills.

In the study area, many villages have taken the initiative to self-protect the forests surrounding their settlements, guided by customary laws and mutual understanding. Certain villages have designated entire hills or patches of forest as protected areas, allowing only the collection of dry wood, leaves, and fruits. The forest department also plays a role in promoting and educating the residents of these villages about the importance of forest conservation. Women actively protect their village forests, as highlighted by many female respondents from the lower hill areas of the Chakapad region. They express their objection when they witness outsiders cutting trees in their forests and joining men in extinguishing forest fires. One middle-aged woman emphasised the collective responsibility of the community, stating that any harm to the forest is a loss for all. Thus they must protect it. The women of Karukata village shared their success story of driving away wood smugglers from their forest when the entire village, both men and women, united against them. Regarding forest conservation, most women in the studied villages believe that men and women must work together, as their combined efforts are essential for effectively safeguarding the forest.

In the 1980s, many villages in the Tikabali area witnessed the establishment of youth clubs dedicated to protecting their local forests. The young people of these

villages were responsible for safeguarding the forests by regularly patrolling the areas and preventing both villagers and outsiders from cutting trees. According to a former president of a youth club in Kutrikole village, the motivation behind this initiative was the increasing deforestation and the depletion of crucial forest resources. The governance of these protected forests was entrusted to the youth club members and influential individuals from the village. Although women were not formally part of the youth clubs, they actively contributed their labour in combating forest fires within the protected areas. Notably, women were not restricted from utilising the resources from these protected forests.

Kandha women also play a crucial role in the sustainable management of their local forests by utilising their traditional ecological knowledge. They skilfully collect various forest products, including firewood, leaves, fruits, leafy vegetables, mushrooms, and tubers, while ensuring minimal impact on the forest ecosystem. When harvesting tubers, they carefully detach a portion, leaving the rest intact to allow for regrowth in the following rainy season. Similarly, when gathering siali and sal leaves, they take only what is needed without causing harm to the trees. Moreover, the regular benefits Kandha women derive from trees, such as mahula, mangoes, and jackfruit, serve as incentives for them to conserve and protect these trees and their habitats. Even when these trees are located in the midst of their agricultural lands, the Kandha people consult their female counterparts before deciding to prune the branches.

Apart from the community-managed forest, sacred groves play an important role in forest conservation. Many villages in the study area have dedicated patches of forests to the local deities on the outskirts of the village. They do not harm such forests as they believe that their ancestral spirits live in the trees of the groves. They believe

doing so may harm individuals or the entire village. Even extraction of dry wood or plucking of leaves and flowers are also restricted. These forests are crucial in preserving rare tree species and also work as a biodiversity spot. Birds and wildlife carry seeds from such forests to other areas, helping restore the plant species.

Community-managed forests are built on the traditional ethos of the village community, making it a sustainable conservation project. Though such organisations have no by-laws in written form, they have been practised as a custom for generations. The community forests are also a significant source of dry firewood and other non-wood products essential to women. Furthermore, the presence of a protected forest near the village makes the availability of necessary forest products for women easy. However, such forests are primarily governed by men. Despite being an equal part of the community and significant forest stakeholders, women are traditionally excluded in the traditional forest management affairs, undermining their positions within the community.

4.6.2 Women in Forest Conservation through Vana Samrakshana Samiti (VSS)

The Vana Samrakshana Samiti (VSS) is the implementing agency of the Joint Forest Management (JFM) programme in Odisha. The VSS is an institutional collaboration between the forest departments and the village communities for the conservation of the local forest. The forest department constitutes and legitimates a VSS with the approval of the Gram Sabha or Palli Sabha of a village. A VSS consists of all the adults of the concerned village as the general body (GB), an elected executive committee (EC), and the ward members and forest guard as ex-officio member(s). All the adult women of the village are eligible for membership in GB, and 50% of the women members are

mandatory in the EC. The EC mainly looks after the VSS management affair and executes forest conservation activities.

In Kandhamal, hundreds of VSSs operate and protect thousands of hectares of forest area. They have been established primarily in tribal-dominated villages. Even the tiny tribal hamlets, whose population ranges from seventy to eighty, have constituted VSSs to protect their forests. The organisational structure and operation of the VSS are established according to the JFM resolutions of Odisha. In the study area, VSS has been constituted mainly under the initiative of the Forest Department. However, apart from the forest department, some Non-Governmental Organizations (NGOs) are also involved in forming VSS. NGOs mainly act as coordinators between the village community and the forest department.

In the study area, most of the VSS were constituted in 2007–09 and were mainly found operating in the Tikabali region. On the other hand, their presence is marginal in the lower hill areas of the Chakapad regions. Although the forest department has constituted several VSS, most are dissolved or non-functional. The locals said that most VSSs have become non-functional or have been dissolved due to a lack of support from the forest department. The Chakapad region has valuable forests of old sal and piasal trees. Probably, the forest department does not want to share the timber-rich forest with the village communities. Another reason may be the Maoist activities in the Chakapadu region, especially in the lower hilly areas. In 2008, many cadets of the Odisha police died in a fierce exchange of bullets with the Maoists in the Gasama forest. Therefore, forest department employees are passive in the area due to the threat of Maoist attacks.

Kandha women play a significant role in forest conservation through VSS. They have been traditionally excluded from the decision-making process in Kandha society,

which falls under the purview of men. However, through the JFM programme, for the first time, the state included and prioritised women in local forest governance in Odisha. In the study area, women were found holding office-bearer positions in VSSs. Each VSS has 11 to 15 members in the EC, including 4 to 5 women. However, under the JFM resolution 2011 of the government of Odisha, 50 percent of reservation for women in executive committees is mandatory. But the forest department has not reconstituted or upgraded the existing VSS. Such an incident shows the forest department's negligence towards VSS, particularly in boosting women's participation in forest governance. Furthermore, it is disheartening to note that the VSSs have only maintained one-third representation of women in their Executive Committees (EC), with no increase in their numbers. This perpetuates the stereotypical perspective of men and forest department staff regarding women's participation in forest conservation.

The VSSs mainly concern forest management activities, such as protecting the allocated forest area, forest regeneration and plantation activities, wildlife protection, and tackling forest fires. Every VSS manages an average of 100 to 120 hectares of forest, depending on forest availability and village size. VSS rotates forest protection duties among member households to ensure the forest's safety. Women and men both take different forest conservation responsibilities. Women go in separate groups to monitor the VSS forest. The monitor groups mainly check on the logging and poaching of animals. If they saw anyone felling trees or poaching, they prevent them from doing so. The VSSs have also provisioned to impose penalties of up to 1000 rupees on the woodcutter, depending on the volume of wood. However, the mode of punishment varies from one VSS to another. Other forest protection duties, such as snuffing out forest fires, are handled collectively by all VSS members. Women bring water to put off the fire, clean the grounds, and put sand on it, while men form lines with hoes around

it to limit its spread. During the mahula and sal seed collection season, women clean the dry leaves from tree bases and burn them separately to avoid the spread of fire into the forest. Before the mahula and sal seed season, the VSS also issues notifications in the village and neighbouring villages about forest fire prevention.

Women are found well executing their responsibility for forest protection. A young woman who was the secretary of an SHG said that the forest protection activity in their village has been going on since 20 to 25 years ago by the village males. However, they used to cut trees for selling and sympathised with the neighbouring villagers, whom they allowed to cut trees from the forest. But since women took responsibility for forest conservation through VSS, tree cutting has been stopped and the jungle is growing. She said the wild animals that once disappeared from the forest are now regaining their presence there. Previously, women were uneducated, so the forest was managed by men only; now, they are educated and responsible for forest conservation. Looking at the progress of forest conservation, men also support and join their hands with women. It was observed during the study that women who attended at least high school education are more concerned about the environmental and ecological aspects of forest conservation. Furthermore, the forest department and NGO staff have been regularly educating the people regarding the relationship between forests and environmental security in various programmes of the VSS. Women attend the VSS meetings regularly and participate in awareness programmes and forest conservation activities.

Every VSS has Self-Help Groups (SHGs) under its supervision. The SHGs primarily deal with collecting and marketing non-timber forest products (NTFPs) from the VSS forest. They take responsibility for the safe extraction of NTFPs without

causing damage to the forest. Furthermore, the forest department has granted forest land to many SHGs for hill broom cultivation, aiming to empower women economically. The SHGs engaged in hill broom cultivation have been earning good money from the sale of brooms. Many SHG members in the field have reported regular discussions on forest-related matters in their meetings. Additionally, they organise various awareness programs on forest conservation conducted by forest departments and non-governmental organizations (NGOs). The SHGs functioning under the VSS contribute to forest conservation and serve as a platform for women empowerment.

Besides forest conservation, the VSSs have played a crucial role in afforestation activities. The forest department is hosting afforestation programmes in the assigned forest area of VSSs. Women and men of the villages who worked in the plantation activities were paid wages through the NREGS programme. The post-plantation caretaking is also the responsibility of the VSS, who further fences the planted area or employs people to protect them from cattle. Women also share responsibility for the protection of plantation areas. The VSSs have conducted an average of 15 to 20 hectares of plantation in their locality. Trees like karanja, teak, eucalyptus, chakunda, sisoo, and gambhari are some species that the forest department has preferred for plantation. However, teak has retained the dominant position in the plantation area.

Inclusion of women in community events and decision-making processes in the VSS has contributed to their political emancipation and improved social status. However, specific issues within the VSS still need to be addressed. In many VSSs, there are concerns about the meaningful participation of women. Women are retained as members of the Executive Committee (EC) but are not appointed to office-bearing positions, which men mostly hold. Consequently, the decision-making authority in the

VSS remains primarily controlled by males. Furthermore, while women participate in all VSS meetings, it was reported that men predominantly make decisions on various issues and events. During group discussions, it was observed that men tended to dominate the conversation, while women rarely participated actively. They only spoke or expressed their opinions when specifically asked. Only a few VSS, such as Uparakhole and Mazagada, have women holding the positions of president and secretary, and they were found doing well in promoting forest conservation.

Even though the village community regulates the VSSs, there is lack of democracy in its operation. The forest department has an influential grip over them. In all the important events, the VSS committees follow the instruction of the forest department staff. Therefore, in the afforestation activities, the FD autonomously selects tree species and lands without consulting the local communities. The forest department staff ignore the opinions and preferences of women. The forest department has mostly planted commercial varieties of trees, making its long followed capitalist agenda clear. Many women in the studied villages stated that the trees planted by the forest department would not produce their required fruits, flowers, seeds, leaves, and roots. Instead of those, the FD could have secured their livelihood and rights by planting local trees such as sal, mahula, mangoes, jackfruit, cashew nut, gooseberry, siali, bahada, and medicinal plants. Tree plantation on the community land also displaces landless families and herders who live on those lands, depriving them of their source of survival. Many Kandha women also rely on such lands for grazing their goats, which is a critical source for their financial needs. On the other hand, the commercial and exotic trees planted on the land neither compensate the landless, herders, and women nor offer them an alternative livelihood.

Furthermore, the VSSs operate on the principles and framework of the forest department. As a result, the forest department must regularly support and mobilise the community to involve them in forest protection activities. The lack of financial and administrative support by the forest department could lead to the malfunction or collapse of the VSS. An example is the VSS of Ragapaju village, which collapsed within two to three years of its establishment due to lack of coordination by the forest department. The failure of the VSS has demoralised the women leaders, who are enthusiastic about protecting their forests. During the fieldwork, women of Ragapaju village mentioned that they had fought many times against the mighty wood mafias through VSS to save their forest from wood smuggling. The same thing can happen to any VSS if the forest department stops funding, which could significantly affect forest conservation.

The forest department's management agenda mostly concentrates on the preservation of commercial trees in the natural forest. Such a decision again promotes the monoculture of commercial trees and ignores the diversity of the forest. Women in the studied villages reported that forest conservation affected the availability of siali leaves. Siali vine needs space and adequate sunlight to grow and produce quality leaves. However, due to restrictions on cutting trees, the large trees occupy the forest space, preventing the creepers and small trees from growing. Also, siali vines tend to climb higher as the supporting trees grow taller, making it difficult for women to pluck leaves. Siali leaf is a vital forest product for tribal women in the locality, providing them with a steady source of income. Similarly, sal leaves are another important collection of women, which they use to make leaf plates and cover the turmeric plantation. While tender sal trees produce higher quality leaves than larger trees, collecting leaves from a

large tree is difficult for women. They often complain that the sal trees in the protected forest are getting taller, making it difficult for them to pluck leaves or collect twigs.

Traditional forest conservation in the tribal villages of Kandhamal is based on livelihood, belief systems, customs, and principles of forest utilisation. These elements are interconnected and make forest conservation sustainable. On the Other hand, the Forest Department neglects the above conservation ethics and adheres to scientific forest management principles. The British introduced scientific forest management against the customary forest use practices based on commercialisation and revenue generation principles. Such practices project the forest as a source of economic gain rather than the survival of the local communities. It will also affect the Kandha people's traditional ethos and philosophy of forest conservation. The commercial plantation programme is part of the capitalist agenda, where they have found free land, easy and cheap labour, and an inexpensive and dedicated community for the long-term protection of the trees for commercial gains.

4.6.3 Forest Rights Acts (2006) and Women's Involvement in Forest Conservation

The Forest Rights Act (FRA) is a long-awaited legislation for the Kandha people residing in Kandhamal. The centralisation of forests resulted in the loss of autonomy and rights over the forest and land for the Kandha community. Many of the lands traditionally cultivated by the Kandha people were categorised as forest land during forest surveys and settlements. Moreover, numerous agricultural lands they continued cultivating were classified as forest land under the forest department's jurisdiction. As these lands lacked revenue documents, the Kandha people did not have legal ownership. Additionally, they lost control over forest areas during the governmentalisation of

forests. Before this, they practised sustainable utilisation and management of the nearby forests to fulfil their basic needs.

The Forest Rights Act (FRA) has bestowed legal rights upon the Kandha people for their cultivated land through Individual Forest Rights (IFR). Additionally, the act has granted the Kandha community the governance rights over customary forest-use areas through Community Forest Resource Rights (CFRR) to restore their traditional forest governance practices.

During the field study, many Kandha families received legal documents for their cultivated land, with the land being recorded in the names of both the husband and wife. Some widowed women also obtained land records in their names. It is important to note that no new land was granted under the Forest Rights Act (FRA) as the land was already under the occupation of the rightful owners. Implementing the FRA effectively resolved the longstanding battle of the Kandha people against the forest department for their legal claim over their traditional cultivation land.

If implemented carefully, the Community Forest Resource Rights (CFRR) can restore the traditional rights and forest governance principles of the Kandha people over their local forests. In the field area, a few villages, including Rudabidingia, Gistikhole, and Patingia, have recently received CFRR titles. However, these titles are not being effectively implemented, and the local communities lack awareness about exercising their rights. The government has not established any institutional mechanism to mobilise the people and operationalise the CFRR.

Traditional village councils are in a fragile condition due to the influence of modern governance systems. Therefore, introduction of CFRR can potentially lead to conflicts within the community or between different communities within a village

regarding resource claims. Moreover, the traditional village councils have historically operated based on patriarchal values, excluding women from participating in the governing bodies. Therefore, CFRR requires special provisions, mechanisms, and support from the state to ensure the inclusion of women in the governance system, protect their rights, and safeguard their resources in the forest.

One significant challenge to the implementation of CFRR in Kandhamal is the rapid encroachment of potential CFRR areas by the forest department for afforestation purposes. The department is aggressively planting commercial and exotic fast-growing trees in these areas to achieve the government's target of 33 per cent forest cover. This approach poses a threat to the CFRR rights granted to existing villages or those awaiting CFRR titles. The details regarding CFRR rights, their challenges, and their implications in the lives of tribal communities, particularly tribal women, have already been discussed in Chapter 2 of the thesis.

4.7 Challenges Kandha Women Face in Pursuing Forest-based Life

The Kandha people's life in the forest is not easy; they work hard and face several challenges to earn a living. Women face numerous challenges while living on forest resources. While gathering products in the forest, women face the danger of wild animal attacks, the threat of venomous snakes and insects, injuries from rocky terrain, skin allergies from poisonous plants, and scratches from thorny bushes. Sometimes they must spend money in the hospital to cure the injury. A woman from the Karukata village said that going to the forest means facing difficulties. However, several external factors such as deforestation, afforestation, forest conservation laws, and lack of marketing of forest products also challenge Kandha women living in forests.

4.7.1 Impact of Deforestation on Women

Despite the forest conservation initiatives, deforestation remains a significant problem in the study area. The situation is particularly precarious in the lower hill area of the Chakapad region. Both natural and human-made factors contribute to deforestation. In 2013, cyclone Phalin caused extensive damage to the forest in the Chakapad region. The extreme velocity of the wind and torrential rain uprooted many of the old trees in the forest. Similarly, in 2018, cyclone Titli caused severe damage to the forest in the Tikabali area, resulting in landslides in various areas. On the other hand, human activities such as forest fires, agricultural expansion, timber smuggling, commercial logging, and local people cutting down trees for various purposes are the most widespread causes of deforestation. The consequences of deforestation primarily affect poor, forest-dependent communities, especially women.

Women are the principal victims of deforestation. The depletion of forest resources has affected the livelihood of women and increased their workload. An older woman from Karukata village stated that the forest was once adjacent to her village. They used to get the necessary products from the forest with less time and effort. However, due to the continuous depletion of the forest, they have to work harder. As a result, many women quit their traditional livelihood of making leaf plates, brooms, mats, and bamboo works. Another woman from Ragapaju village said that previously firewood and siali leaves were abundant in the nearby forest. However, due to the shrinkage of the forest, they are going far into the forest to get firewood and leaves now. The depletion of forests displaces the tribal women from their traditional livelihood, who are diverting to agricultural or other sectors where they are treated as unskilled labour and receive lower wages than men.

Forest fire: Many of the women respondents said that forest fires seriously affected their lives. Forest fires burn all the fallen wood and small twigs from the forest, which is the regular source of firewood for women. Women of Gistikhole village said that if they do not get dry firewood, they are compelled to cut live trees and dry them for cooking. The forest fire destroys the young sapling and affects the fresh air. In the study area, people set fire to hunt animals, collect forest products, and make charcoal.

Wood Mafia: Wood smuggling has emerged as a significant factor contributing to deforestation in the study area, particularly in the lower hills of the Chakapad region. The villagers residing in the Chahali area have highlighted the pervasive presence of the wood mafia as one of the primary causes of deforestation. These individuals engage in widespread illegal felling and transporting of valuable old trees from the forest. According to Kandha women, they feared entering the forest if they came to know about the presence of smugglers in the forest, as the smugglers are armed with guns, axes, and dogs.

A middle-aged woman from Ragapaju village disclosed that they frequently face threats from the wood mafia operating in the forest. Local sources suggest that a network of politicians, local goons, and government officials supports these criminal activities. Residents of Nidhiberana and Gasama villages refused to discuss the mafia issue, fearing for their lives, as a past incident involving murder occurred in their vicinity concerning the same matter. In Adima village, the residents expressed, “We are a small settlement comprising only 12 to 15 families. Our entire community is impoverished, lacking sufficient manpower and resources to confront the influential and wealthy wood smugglers. Above all, our priority is to protect our women and children.” Local inhabitants further mentioned that the felling of large trees has

adversely affected the availability of honey and resin, which are vital sources of income for them.

Commercial Exploitation: Commercial logging of wood has also been identified as a significant contributor to deforestation in the study area. During field visits, lorries loaded with timber were frequently observed on the roads. The extraction of timber and bamboo from government forests is overseen by the Odisha Forestry Development Corporation (OFDC). The OFDC grants permission to contractors and corporations to extract timber and bamboo from designated areas. However, extracting specific resources from the forest often poses challenges to the local forest-dependent communities, particularly women.

The women of Gistikole village expressed that the forest department's extraction activities, including timber, bamboo, and siali fibre, from their local forest have adversely affected their lives and livelihoods. They mentioned that the cutting down of siali creepers has resulted in a severe shortage of siali leaves, a regular income source for them. Additionally, the felling of mature sal trees has impacted the availability of sal seeds, another source of income. While the corporate sector benefits from the commercial exploitation of forest resources, the local people bear the consequences.

Climate Change: Deforestation escalates environmental catastrophe and worsens the impact of climate change. In turn, natural calamities cause deforestation, which leads to livelihood loss for women and increases the effect of environmental challenges. It is a vicious cycle that needs to be broken through forest conservation, increased green cover, and reduced environmental pollution. Odisha has witnessed frequent cyclone attacks and heat waves for the last few decades. Despite its extensive forest cover,

Kandhamal is subject to climatic challenges such as heat waves, flash floods, and cyclones, which disrupt the lives and livelihoods of the residents.

Cyclones Fallin (2013) and Titley (2018) triggered flash floods and landslides, causing extensive damage to forest resources and public properties. According to the respondents in the Chahali area, cyclone Phalin extensively affected forest products' availability. Women faced a forest product shortage, which they gathered regularly before the cyclone. Some respondents also said that they are experiencing heat waves in their area, which were not there before. Cyclone Phalin caused heavy damage to the forest in the Chahali area and turned the dense forest into an open forest.

A woman from Ududeba village opined that people will not realise the importance of forest conservation until they face the consequences of deforestation. This sentiment was echoed in various parts of the study region. The continuous deforestation has resulted in local communities experiencing the effects of climate change. A middle-aged man from Ghasama village said, "In the past, our area had dense forests, and the temperature was not excessively high. We could work in the forest throughout the day without much difficulty. The forest climate was pleasant due to the abundance of shady trees, and there was ample drinking water as the water pools did not dry up in summer. Women could collect forest products until late afternoon. However, summers have become harsh with heat waves, making it challenging to venture outside during the day. People mostly stay indoors after 11 am". He attributed this change to the significant destruction of forests over the past few decades.

The impact of climate change also affects the availability of forest products. As stated by many individuals in the studied villages, irregular rainfall during the summer season adversely affects the production of mahula flowers and mangoes.

Human-wildlife Conflict: Deforestation is also a strong reason for the escalating conflict between humans and animals. Women in Bidingia village report that monkeys and wild pigs have been causing extensive damage to their crops for the past few years. Monkeys usually do not eat turmeric, but because of the unavailability of food in the forest, they are consuming it now. Due to the damage caused by monkeys, many people in the village have quit cultivating it in the forest. The women of Ragapaju village also told a similar story. Monkeys and wild boar are creating havoc in their paddy and pulses in the field. They also said that wild animals eat forest products like mahula, mango, and tubers that provide a livelihood to the tribal women. Forest depletion, habitat loss, and lack of fodder in the forests are major causes of wild animal migration to human proximity, resulting in an unhealthy human-animal relationship. Another dimension of wild animals' migration to human settlements is the changes in the forest ecosystems. The forest department is turning the grasslands and natural forests into commercial forests by introducing exotic plant varieties through afforestation activities. Such initiatives have escalated conflict in the wildlife for the habitat, resulting in migration to human habitations.

The local people's utilisation of the forest contributed to deforestation. Many respondents in the studied village acknowledged the importance of the forest, yet they still engaged in cutting it down. They feel compelled to do so as they require wood for construction and repair work, as well as for food processing purposes. An elderly man explained that the construction of a typical house necessitates the felling of 15 to 20 trees, while a concrete house requires 100 to 150 trees to support the roof and beams. Due to poverty and lack of employment opportunities, the Kandha people residing in rural areas cannot access alternative cooking fuel and reusable construction materials.

Consequently, they become overly reliant on forests to fulfil many of their needs, leading to the depletion of forest resources.

4.7.2 Afforestation and Challenges

Afforestation activities in Kandhamal have been ongoing for a considerable period, with the old teak forest in the Chahali region of Chakapad block serving as an example. However, these efforts have seen a significant acceleration in recent decades. The vast amount of forest land in the district has become a focal point for afforestation initiatives by the forest department. Afforestation in the district is primarily carried out through the National Afforestation Programme (NAP) and the Compensatory Afforestation Fund Management and Planning Authority (CAMPA).

The CAMPA fund comprises money deposited in the Ministry of Environment and Forestry (MoEF) by forest user agencies that have utilised forest land for non-forest activities. These funds are exclusively allocated for afforestation and forest regeneration activities on private or government forest land. However, the availability of forest land is limited, and the costs associated with private land are beyond affordability. Since two-thirds of Kandhamal's geography is forest land, the department is dumping the CAMPA fund there.

In the study area, the forest department is actively carrying out afforestation activities near numerous villages using the CAMPA fund. These initiatives involve tree plantation in open forests, degraded forests, dense forests, barren lands, shifting cultivation lands, and community-used lands. Much of the afforestation work entails the removal of bushes and other natural vegetation. Women, who previously collected dry wood, fruits, and leaves from these areas and grazed their goats there, had a strong

connection to these lands regarding their livelihood and economy. However, the forest department has fenced off these areas and restricted the entry of people and cattle.

Women from Kilusuga village expressed their concerns, stating that the forest department has fenced off a large forest area near their village for afforestation purposes. They used to collect siali leaves from the forest, and their goats and cows grazed there. However, due to the plantation activities, they have been unable to collect siali leaves, and they now have to venture deep into the forest, bypassing the plantation area, in search of firewood. Such developments deprive them of their rights to resources and increase their workload and domestic responsibilities, making them more vulnerable.

Moreover, the common land and open forests near the villages serve as crucial sources of income and survival for Kandha women. Women's economic contribution to their families enhance their decision-making power in financial matters, allowing them to maintain an elevated status within the family and narrowing the gender gap. However, denying women access to forest and land resources or altering land and forest usage patterns would further exacerbate existing gender relations within households.

The forest department conducts the tree plantation in a draconian manner. They are neither consulting the local people and women during the selection of plantation sites or tree species nor mapping their traditional association with such land. The trees chosen are mostly of commercial varieties such as teak and other fast-growing non-native species, which would not benefit women or provide them livelihood. Furthermore, once the commercial trees mature, they will be a hot spot for wood mafia, creating an unpleasant and insecure environment for women. Such incidents happened in the Ragapaju and Adima villages in Chahali GP, where the wood smugglers were

active due to the presence of old teak and sal trees. They are harassing the local people and threatening their lives.

The forest department places a high value on teak and commercially valuable trees as economic plantations. Undeniably, these plantations can generate revenue and serve as a source of income for the government. However, in their pursuit of these goals, they seem to be disregarding the presence of various other stakeholders in the forests, such as the Kandha women, who have long relied on the forest for their livelihood. If the department fails to consider the rights, traditions, and cultures associated with the forest of the Kandha people and continues with its afforestation programs, it may be perceived as a strategy of land and resource appropriation by the government.

The Kandha women share a unique cultural and emotional connection with the forest, rooted in its life-sustaining qualities. They have traditionally developed a deep respect and a religious sensibility towards the forest due to its inherent natural beauty, which holds profound meaning for them. Their symbiotic bond with the forest consistently reminds them of the critical importance of forest preservation. However, the introduction of monoculture plantations consisting of commercial and fast-growing exotic species has the potential to disrupt the natural ecology of the plantation areas. Over time, these trees may spread to other parts of the natural forest, posing a threat to native species and further disturbing the ecological balance of the forest. Such changes can gradually undermine the relationship between Kandha women and the forest, impacting their perspectives on forest conservation. It is essential to consider these potential consequences and ensure that afforestation efforts consider the complex and interconnected relationship between the Kandha women and their forest environment. Preserving the natural diversity and ecological integrity of the forest is vital for

maintaining the cultural and spiritual bond that Kandha women have developed with their ancestral lands.

4.7.3 Challenges in Marketing the Forest Product

Despite the significant role played by Kandha women in gathering and processing forest products, they often face unfair pricing practices. In the remote villages, brokers take advantage of the impoverished conditions of these women by offering them much lower prices compared to the market rates. Due to limited bargaining opportunities in the village, women are forced to accept the prices set by these traders. Furthermore, the lack of proper communication facilities challenge women in accessing broader markets.

Many women making siali leaf plates reported that traders pay them 20 to 25 rupees per bundle (one bundle consisting of 80 plates), while these traders sell the plates at twice the price. Despite various government and private organisations operating in Kandhamal, direct procurement from the gatherers is not being facilitated. Gram Panchayats, the local self-governing bodies, are also not taking any initiative to support the procurement of forest products. A former secretary of Chahali Gram Panchayat pointed out the lack of proper infrastructure in the panchayat for storing forest products and the unavailability of instant cash to provide immediate payment to sellers upon procurement.

Many women highlighted that in the past, forest products were procured by the Agency Marketing Co-operative Society (AMCS) in Tikabali. This cooperative society enabled them to earn money from selling their forest products. However, since the closure of society, they have been facing difficulties in marketing their forest products, and the prices they receive are significantly lower. The society had established branches throughout the district and even outside the state.

It is disheartening to observe that Kandha women often receive significantly lower prices for their products compared to the prevailing market rates. This is partly due to women's lack of market knowledge and bargaining strategies. For instance, the researcher once witnessed an elderly Kandha woman selling a basket of locally grown mangoes weighing approximately 8 to 10 kilograms along NH-157. Despite setting a relatively low price for the mangoes (40 rupees), a customer attempted to negotiate the price further down to 25 rupees for the entire basket. Many women are compelled to accept such low offers out of fear of being unable to sell their products. Unfortunately, this means they do not receive fair compensation for their hard work in collecting and processing these products. It highlights the need to empower Kandha women with effective bargaining skills and create fair market opportunities to ensure just prices for their products.

These hurdles in fair pricing and market access have a detrimental impact on the economic well-being of Kandha women, hindering their ability to benefit fully from their engagement with forest resources.

4.7.6 Outsider Interference

External factors often create an environment of uncertainty and fear for Kandha women in the study area. Various external elements, such as conflicts between Naxalites and the police, as well as the activities of wood smugglers, pose significant threats to the safety and well-being of women.

Women residing in Gasama village reported a fierce battle between the police and Naxalites, resulting in casualties on both sides. Although no civilians were harmed, the incident instilled fear in the community, preventing women from venturing into the forest for months. This fear has had a direct impact on their lives and livelihoods. They

mentioned that the Naxals are still active in the area but not causing harm to them, yet they remain apprehensive of any unforeseen incidents while accessing the forest.

Furthermore, the district experienced a communal riot in 2008, which profoundly impacted the region. The severity of the riot led to the district being sealed off for almost a year, disrupting the economic activities of the Kandha women. The riot affected social harmony and significantly affected the livelihoods of the local communities, including Kandha women. During this period, traders and buyers were reluctant to visit the villages, resulting in a halt in the procurement of forest products. The economic life of Kandha women suffered considerably as their usual channels of selling forest products and accessing markets were disrupted. The absence of traders and the inability to carry out regular trade severely impacted the income and economic stability of Kandha women, exacerbating their already challenging circumstances.

Similarly, the women of Ragapaju village expressed their concerns regarding the activities of wood smugglers in their local forest. These illegal activities have created an insecure environment for women to engage in their forest-based livelihoods. The presence of wood smugglers poses a threat to their safety and hinders their ability to gather forest resources freely.

These external factors contribute to a sense of insecurity and uncertainty among Kandha women, impacting their daily lives and livelihood activities in the forest. Efforts have to be made to address these challenges and create a safe and conducive environment for women to engage in their forest-based livelihoods without fear.

4.8 Conclusion.

Kandha women mainly depend on agriculture and forests for their survival. They also do other wage labour if available in their locality. Labour migration to other states is less prevalent among Kandhas, but it is increasing. The Kandhas are expert cultivators of the hilly terrain. They grow varieties of crops on different types of land, mainly paddy, maize, millet, pulses, oil seeds, turmeric, and ginger. However, their agriculture depends on monsoon rain and is the most disaster-prone occupation. The forest provides them with food, fodder, construction material, and different sources of livelihood. Women collect varieties of forest products for domestic consumption and sell them in the market. Mainly, women collect non-timber forest products from the forest and contribute significantly to the family's survival and economy. The Kandha women forest-based livelihoods are hindered by deforestation, faulty afforestation, and lack of market opportunity.

The Kandha women living in the forest have traditionally maintained a symbiotic relationship with the forest. Their economy, agriculture, survival needs, belief systems, folk culture, healthcare, and nutrition are firmly associated with the forest. They have traditionally explored extensive knowledge of their local environment and survival skills. Women's relationship with the forest is particularly significant because the forest is essential for them to pursue their societal gender roles in household chores and manage the family's nutrition and food security. Kandha women are also culturally associated with the forest. Nonetheless, they have developed a more sentimental bond with it because it gives them a sovereign space and resource to carry out their lives. Overall, the tribal communities in Kandhamal have maintained a solid and multifaceted relationship with the forest, which is deeply ingrained in their culture,

economy, and daily lives. The forest is not just a source of resources but also a space of cultural and emotional significance for the Kandhas. Therefore, the forest conservation and management activities must give attention to women's association with the forest to preserve the women's relationship with the forest.

The Kandhas have traditionally conserved their forest sustainably following their customs and practices. However, since the government took control over forests, they are protecting them through community and joint forest management. The forest department is controlling all the forests whether they are under government, community, or joint control. They are implementing their forest management strategy, ignoring the local concerns. The forest department's afforestation activities are significantly affecting the Kandha people's forest based livelihood, particularly that of Kandha women.

CHAPTER 5

The Field Speaks

5. 1 Introduction

This chapter discusses the tribal people's life experiences in the forest. The narratives reflect how closely and differently the forest and its inhabitants are connected and how the forest benefits them. Furthermore, some case studies describe the challenges the locals, particularly women, face while living forest-based lives. The chapter contains eleven case studies. The first case study is about a widow's survival strategy after losing her husband and young son very early. The second case study focuses on challenges that women face while collecting and marketing a few key forest products. The third case study shows how a village relied on the forest to survive consecutive droughts. The fourth case study demonstrates how forest protection can be beneficial in the face of natural disasters. The fifth case study describes how the cattle grazers faced difficulties due to the forest department's encroachment on a traditional pasture ground for commercial tree plantations. Case study number six is about how the government's commercial exploitation of timber and other resources affected women's livelihoods. The seventh case study describes how deforestation and resource depletion have impacted women's forest-based livelihoods. Case study eight is based on observing women's lives in the forest. Case study nine is based on how the Kandha's belief system is structured around the mountains and the forest. Case study 10 is about various medicinal plants available in the forest, their collection, and their uses. Case Study eleven is about the functionality of a Vana Samrakshana Samiti (VSS).

5.2 Case Study 1

Harabati Malika lives with her physically challenged daughter in Chahali Gram Panchayat's Ragapaju village. Her husband died of an unknown disease nearly 20 years ago. Her young son went to Tamil Nadu with his village colleagues to look for work and never returned. She kept in touch with his son in the early years through people returning to the village and money orders he sent her. However, she lost contact after his friends, and nearby villagers returned permanently. She no longer received his money orders, which she received regularly earlier. After nearly a year of waiting for her son's response, a search group at her request went there but could not find him. She is unsure whether he is alive or dead but has not given up hope. Her son was their only support and hope during their hard times.

Despite these tragic incidents in her life, she stayed strong and fought all odds for her survival. She managed her family by gathering things from the forest and farming the small piece of land her father-in-law gave her as her husband's share. However, agriculture is seasonal and requires favourable weather, mainly rain. Shortage or excess of rain could destroy her cultivation and make their lives miserable. If the weather cooperates, she can harvest enough food grains to feed her family for an entire year; otherwise, she would have to rely on other sources. Work opportunities in agriculture and other sectors are limited and competitive in her area. Furthermore, despite performing equal work, women are paid less and offered fewer work opportunities than men. She has also kept some cows, goats, and poultry that generate income.

The local forest is a constant source of income for Harabati and other village women as it mainly provides them with employment during non-agricultural spells.

Harabati regularly goes to the forest with other village women to collect siali leaves, sal leaves and seeds, mahula, tola, mangoes, broom grasses, and other products. She and her daughter make sal and siali leaf plates for domestic and commercial purposes. She sells all the forest products to the brokers at a much cheaper rate, which is very low compared to the effort required for their collection and processing. She stated that the actual market price of forest products is much higher than those offered. However, she is forced to sell them at low prices due to lack of market connectivity, small quantity of her products, and absence of government support. Regardless of the lower price, she refuses to give up her forest-based livelihood because that is her only year-round employment source. However, she expressed concern over the future of their livelihood because of the increasing depletion of forest resources. She also expressed her displeasure at the forest department staff's unnecessary enquiry, wood smugglers, and outsiders who frequently interrupted them on their way. Harabati said that the forest is everything to her life because it has always supported her, especially during her most difficult times.

Aside from her personal life, Harabati is an active village leader. She had been the secretary of their Self Help Group (SHG) as well as the president of the Vana Samrakshana Samiti (VSS). Currently, both are not functioning due to lack of support from the government. During her term, the village women participated in several forest protection activities through VSS. She once confronted a gang of wood poachers felling trees in their nearby forest. However, she fled when they approached her with axes and other weapons. They were later revealed to be the notorious wood mafia of the neighbouring district, and no one in the region dared to oppose them. Harabati's fight against the wood mafia demonstrates her concern for forest protection, as she understands the importance of forests for women like her.

Harabati is over 55 years old and cannot work for long because of her age and health. Her widow pension and her daughter's disability pension are their only reliable sources of income. But, the amounts are insufficient to meet their requirements. So she urges to continue the forest-based livelihood to support her family, which she can do for a few more years. However, she is concerned about her daughter's survival, especially after her. She expects some governmental help for her daughter so that she can survive. Harabati enjoys spending time in the forest, which she believes should be preserved to benefit women and tribal communities. Harabati is just one example. There must be many other Kandha women who depend on the forest for their subsistence. Therefore, forest management mechanisms must include the rights and interests of the forest-dwelling tribal women.

5.3 Case Study 2

Agriculture is the mainstay of the Kandha people. Both women and men work together on their farmlands to grow the crops. However, men enjoy advantages over women as they are the legal heirs to the land. They regard the land as an asset that reflects their personal and social status. Men have the official status of farmers and are therefore entitled to the benefits of the government's financial and material assistance to farmers.

On the other hand, despite women being involved in almost every aspect of agricultural activities, they have never been recognised as farmers. They are treated chiefly as workers in their field. Due to the socio-cultural practices and gender norms followed in land ownership, their identity in the agricultural sector is negligible and hidden behind men. However, Kandha women have mastered forest-based activities and developed distinct identities. They regard the forest as one of their most valuable resources and have a sense of ownership. However, they hardly get support or attention

from the government or village community regarding protection of their resources and improvement of their livelihoods. This lack of support has left Kandha women in an underprivileged state that only exacerbates their already disadvantaged position in the agricultural sector.

Twenty six year old Sukanti Malik of Karukata village lives with her husband, mother-in-law, and two kids. The entire family depends on agriculture, and all the family members worked on their farmland. However, apart from agricultural work, Sukanti and her mother-in-law collect and process many minor forest products. The primary forest products they collect for commercial purpose are siali leaf, mahula, and sal seeds. Sukanti listed a few challenges that she faced while earning her livelihood on forest products.

Siali leaf is a regular collection for her, and she and other women go to the forest to collect it all through the year except during the rainy season. They must walk three to four kilometres into the forest to gather good-quality leaves. Once she visits the forest, she collects enough leaves to make two to three hundred plates. During her spare time, she stitches the collected leaves with her mother-in-law. After that, she has to sun-dry the plates and keep them in a bundle to sell to the middleman. A bundle contains 80 leaf plates, for which brokers pay her fifteen to twenty rupees. She earns five to six hundred rupees monthly for selling siali plates. However, she points out several challenges while carrying out this activity. First, there is a scarcity of leaves due to deforestation and overexploitation. Earlier, only tribal people were collecting the leaves, but now other caste people are also collecting, resulting in their scarcity. Second, she has to walk longer as siali vines are extinct in the nearby forest, which is time-

consuming and affecting her routine. Third, the offered price for the plates is low and insufficient to meet the family's needs.

Mahula is another forest product that is important to the economy of the tribal people. It is found everywhere in the village, including in private, common, and forest land. The trees on private property belong to the person who owns the land, but the trees on common or forest land belong to the families who have cared for them and picked flowers from them for generations. Sukanti's family has a few mahua trees on their land as well as forest land. She and her mother-in-law spend four to five hours gathering the flowers daily during the season. They wake up early, around 4 a.m., and after finishing their routine and breakfast, they rush to the mahula trees with baskets. They have to walk around one kilometre through uneven and rocky terrain to reach the trees. Usually, the flowers are gathered after sunrise, as they drop mainly after the sun comes out. However, the two women must arrive early to protect the flowers from cattle and wild animals. They pick the flowers one by one from the ground while sitting or crouching for hours. Sometimes her husband helps her gather and carry the mahula baskets to the house. The collected mahula flowers require to be properly sun-dried before they are sold in the market. Mahula is eaten by wild animals such as wild boars, bears, barking deer, and monkeys. She stated that there is always a fear of bear attacks during mahula collection because bears like the flowers very much. Though she has not faced a bear, many villagers have seen them eating mahula. The price the brokers and shopkeepers offer is ten to fifteen rupees per kilogram, whereas the market price is thirty to forty rupees.

Sal seeds are collected in May and June after the Mahula flower season. Women collect the seeds by burning the sal leaves or manually cleaning the ground around the

sal tree. Collecting sal seeds does not require much effort like mahula, but the seed extraction process is a tedious job that requires time and labour. After sun-drying the fruits, women burn and beat them with a stick to extract the seeds. However, the brokers only offer them five to seven rupees per kilogram, whereas the minimum support price (MSP) of sal seeds is twenty rupees per kilogram.

According to her, they get many things from the forest, but the price is inadequate compared to the hard work and risk involved in their collection. Even their earnings from forest products are significantly lower than the wage of a manual labourer. She further said that due to a lack of market to sell, local traders and shopkeepers of Chahali village are arbitrarily fixing the price of forest products. They are also forced to sell at that price. Otherwise, their products may be damaged if they store them for a long time. Although several government agencies, such as TDCC and TRIFED, work to market forest products in tribal areas, they do not cover most rural areas. Furthermore, the minimum support price (MSP) set by TDCC for NTFPs is very low. For example, the price of one kilogram of dried mahula flower listed by the TDCC is only seventeen rupees, whereas the market offers twenty-five to thirty rupees. The Gram Panchayats are also not supporting women in marketing their products.

5.4 Case Study 3

Odisha's hilly districts are the state's poorest and most drought-prone regions. But these regions are abundant in forest resources, and the tribal people living there have traditionally learnt how to use forest resources to deal with drought situations. This case study is about how the people of a tribal village survived consecutive droughts using resources from the forest.

Kunti Malika, an eyewitness of the incident, is a septuagenarian woman from Ragapaju village in the Chahali Gram panchayat. Her family traditionally relies on farming, livestock, forest product collection, and labour work for survival. Kunti's age does not permit her to do labour work, but she regularly makes leaf plates and processes various forest products. She has learned the collection, processing, and use of various forest products found in their surrounding forests.

Kunti explained how she and the villagers survived a series of droughts using forest resources. She could not remember the exact years but said she was young. So maybe the year was approximately between 1970 and 80. Rain was scarce and irregular, disrupting the area's agricultural practices. They could not grow anything on their land. The situation continued for two to three years, and people ran out of food. Hunger and unemployment ravaged the area, and residents (primarily men) fled to other areas for food and work. It was challenging for Kunti and the villagers to survive, especially for women and children. The government did not respond to the situation, and no other organisations offered assistance. Usually, in those days, the government facilities barely reached the interior tribal areas. Communication was a big challenge, and the government networks, especially the information chains, were weak and sluggish. She stated that everyone was suffering, particularly their children, were starving.

Their traditional knowledge of forest vegetation served them well in such a situation. They collected edible tubers, wild fruits, nuts, and leafy vegetables from the forest for their food. The salap tree (*Caryota Urens*), also known as the sago palm tree, fish tale palm (English), Ban Khajur (Hindi), Sritalah (Sanskrit), and Jeelugu (Telugu) is abundant in the region. Typically, the Kandhas extract toddy from the tree, a healthy juice when consumed fresh, but they add some roots to make it intoxicating. However,

the tree's trunk contains high-quality starch, similar to sago, which is rich in carbohydrates and minerals. During the drought period, the villagers extracted starch from the tree and substituted it for rice. The cake made of dried Mahula flower also became an additional food source for them. Throughout the drought period, forest was the only source of support for the survival of the people.

Kunti considered that period to be her worst memory. While narrating the event, one of her associates, Kanchana Malika, said that they are still alive because of the jungle; otherwise, they would have died of starvation in that horrible drought. Kunti added that in any situation, if their jungle is present, they have options for survival. Their ancient knowledge of forest flora, fauna, and traditional food practices taught them a compact strategy for survival. The forest is a natural warehouse of food and other subsistence ingredients. The tribal people use forest as a reserved option for their survival during extreme situations.

5.5 Case Study 4

In October 2013, a tropical cyclone named Phailin wreaked havoc in Odisha's coastal districts, claiming many lives and causing extensive damage to public and private properties. However, it also caused extensive damage to some central districts, such as Kandhamal. The mighty wind of the cyclone rooted out numerous trees. It caused immense damage to the forest resources in Chakapad block of the Kandhamal district, particularly in the lower hill areas of the Chahali Gram Panchayat. The region's natural drainage system could not transport the torrential rainwater that the cyclone brought. As a result, overflowing water entered village streets and agricultural lands, and caused significant damage to human settlements, cultivation lands, and standing crops. The high velocity of the wind damaged thousands of trees in the forest. Trucks, cranes,

cutting machines, and hydraulic excavators were deployed for months to remove fallen trees from roads and forests. The cyclone was so powerful that it turned an old dense forest into an open forest. Although no one in the region lost their lives due to the storm, it caused panic among the people. This case study illustrates how a community-protected forest in a village saved the villagers from cyclonic winds.

Panabara Malika, a resident of Chahali GP's Gistikhole village, describes the horrifying experience of the day the cyclone hit their village. He said he had never witnessed a cyclone that destroyed an entire forest and washed away agricultural land, standing crops, roads, and houses from many villages. Before the cyclone, the government alerted the people through electronic media, and government officials also relocated the people with poor houses to the school building. His house was also packed with his fellow villagers.

Around midnight, the cyclone intensified in their area. The wind blew with a terrible roar as if it intended to root out the entire village. Trees were touching the ground and alerting the villagers of the cyclone's potential impact. They could not move even a few metres outside their home due to the torrential rain with wind. The cyclone died down in the late morning of the next day, but the drizzle continued for another few hours. No one slept that night, praying for their and their relatives' safety. Surprisingly, the entire village was unharmed, and no houses, including the cattle sheds, were damaged. Only some of their village forest's frontline trees were damaged, but others were unharmed. Panabara attributes his village's survival to the mountains and the lofty sal forest surrounding it, which he believes saved them from an impending disaster. The mountains controlled the wind's direct current, and the trees absorbed the velocity before it reached the village. The dense natural forest protected their agricultural land

and soil from being washed away by rainwater. However, he and the entire village believe that the mountain god shielded their village from the cyclone.

The cyclone has remarkably affected traditional forest-based livelihoods of the whole area, particularly women, due to the vast destruction of valuable trees like mahula, sal, and mango. A woman of the Gistikhole village said the availability of forest products significantly decreased after the cyclone hit their area. The forest may take many years to recover from the damage and re-establish the availability of forest products. However, the forest department's decisive way of filling the cyclone-hit forest with commercial species like teak may cause the decline or eliminate the local variety of trees. Such unethical transformation of the forest may substantially affect the forest-based livelihood of the women on a large scale. The photographs taken from the field in 2013 and 2016 depict how the post-cyclone anti-tribal and anti-women plantation programme in the Chahali area is converting the natural forest into a commercial forest.

5.6 Case Study 5

The tribal people of the Kandhamal district rely heavily on livestock for a living. Usually, people domesticate cows, goats, and poultry birds to meet their financial needs. Kandhamal is ideal for cattle farming due to the abundance of forests and pasture grounds. However, expanding wildlife sanctuaries, grazing restrictions in reserve forests, tree plantation on common lands, and the forest department's unethical encroachment on revenue and community forests for afforestation programmes are challenging livestock farming. Women and the elderly, who usually care for livestock, suffer primarily. This case study describes how herders are affected due to commercial tree plantation by the forest department in the traditional grazing land of a village.

Bausunia Nayak, the Chahali GP's Ragapaju village resident, narrates the event. The sexagenarian man works as a herder in the village. Every morning, he takes the village cattle, including his own, to the forest for grazing. The grazing field is approximately four kilometres away from the village. However, a few years ago, he and other herders did not have to travel far to graze their cattle. Near the village was a vast pasture ground where cattle and goats grazed regularly. Cattle herders from nearby hamlets also used that grazing land. They did not have to take their cattle far into the forest because plenty of fodder was available. Furthermore, because the pasture was close to the village, locals could assist them if they encountered any difficulties.

About twenty years ago, however, the forest department took possession of the pasture land. They cleared the bushes and other natural vegetation and planted teak trees there. To protect the plantation area, the forest department personnel prohibited grazing activities there. Furthermore, the local forest guard warned all the herders to keep their cattle away from the plantation area. The forest department's restrictions caused problems for the herders because other grazing options were only available inside the forest, and the shortest route went through the plantation area. However, Bausunia discovered another way to the forest around the plantation area, but he had to walk around three to four kilometres to take cattle there. Women and children who cared for the goats faced the same problem. Such actions by the forest department deprived the herders of their traditional rights and increased their workload. Taking the cattle far into the forest decreased the cattle grazing time while increasing the travel time.

Furthermore, going into the forest is not always safe because there is a risk of missing cattle or being attacked by wild animals. Bausunia has frequently lost his cattle

within the forest and has had to perform strenuous work to locate them. Leopards have also attacked cattle on a few occasions. In such circumstances, he was helpless, as no one was around to assist him except his herder companions. Although the forest department later opened the plantation area to cattle, the natural fodder there had vanished due to the dominance of the teak forest. The short route to the forest was the only benefit of the plantation area's opening for Bausunia and other herders.

Although what Bausunia said is an old incident, people, particularly herders, still suffer from its consequences. Over the last few years, the forest department has accelerated the afforestation programme in the district. The tree plantation included open forests and community-used forest land which is critical to tribal survival. Several plantation programmes of the forest department in the study area are located near roads or in community-used lands. In many places, such plantations block the traditional way to the forest, making it difficult for the local people to access the forest. The roadside or village-side forest lands are selected logically for plantation programmes by the forest department. As a result, they can easily patrol the plantation areas, and the village can provide them with easy and low-cost labour. The trees chosen for plantation are dominated by commercial species such as teak and eucalyptus, which are classified as commercial plantations by the forest department. Regretfully, such unethical and undemocratic plantation activities are one of the root causes for the decline of the local economy.

The commercial plantations near the villages are the reason for many local problems, especially for women and older men who generally have livestock responsibilities. Furthermore, women are overburdened with domestic work due to the increasing difficulty of accessing forest resources. Also, the commercial trees are of no

use to the forest-dependent women. Monoculture of the commercial plant is not only devouring the traditional livelihood and survival strategy of tribals but also destroying the ecology of a particular area by causing partial or permanent disappearance of natural flora and fauna. The plantation of exotic species in the forest also disturbs the relationship between tribal women and forests.

5.7 Case Study 6

The patriarchal social order and the state's commercial approach to forest usage and management often deprive women of their traditional rights and reliance on forest resources. Extracting timber and bamboo from the forest is one of the significant sources of revenue for the forest department in the Kandhamal district. The Odisha Forest Development Corporation (OFDC) often grants bids to contractors to extract timber and bamboo from the forest. These contractors irrationally extract the tendered resources for their trade interests without considering their impact on the ecology and local inhabitants' livelihood in the absence of the plant species. This case study reveals how a village community suffered due to state-sponsored exploitation of sal log, bamboo, and siali fibre from the nearby forest. In particular, women were deprived of their forest-based livelihood. The villagers narrated the incident in a mixed group discussion where both women and men participated.

Gistikhole is an average-sized village in Chahali Gram Panchayat. Hills and lush forests surround the village. The forest is one of the traditional sources of livelihood for the villagers, especially for women. Women collect and sell various types of minor forest products (MFPs) from the forest to financially support their families. Among the varieties of MFPs available in the forest, the siali leaf is prominent. Women regularly collect and stitch siali leaf plates for commercial and domestic purposes. Siali

leaves also provide leisure time employment to women, especially the older women who contribute their labour to the family. However, as the forest department removed timber, bamboo, and siali fibres from surrounding forests, their availability, particularly of siali leaves, has dramatically diminished.

Sumati Malik, a middle-aged woman, describes how the village women lost their traditional livelihood due to the commercial exploitation of forests in the past. She claims that indigenous people's reliance on forests is not the cause of deforestation but the official licence to exploit forest resources is. A few years ago, the OFDC approved a bid to remove timber from adjoining forests. Contractors and workers were engaged to execute the work. The male members of her village were engaged there as daily wage labour for cutting and processing of timber. Initially, the contractors had earmarked a small area for logging, and later they started logging in the forest that the villagers regularly used. The villagers protested against it and quit their work. However, the contractors did not stop felling of trees and continued the work through labour hired from other areas. Seeing their protest fail, the jobless villagers approached the contractor to re-engage them because the wages were going to others' pockets.

After timber extraction was done, the OFDC granted the extraction of bamboo and the siali fibres from the forest. Bamboos were shipped to paper mills, while siali shrubs were chopped down severely for rope making. The villagers were offered twenty to twenty-five rupees for a coil of siali rope and four to five rupees per bundle of bamboo. The villagers earned a good wage for a short period until the last bamboo and siali plants were cut down. With the end of exploitation of bamboo and siali, the corporate agents and their trucks disappeared. The villagers also lost the job and wages they got during the extraction of the resources from the forest.

On the other hand, women were merely spectators to the entire episode. They got nothing but they lost their traditional livelihood based on siali leaves. Many women of the Gistikhole village quit siali leaf plate work because of their unavailability in the forest. Sumati said the siali leaves had always employed the village women, but now they mostly stay home during unemployed time. Although sal leaf is an alternative to the siali, the forest department has only allowed plucking the leaves for domestic use. The male members of the village realised their mistake only when they travelled a long distance for bamboo to do necessary reparations and construction works. However, the forest department did not seem concerned about the livelihood and ecological loss in the locality. No efforts were made to regenerate the extinct plant species in the local forest so that women's lost livelihood could be restored.

Forest-dwelling communities, mainly tribal people, are often negatively affected by forest commercialisation and deforestation. However, when the same issue is analysed through the lens of gender, a different picture emerges. In this case study, the researcher has highlighted how the gender bias of men in the community and the gender insensitivity of the forest management agencies alienated women from the forest. The case mentioned above demonstrates how male labourers opposed logging but did not oppose the exploitation of siali fibre. Men consider timber the most significant forest asset, owing to its monetary worth and use in construction and repair work. Siali, an essential plant for women, is not accorded the same weight as timber species, by men. Furthermore, men dominate community decision-making and usually make decisions on behalf of women without addressing their issues and perspectives. On the other hand, the forest department considers itself the exclusive owner of the forest and makes decisions without considering the livelihood of the local people, particularly women.

5.8 Case Study 7

Phula Malika, a sexagenarian resident of Karukatta village in Chahali GP, recounted the changes to their adjacent forests that she has witnessed. Karukatta is situated within the forest, surrounded by hills on one side and a tiny stream on the other. The valley between the mountains and the stream was abundant with forest before the village was set up. However, later the forest was cleared for the village settlement and agricultural land. The fields are the village's rice bowl and source of sustenance. A three-kilometre-long unpaved road connects the settlement to the main road and panchayat headquarters.

She said there were dense forests near her village when she was young, and they could obtain forest produce with less time and effort. The forest was abundant with firewood, siali leaves, and sal leaves, which are vital forest products for them. There was a time when their forests were abundant with wild animals. She had many encounters with tigers, leopards, wolves, and hyenas. The villagers were not scared of the wild animals, as meeting them in the forest was normal. In reality, they co-existed in the forest, she said. They have never harmed her or anyone in their village. They prefer to stay away from human presence, especially tigers and leopards. However, they used to visit their village at night to take domesticated animals and birds, but they never harmed the residents.

Now, that forest is no more, and the wild animals living there have also significantly disappeared. The forest has gradually lost its habitation due to the continuous expansion of agricultural land and the commercial exploitation of timber. Presently, good forests live primarily in the hills and mountains. The little forest left at the foothills is an open forest, which the locals use to graze their cattle. Phula said that

due to the depletion of forests and reduction in forest products, women face many problems. They must travel longer distances, spend more time in the forest, and work harder to get the necessary materials, increasing their household responsibilities. She also said that earlier they did not need to climb the hill to get siali leaves, but now they have to climb at least half the hill's height to get them. Due to the scarcity of forest products and difficulty in availability, many women abandon forest-based livelihoods such as manufacturing leaf plates, hill brooms, and mats. However, deforestation and the depletion of forest products are not the only factors threatening women's livelihoods. Other factors, such as the growing dominance of factory-made goods over traditional products, also significantly impact them.

Although Phula criticised the depletion of forests from their locality, which is logical, she also admits that the agricultural fields are equally important for their survival. The deterioration of any of these assets can significantly impact women's lives. According to Phula, forests should be protected to meet future needs. Otherwise, due to the current deforestation rate, no wood will be available to process their food. Her concern for the forest is justified, as she has benefited from it and experienced the difficulties resulting from deforestation. She cannot travel now to distant forests to obtain raw material due to her old age, but she said, if the resources been available closer, she would have continued her collection.

5.9 Case Study 8

This case study is based on an in-depth understanding of women's forest-based activities. The researcher accompanied a group of women into the forest to document their lives there. The purpose was to observe and record the women's schedules, travel distances, difficulties encountered, and knowledge of the forest. It was recorded in the

Rudabidingia village of the Tikabali block. The village is set in a mountain valley surrounded by hills, with a seasonal stream running through it. People's principal means of livelihood agriculture, animal husbandry, and forest product collections. Women regularly go to the forest to collect various forest products for domestic and commercial use. The village is about five kilometres from Tikabali town and is well connected by a concrete road.

It was December, and the temperature in the hills was shallow. Around 6.30 a.m., the researcher arrived in the village, where two women were waiting. Kamarani Pradhan, about fifty years old, and Pramila Pradhan, about forty-five. They said it was late, so the other women had already left for the forest because they must return early to work in their agricultural field. Usually, the women wake up early in the morning and finish their work to go to the forest as early as possible. The Kandha women rarely have extra time to talk to outsiders as they have tight schedules and plan their time accordingly. The women carried a bag and a small axe to collect leaves and firewood.

The forest starts after passing a few hundred metres through the fields. They crossed the forest, which is again a few hundred metres away with less dense vegetation, and climbed a hill. While crossing the forest, the women said that in the past, they did not have to climb the hills for siali leaves; they used to get them there in abundance. Now not a single siali creeper is left there. The local people cleared them all to make ropes and use the land for cultivation. Although the siali is a vital species for women, nobody has taken the initiative to regenerate it.

The narrow forest trail used to climb the mountain had sharp boulders and tiny rocks ready to roll down with a slight push. One has to be very careful while riding up or climbing down to avoid mishaps. There are also thorny bushes and dense forests,

with the possibility of encountering wild animals or snakes at any time. A small, non-perennial stream was rolling down along the roadside, making small water pits in several places. The locals use them for drinking, bathing, and other purposes. While climbing the hill, both the women described the location of fruit trees, animal hideouts, water bodies, and the availability of siali leaves. They also identified a few medicinal plants commonly used for treating minor injuries, fever, and common cold. This gives us a glimpse of women's knowledge and understanding of the local environment.

After climbing for half an hour, they stopped at an altitude where they started collecting siali and sal leaves. They prioritised broad and well-furnished leaves because such leaves can produce a large plate that is demanded by the market. Climbing a mountain is risky and tiresome, but locals, especially women, are accustomed to it and have no fear or exhaustion. While collecting leaves, the women were mumbling Kui songs. Women have a habit of singing songs or chatting while collecting forest products. According to Kamarani, singing eliminates tiredness and keeps their moods stable. Singing or gossiping in the jungle also alerts wild animals about the presence of humans, causing them to flee. Singing also works as a safety tune for women in such cases. It also relieves the women from the drudgery of their household chores, as it is a way to express their emotions.

While gathering the siali leaves, they were also descending from the hill. They said they usually climb more of the hill but stop there as they have to go to their agricultural land. On the way down, they collected a few gooseberries, bahada, a bundle of chewing twigs, and dry firewood for their home. Usually, women gather multiple commodities while visiting the forests. The total journey took more than three hours.

After reaching the village, they kept the collected products and walked to their cultivation field to work there.

Women's relationship with the forest extends beyond their material needs. They have a strong emotional connection with the forest because it is a place to relax and express their joys and sorrows. The forest also gives women a break from their domestic chores and mentally prepares them for the rigours of their laborious life. Women have also accumulated considerable ecological knowledge and they know how to use and sustainably manage forest resources. Kamarani Pradhan stated, "We will not abandon our traditional way of life because we have an unseen bond with the forest. We love gathering leaves, tubers, flowers, and fruits from the forest".

5.10 Case study 9

Forests and mountains are sacred for the local Kandha people. They believe that the forests and mountains are the abode of the gods and spirits of their ancestors. If carefully observed, there is a close connection between the Kandha people's survival needs and their belief in mountains and forests. The deities associated with the forest and mountains are important in Kandha theology. In this case study, Surja Malik, a septuagenarian, shared his life in the forest and his devotion to the forest and mountain deity. His narration establishes a connection between Kandha people's daily material needs and the construction of their belief systems.

Surja Malik is a resident of Chahali GP's Karukata village. He and his wife live in a small house on his farm near the village. His son and daughter-in-law stay in his village house. The couple grows horse gram, pigeon pea (locally called "kandula"), maize, and rainy-day vegetables on their agricultural land. However, other family members do all the labour work like ploughing, planting, and weeding, which needs

physical labour, and he and his wife protect the harvest from birds and animals. There are a few mahula trees on his land, from which he and his wife collect mahula flowers and seeds in the summer. Mahula is a significant commercial tree in the Kandhamal district. Women especially engage in the collection and marketing of mahula flowers and seeds. Surjya has planted banana, guava, papaya, lemon, coconut, and drumstick trees in his backyard.

It was the month of September, and the older man was sitting on a rock under a mahula tree on his farm. He pointed his finger towards various hills and identified several mountains: Mandabali, Karukupa, Benjankuti, Bapandi, Nanakuli, and others. Mountain names are traditionally assigned based on their location and features. He said the mountains are like their intimate family members, and the Kandha people respect them. The mountains are the home of their deities and ancestors, who keep an eye on Kandha people's good and bad actions and govern their lives accordingly. Because the mountains exist, the forest, the stream, and the Kandha people are alive. He showed gratitude to the mountains and added, "My ancestors are no more, I am in my final days, and one day my children will die, but the mountains will live forever and protect my people with benevolence and generosity". He added that his ancestors fought many battles to protect the forest and mountains. In exchange, the forest provided them with safety, security, and the means of survival.

Surja was a skilled archer when he was a young. He and his village companions have hunted many animals with bows and arrows. Bushmeat was a significant source of food for the local Kandha people. The forest in those days was dense and abundant with game animals, and hunting was a regular event. The jungle also had large predatory animals like tigers, leopards, wolves, and hyenas. He had often faced a tiger

and a leopard during his stay in the forest, but they never hurt him. Humans are not the natural prey of tigers and leopards; they usually avoid their presence near them. However, Surja said he knows how to tackle the situation if a predatory animal unexpectedly approached him.

Apart from hunting, he used to trap birds from the forest and collect honey. Surja said the Kandha people love to stay in the forest, hunting and gathering food. They never felt hungry or thirsty in the jungle, as plenty of fruits, roots, and other edible things were available there. He said he had scanned the entire forest of his locality in his youth and was well acquainted with all the ways and trails. Although the forest was dense, he never got lost in it. The mountains are a navigational tool for him, enabling him to find himself and the location of his village, and he returned to his village comfortably.

Surja has deep faith in the mountain god and believes that he saves surja from all the troubles in the jungle. The foundation of his religious belief in nature is somehow strongly linked to the material benefits he derives from it. Previously, the Kandhas practised shifting cultivation on hills and worshipped the mountain god for good fortune and plentiful harvest. Mountains have a unique cultural significance in the Kandha tradition as well. The whole Kandha community profoundly believes in the mountain deity and regularly worships to get the deity's blessings.

5.11 Case Study 10

Traditionally, the tribal communities of the Kandhamal district have relied on various types of plants to cure many ailments. The region's forest is home to a plethora of medicinal plants. Some plants are widespread, and many people know their usage. On the other hand, extensive knowledge of the plants and their uses are restricted to a few

people, primarily the Kandha priests, such as the Jani, Jhankar, and Guru. These people acquire the knowledge hereditarily from their forefathers. However, a few non-tribe people have also learned about medicinal plants from these Kandha priests.

The present case study is based on identifying a few medicinal plants found in the Chahali region's forest. Kalingasena Choudhury of Chahali village shared the information. He has a good knowledge of ethnomedicine, and many people come to him to get healed of various diseases. Usually, Choudhary does not charge anyone for medicine, but some pay him according to their will and ability. He learned about medicinal plants and their usage procedure from a guru and some books. However, he refused to reveal his teacher's identity because that custom must be followed to receive knowledge. While collecting the medicinal herbs, the researcher went with him to record the details, including distance travelled, time spent, availability of plants, and the challenges they faced.

The collection of medicinal plants is not a regular job. According to Kalinga, a medicinal plant's effectiveness increases if collected on some selected auspicious days. On the 20th of November 2015 morning, he and his associate Pabitra Kahara were set to go to the forest to collect medicinal plants. Pabitra hails from the Kandha community and has previously assisted Kalinga in collecting medicinal herbs. He carried some cutting and digging equipment with him. Before they started their journey, they purchased a coconut and one packet of incense sticks from a local shop. There was no idea how long it would take them to collect the herbs, as to avail of some rare herbs, they might have to travel far into the forest. So they carried food and water with them.

Before entering the forest, they clean a small place at a foothill to worship the mountain and forest. They perform rituals for the deities by kindling a few incense

sticks and offering the coconut. The purpose of the worship is to seek permission from the deities to collect the required plant and to protect them from mishaps in the forest. It is an example of the sustainable coexistence of nature and the local people through the local belief systems. Most of the tribal communities in Kandhamal have great faith in the mountain and forest deities, and it is customary to offer prayers to them before entering the forest.

The forest path is a narrow, slippery trail filled with rolling boulders. Soil is also fragile, and one wrong step can result in serious injuries. Travelling in those conditions is challenging for someone unfamiliar with hilly terrain. On the other hand, the tricky path and the twittering of the wild birds will distract a newcomer from the fatigue of the journey. Kalinga and Pabitra travelled effortlessly, as they were accustomed to the path. On the way, Kalinga identified many medicinal plants and described their utilities, but he did not collect any of them. He is familiar with the forest and knows where medicinal plants can be found in abundance.

After a tiresome journey of around four hours, crossing several hills and climbing much altitude, they reached a small plain area over a hilltop. The little valley was covered with long grass (more than six feet), and they had to move through it to reach the other side. Pabitra was at the front, holding an axe to make the way, followed by Choudhury and the researcher. Pabitra warned everyone that such grass is an ideal hideout for leopards and pythons. However, with the deliberate effort of Pabitra, all safely crossed the hundred-meter-long grassland. Kalinga said they had reached the place where medicinal herbs were abundant. It was a flat hill cap, and many plants found there were rare and usually not found in the lower areas. The researcher later

found online that some medicinal plants are found mainly in the lower Himalayas. They all sat under a tree for food and water as it was afternoon.

Following the meal, they began collecting medicinal plants. However, before gathering the medicinal herbs, they burned incense and performed rituals to pray to the plants. According to Kalinga, such customs are intended to express gratitude to all plants for sharing their goodness with humans. He described the use procedures of each herb while collecting them. The collection was not challenging as the medicinal herbs are plenteously available there. Kalinga provided details of about twenty-thirty numbers of medicinal plants. Some of them are rare and found only at a certain altitude and in specific places. One of the medicinal herbs, locally known as ‘Giridhini,’ which grows primarily on rocks and large tree trunks without soil, is used to stay hydrated in the forest. The collection took around two hours, and they had little time left to journey back. So they took a shorter but perilous forest trail to climb down from the hills. However, they all reached comfortably to the village before sunset. Some of the medicinal plants collected are listed below:

Rare Medicinal Plants Found in the Chahali area and their Usage

Sl.No	Local Name	Botanical Name	Part Used	Disease Cures
1	Ada, Gada	Zingiber Chrysanthum	Tuber	Snakes, scorpions, and poisonous insect bites
2.	Sugandhi, Anantamool	Hemidesmus indicus	Root, leaf	Mouth infection, stomatitis, herpes, diarrhoea
3	Satabari, Iswarajata	Asparagus racemosus	Root	Diabetes, stomach disorder
4	Masani	Aporosa octandra	Bark, stem	Rheumatism, bone fractures, cuts, wounds, and itches

5	Patra gaja, Hemakedara	Bryophyllum pinatrun	Leaf	Diarrhoea, dysentery
6	Bidinga	Embelia ribes	Seed	Acidity, headache, dizziness, gastric, biles, and low back pain
7	Giridhani	----	Tuber	Taken to cure thirst in the jungle, cures rheumatism
8	Ranga chitaparu, Manjistha	Ruba Cardifolia	Root	Acidity, gastric, rheumatism
9	Patal Garuda, Sarpagandha	Rauwolfia Serpentia	Root	Snakebite, poisonous insect bites
10	Akarakara	Anacyclus Pyrethrum	Flower	Dental pain, headache
11	Hanumanmu li, Avartani	Helicteres isora	Fruit, root, bark	Diarrhoea, dysentery, abdominal pain
12	Aphamara	Achyranthes aspera	Root, leaf	Ringworm, cholera, indigestion, diarrhoea, hair fall, skin diseases
13	Bhuinimba	Andrographis paniculata	Leaf	Skin diseases, intestinal worms, blood purification, itches
14	Simili	Bombax ceiba	Flower, fruit, bark	Stomach diseases, diabetes
15	Chitakutei	Euphorbia hitra	Root, stem, leaf	Candidiasis, itches, boil
16	Bana Kulthia	Tephrosia Villosa	Root	Stomach disorder, cold fever, typhoid

Table No: 5.1 Medicinal Plants found in Field Areas

Collecting medicinal plants from the forest is a challenging and time-consuming job. The collectors should have reasonable knowledge of the availability and locations of the medicinal plants. Many plants in the forest appear similar, and selecting the wrong plant could negatively impact a patient. Therefore, a traditional healer has to be

very careful and experimental in selecting suitable herb species. Furthermore, they should have proper knowledge of the preparations and doses of herbal medicine. In the above table, the botanical names of the plants are derived from secondary sources.

However, the knowledge of traditional medicine is mainly limited to male members only. On the other hand, women have little knowledge about them—particularly limited to the herbs found in the village peripheries. They are deliberately kept away from traditional medicinal knowledge. A person with knowledge of medicinal plants holds high honour and status in Kandha society. Presumably, in a male-dominated society, men do not want to share their societal rank and status with women. That is why men traditionally share their knowledge only with male children. Even though women rely on the forest and have crucial ecological knowledge, they face discrimination and are considered unsuitable to possess much of the traditional knowledge held by men.

5.12 Case Study 11

This case study examines the Vana Samrakshana Samiti's (VSS) functionality in Khajurisahi, a small Kandha hamlet under Uparakhole village in the Tikabali block. The hamlet is situated in a mountain valley around ten kilometres from Tikabali. Local forest officials regard this VSS as one of the best in the Tikabali forest range. The VSS has been operating since 2007. However, the village youth club has protected the village forest since the 1980s and is now merged with the VSS. The researcher here examines the structure, function, and issues of this VSS from women's perspective. The information was collected through group discussions with the SHGs of the VSS. Also, the enumerator of the VSS provided much information.

The VSS was established by involving all the adults, including women of the village as general body members (GB). At the same time, the executive committee (EC) comprised seven men and four women. However, the office-bearing positions, such as the president and secretary, are held by men only. On the other hand, including women in the GB and EC was only to maintain the provisions of the JFM programme. After the VSS was set up, the forest department assigned around 82 hectares of forest land for co-management. The VSS management system was institutionalised following the JFM's guidelines.

The villagers protect the forest by dividing themselves into groups and turning surveillance responsibilities from one group to another. Outsiders' entry into the protected forest is banned, and even villagers were restricted from felling trees, particularly fruit trees, medicinal plants, bamboo, and certain timber species. Penalties were imposed on anyone who cut trees without the VSS committee's permission. The fine is based on the volume of resources extracted and is limited to a thousand rupees. The VSS also focused on the prevention of forest fires. Therefore, the VSS issued notifications in the village, and the other villages settled near the protected forest to avoid igniting fire in the forest to collect forest products. On the other hand, the village women clean under the trees and carefully burn the debris in a separate location while collecting mahula and sal seeds. If fire accidentally breaks out in the forest, the villagers, including women, immediately take action to snuff them out. The villagers claimed they have never ran out of firewood since the forest protection measures were initiated. They further said, protection of forest and restriction on hunting has increased the number of wild animals in their jungle.

The forest department has provided an office cum meeting hall building to the VSS. It has also given other amenities, such as tables, chairs, cotton mats, a steel almirah, a television, a sound system, and culinary equipment to assist the VSS members. A corpus fund was also provided to VSS for its welfare and development activities. Women SHGs of the village also use the office space for meetings and to host awareness programmes. In the early days of VSS, the forest department organised awareness programmes on the significant role of VSS in environmental protection and forest conservation. They also showed them visuals of successful VSS models from other states. All these programmes were made to educate and motivate people to become involved in managing and preserving their forests.

The VSS also hosts the afforestation programme sponsored by the Forest Department. In 2009, approximately seventeen hectares of community-used land was used for planting trees. The following trees were planted in the land: Chakunda, Acacia, Simarouba (*Simarouba glauca*), Karanja (*Millettia pinnata*), Neem, Siali, Gooseberry, and Teak. However, chakunda and teak were given more attention. The Chakunda tree is suitable for firewood, and the VSS has started harvesting it. The VSS distributes the harvested firewood equally among all the VSS member families. The proposed plantation area was used earlier as grazing land, and a few low-income families in the village were also cultivating pulses, maize, and turmeric for survival.

Even though women have less autonomy over the VSS's forest management, they have significant control over non-timber forest products (NTFPs). There are two women's SHGs functioning under the VSS. These SHGs are responsible for collecting and marketing. They are also part of the cluster level forum (CLF), which is constituted by taking 23 SHGs from seven different VSSs in the locality. Two representatives from

each SHG constitute the executive committee of the CLF. It procures the forest products collected by the SHGs, and the forest department facilitates marketing those products. The women said they also discussed various women's and forest conservation issues in the CLF meetings.

Although the VSS has many positive aspects, particularly in conserving forests and giving women a political voice in forest management, it also has drawbacks. One VSS member said that the plantation on community land displaced some families who were farming there, especially women who were growing turmeric. The land was also used for cattle grazing, so the villagers relocated their cattle to other areas. Women who kept goats were particularly affected. However, during the plantation, no effort was made to restore the livelihoods of displaced families. The trees planted are commercial varieties that are useless to them, particularly women.

The VSS is dominated by males and mainly regulated by the forest department. Women are added to the committee to make the programme appear gender-sensitive. Their interest in the forest has largely gone unnoticed, as evidenced by the types of trees planted. Most planted trees produce firewood or timber under the male domain. A few trees, such as siali and gooseberry, are also planted, but that is insufficient to restore women's lost land-based livelihoods.

Giving SHGs complete control over the forest product collection raises concern among non-SHG members who traditionally depend on the VSS-protected forest. It also raises concerns about the sovereign right to collect forest products, which has traditionally been practised.

At last, by providing a few facilities to the village community, the forest department gets control over an already protected forest, a good amount of community

land for the plantation of commercial trees, and an organised community that will provide security to their commercial forest. In addition, the community acts as a source of cheap labour that protects the forest while receiving marginal profits.

5.13 Conclusion

There is a close relationship between Kandha women and forests. Women depend more on them than men for their livelihood. However, men have access to many livelihood options apart from forest resources. They can migrate to other states anytime for work and wages, whereas women make a living from the resources available in and around the village. Although the Kandha community does not migrate easily, tribal youth migration to other states has recently increased. There are numerous reasons for migration, including rising unemployment in local areas, low education, poverty, low agricultural productivity, declining interest in forest-based livelihoods, restrictions on the use of forest resources, shrinking forests, and meeting current lifestyle demands. Long-term migration of men increases women's workload and responsibilities. In addition to their domestic affairs and forest-based livelihoods, women have to juggle time for agriculture and animal husbandry, often taken care of by men. Unfortunately, if something goes wrong with the migrant, it can spell disaster for the entire family, especially the women. An example is Haravati Malika of Case Study 1. In the hill district of Kandhamal, where there are few livelihood options, the forest is a boon to the survival of Kandha women, especially impoverished women. However, they receive unjust remuneration, which is the worst part of the forest-based livelihood.

The forest also safeguards the local tribe from various natural calamities. It provides food during drought and protects them from flash floods and cyclones. Forests also save people from the hot summer by providing a cool breeze, and they keep people

warm in the winter by providing firewood. The forest has also stored numerous life-saving medicinal plants that save the tribal people from many diseases. Although their knowledge is limited to a few remedies, they usually cure people for free. Forests and mountains are also the centres of Kandha culture and belief systems. Their belief system is also intertwined with the conservation of forests.

The Kandha people have established numerous connections with the forest. They believe that the forest provides them sustenance, protection, and spiritual guidance. However, forest management and conservation activities overlooked many of them. The present form of forest management mainly prioritises green cover and commercial plantations. Such thinking would push the Kandha people, especially women, away from the forest in the long term. The Kandha people have developed a close relationship with the forest because of the survival resources available there. This has enabled them to sustain their livelihoods and maintain their traditional way of life. Additionally, it has given them a sense of security and belonging. Natural resources need to be protected and preserved to maintain long-term forest conservation and gain the participation of local people.

CHAPTER 6

Conclusion

6.1 Introduction

Concluding a discussion on a long-standing societal problem that changes and evolves over time is challenging. The situation of a society or a community constantly changes, favourably or adversely, with changing socioeconomic trends and state policies. As a result, problems that persist in the present time may eventually become obsolete or be reconfigured into a different form. Therefore, the conclusions drawn here are subject to debate and critique. It is imperative to acknowledge that future research may provide new insights and perspectives on the topic, leading to revised conclusions.

6.2 Findings

The current study, focusing on the Kandha people of Odisha's Kandhamal district, has examined the Kandha women's association with forests, their contribution in the forest conservation, and the challenges they experience in accessing the forest. The study also critically examines women's participation in forest conservation initiatives and their implications from gender perspectives. Women's issues are prioritised because their relationship with the forest differs from men's, and their problems are deliberately overlooked by policy makers as well as the policy implementing mechanisms.

Kandha people's association with the forest can be better understood through the distinctive geographical setting and socio-economic situation of the Kandhamal district. Kandhamal is a hilly district covered in dense forests and abundant flora and fauna. Approximately 71 per cent of the district's lands are classified as forest land, with forests covering the majority of these lands. The Kandha people are the principal

inhabitants of the district, comprising around half the total population. They were the earliest settlers in the region and acquired the traditional skills necessary for survival in this particular environment. Owing to the undulating geography, limited availability of suitable agricultural land, and low agricultural production, the Kandha people traditionally developed expertise in utilising both the land and the forest for their sustenance. Additionally, their dependence on the land and forests over time has significantly influenced their religious beliefs, culture, and sentimental attachment towards these invaluable resources.

Historically, the Kandha people possessed a considerable degree of autonomy over the land and forests in their region. Even during British rule, they maintained substantial control over these resources, as the region was not subject to the forest policies and laws imposed by the British colonial administration. However, the British forest acts and policy impacted the Kandha people later. Following independence, the forest department gradually expanded its hold on the district's forests, bringing them under its control through surveys and settlements. The Kandha people faced forest and land use restrictions soon after the forest department began enforcing forest laws and policies, losing their autonomy over forests. The legalisation of forests had a detrimental impact on the Kandha people's traditional lifestyle which weakened their social, cultural, and economic structure. They are forced to breach the forest laws and face the department's resentment for getting their necessary materials from the forest.

Before the implementation of forest laws, the Kandha people practised settled and shifting cultivations to survive. The crops cultivated on shifting cultivation lands, including pulses, maize, beans, and millets, provided them with essential and nutritious food. However, since the ban on shifting cultivation, the Kandha people relied more on

the forest to fulfil their food requirements, as settled agriculture alone did not meet their needs.

On the one hand, the modern-day state grabbed the essential resources of the Kandha people, depriving them of their survival. On the other hand, it did nothing significant for their development. For a long time since independence, the region has been isolated from mainstream society, denying the Kandha people access to education, healthcare, infrastructure, roads, communications, employment opportunities, and food security. Providing these facilities could have improved the condition of Kandha people, particularly women, and reduced their stress from being deprived of their survival resources. However, the state concentrated more on urban development, ignoring rural areas, particularly tribal areas like Kandhamal. Even after 75 years of independence of India, the Kandhamal district has not received proper attention from the government. There are a number of remote villages mainly inhabited by Kandha people that have yet to get basic facilities like roads, communication, basic infrastructure, electricity, housing, drinking water, and sanitation provision. The absence of these facilities ultimately affects their access to education, health, market, employment opportunities, and better wages, blocking improvements in their standard of living. The waves of modernisation touched the Kandha people very late and only recently.

The current socio-economic condition of the Kandha people is substandard. The majority of Kandha families live below the poverty line, facing limited access to basic facilities and amenities. They struggle with low wages, a low quality of life, and limited employment opportunities. In these impoverished Kandha families, both men and women work together to sustain their households. They rely primarily on agriculture,

forests, livestock, and wage labour for their livelihoods. In Kandhamal both poor and non-poor people depend on the forest variously. However, while the poor people gather the forest products, the non-poor procure from them.

The Kandha women significantly contribute their labour for the survival of their family. They are the backbone of their family, performing all domestic tasks and significantly contributing to the family's agriculture and economy. Women rely on the nearby forest to gather food, firewood, and varieties of forest product to support their family. They primarily collect fallen wood and cause minimal damage to trees and forests. Kandha women know extensively about various edible roots, fruits, leaves, flowers, nuts, mushrooms, medicinal plants, and bamboo shoots available in the forest. These wild foods significantly contribute to their families' health and nutrition.

Household works are inevitable for women due to existing gender norms of the Kandha society, and the forest helps them carry them out. So, the societal gender role of Kandha women is one of the factors that have shaped the nature of their associations with the forest. Furthermore, the economic contributions of Kandha women through the sales of forest products play a significant role in elevating their position within the domestic sphere and the decision-making process. As they are culturally excluded from owning land, the forest becomes a vital asset for Kandha women to counter male hegemony and achieve self-independence. Their dependence on the forest and holding economic power positively affects the food intake and education of children.

However, within the framework of their subsistence economic practices, the historical dependence of Kandha women on forests for household and economic needs appears crucial. However, in the context of modernisation, globalisation, and the market economy, their reliance on the forest persists due to several factors. These include

residing in remote forest locations, limited employment opportunities in the local area, lack of exposure to external opportunities, limited access to education, challenging financial circumstances, lack of alternative cooking fuel options, and inadequate food availability. It has been observed in the field that when Kandha women avail better work opportunities, even in labour or agricultural sectors, they sacrifice their forest-based collection activities. Additionally, the government's provision of rice, wheat, dal, and other essential food items to the impoverished population has also diminished the necessity for Kandha women to rely on foraging in the forest for sustenance.

Even if the aforementioned facilities are made available in the villages, they cannot entirely eliminate women's reliance on the forest. However, they may reduce their dependency to some extent. In Kandhamal, a significant number of villages are located in close proximity to forests, granting locals easy access. The forest provides abundant raw materials, food resources, fodder, and grazing options, greatly supporting women in contributing to their families' non-cash economy. Although their contributions to the non-cash economy often go unaccounted for and remain invisible, they significantly alleviate the financial burden on families. Therefore, until Kandha women have access to formal job opportunities, their dependence on the forest will persist. Forest gives women employment during the non-agricultural season when work availability is scarce in the region. Furthermore, the forest provides precious service to the Kandha people by providing organic manure to the agriculture land. Women play a significant role in providing organic fertiliser to the crops through cattle. This also economically benefits them by reducing their expenditure on chemical fertiliser. Additionally, organic cultivation promotes the quality food consumption of the Kandha people, particularly children.

Moreover, forests can be better managed and utilised to create employment opportunities for women. Kandhamal's climate is favourable for cultivating a variety of fruits, trees, tubers, spices, and medicinal plants that are in high demand in the market. Efforts can be made to cultivate these resources within the local forests, providing economic support to Kandha women. Such initiatives would not only offer employment opportunities to Kandha women in their own communities but also contribute to the protection of the forest and the environment.

Due to the manifold dependency and vital support system they get from the forest, Kandha women have developed a unique imagination for it. They do not see the forest as an object but a living body adoring with all life supporting components. They have developed a symbiotic relationship with the forest through their unique cultural, religious, and sentimental elements. Before venturing the forest, they seek blessing of the deity established in the forest and hill. They also celebrate their festivals associated with the forests. However, Kandha festivals are mainly constructed on a male-line. Only the male priest can perform the rituals and worship offered to the forest and mountain deities. Kandha women are customarily restricted from worshipping many deities, including mountains and forests. However, they participate in such festivals by arranging worship materials and organising the deity's place. Therefore, even though the forest is culturally important for women, they are more sentimentally attached to it.

The forest serves as a social gathering place for Kandha women, as they go there in groups and interact with each other while gathering forest products. The forest provides a space for both economic and recreational activities for women. During their time in the forest, they share their problems, discuss various socio-political issues, and talk about the well-being of the village. They also gossip, laugh, sing songs, share their

feelings, and enjoy their freedom while collecting forest products. The forest allows them to enjoy their space and express their feelings. Such interactions strengthen their social bonds and facilitate the exchange of information. It also gives them a break from their domestic chores and mentally prepares them for the rigours of their laborious life. Additionally, older women play a vital role in passing down their knowledge of forest resources, sustainable harvesting practises, and ecological wisdom to the younger generation.

Regular interaction with the forest also enables Kandha women to understand their local forest ecology better. They possess critical ecological knowledge of their locality, essential for sustainable forest conservation activities. Using their traditional ecological knowledge, they ensure the sustainable extraction of forest products and promote their regeneration. Women can also predict weather forecasts by observing natural phenomena and the behaviour of wild animals, allowing them to prepare for different situations. For example, women are concerned about their children's health during the fall of leaves in the forest, as this period often brings various diseases and fevers affecting both children and elders. They also predict upcoming rains by observing the activities of earthy creatures and the sounds of the wind from the mountain peaks. They take precautions such as safeguarding food items and firewood and preparing for agricultural activities. Furthermore, Kandha women's traditional knowledge on forest food helps them survival against natural calamities. Thus, they recognise the importance of coexisting with nature.

The Kandha women take proactive measures to preserve the forest, as it directly impacts their practical gender needs, which are necessary for fulfilling their societal gender roles. In the rural areas, they have traditionally collaborated with village

communities to safeguard the forests in their vicinity. Even in villages lacking dedicated forest areas, local inhabitants have traditionally taken steps to protect nearby reserved forests to meet their requirements. The study revealed that women actively assumed responsibility for forest preservation by participating in activities such as extinguishing forest fires, preventing outsiders from felling trees, and engaging in controlled burning of leaves to gather forest products. Women actively participated in conservation efforts in community forest management, which was initiated through village youth clubs. However, despite their significant contributions to traditional forest management and community forest initiatives, women have traditionally been excluded from decision-making. Conversely, men have monopolised control and decision-making power regarding such forests.

When the joint forest management programme included women in the local forest governance, Kandha women saw it an opportunity to achieve their strategic gender needs. The JFM has mandated that half of the general body (GB) and executive committee (EC) members be women. As a result, women play a crucial role in the Vana Samrakshana Samiti (VSS), the implementing institution of JFM in Odisha. They also hold office-bearing positions in many VSSs. Women contribute to VSSs by doing forest conservation activities like patrolling, cleaning the forest floors, making fire lines, supplying water to extinguish forest fires, and participating in afforestation activities. Their participation in the forest protection institution has given them a separate identity and space for political emancipation. It has also ended their alienation from the decision-making process and opened a new platform to achieve their strategic gender needs. Many of the VSS in the study area which is headed by women were doing well for the conservation of the forest.

However, despite women's commendable job in VSS, they face many hurdles. Privileged patriarchal norms often hinder women's participation. Their views and opinions are often overlooked by men and the convener of meetings, who prioritise men's voices. The VSS primarily operates under the ethics of the forest department, which always has a commercial interest in the forest. During afforestation activities under VSS, forest department staffs have never consulted with women's groups before selecting space and tree species for plantation activities. Most of the afforestation activities under VSSs were ended with commercial tree plantation such as teak and eucalyptus. As a result, women will not benefit from those plantation areas. They also lose autonomy over such areas, where they were grazing their cattle and collecting NTFPs. Moreover, women also found that giving preference to valued timber species by eliminating other natural trees reduced the production of certain forest products they collected. Therefore, although the JFM programme enhances women's political participation in forest conservation, it has significantly overlooked their needs, particularly their practical gender needs.

Providing community forest resource rights (CFRR) under the FRA could give tribal people autonomy over their forests and an opportunity to repair their traditional association with forests. However, with the nationalisation of forests, the Kandha people lost their autonomy over them, and their traditional value for forests deteriorated over time. Additionally their traditional village councils are in fragile conditions. In such a case, merely providing them with CFRR over the local forest would not improve forest health and could result in its deterioration. Therefore, an effective mechanism has to be employed to revive Kandha people's traditional relationship with the forests to make the provisions of the FRA fruitful. Furthermore, Kandha women have been traditionally excluded from the activities of village councils. Therefore, a separate

gender sensitive mechanism must be employed to include women in forest governance process and to secure their resources in the CFRR areas.

Even though Kandha women's livelihood and survival are deeply associated with the forest, they face numerous challenges in accessing it. Deforestation is one of the significant challenges that Kandha women have been facing for a long time. It is forcing them to travel far distances to gather their necessary materials. As a result, it is increasing their burden of domestic responsibilities. Resource depletion due to overexploitation of a particular species by government agencies or locals equally affects women. For example, men chopped down the siali creepers from the nearby forest for ropes, which are essential plants for women. Such action pushes women to travel deep into the forest for a particular material, increasing their time consumption. This tendency shows men's careless attitude towards women's dependence on forests. Deforestation and resource depletion have disproportionately affected women, increasing their domestic burden. Many women in the field stated they were gathering forest products from the surrounding forest area earlier; however, they must walk long distances now and spend more time collecting forest products. Deforestation-induced climate change and environmental catastrophe are impacting the Kandha women in multiple ways. Additionally, deforestation has escalated tensions between humans and wild animals, as the latter face challenges in finding food and suitable habitats. As a result, wild animals are increasingly encroaching upon human settlements and causing damage to agricultural fields and forest crops. Due to resource depletion, many women are now abandoning forest-based activities, depriving them of financial independence and deteriorating their position in the family.

Kandha women are increasingly facing the consequences of afforestation activities by the forest department. In the Ragapaju and Adima villages, commercial tree plantation through afforestation activities displaced the women who depended on the land for minor forest products and cattle fodder and later felt unsecured by the activities of wood poachers. The afforestation activities, whether through JFM, CAMPA, or any other programmes, are happening in the community-used land, and women regularly depend on such land. Kandha women have been traditionally restricted from owning land. Therefore they consider the community land and nearby forest as independent sources of survival. However, the forest department deprives them of these resources by planting commercial and exotic trees there. The trees planted by the forest department would not benefit women; instead, they displace them from their traditional resources and make them vulnerable. Furthermore, such plantation activities are happening by scraping the traditional rights of Kandha women over the common lands. Instead of commercial trees, the FD could have secured women's livelihood and rights by planting local trees such as sal, mahula, mangoes, jackfruit, cashew nut, gooseberry, siali, bahada, and medicinal plants.

There is a strong connection between the association of Kandha women with the forest and their positive attitude towards its conservation, as well as their resistance to deforestation, commercial plantations, and alterations in forest species. In the study area, women actively engage in forest conservation due to the forest's crucial role in their survival. Conversely, in numerous villages, women were observed opposing activities that contribute to deforestation and the depletion of their resources.

Forests are critical from an environmental and climate change viewpoint. However, it is equally essential for the survival of millions of forest-dependent tribal

communities, especially women. The government has to implement forest management and conservation strategies that address environmental security while also benefiting tribal communities. Gender-sensitive approaches are required to preserve women's interests and their meaningful participation in forest management initiatives.

The present research applied Vandana Shiva's "ecofeminism" and Bina Agarwal's "feminist environmentalism" theories to examine the relationship between Kandha women and the forest, along with associated issues. Shiva highlights the unique connection between women and nature, intertwining them through the "feminine principle," characterised by reproductive and nurturing qualities. However, the study revealed that the Kandha women's relationship with the forest is primarily driven by their material needs derived from the forest. When the resources they require are depleted or substituted with other species, women demonstrate diminished attachment to that particular patch of forest.

On the other hand, Bina Agarwal's emphasis on "material reality" and "intersectionality" aligns better with the context of Kandha women. The relationship between Kandha women and the forest is not uniform but varies based on intersecting factors. In the field, it was observed that forest-dependent women primarily focused on the survival aspects tied to the forest. Conversely, a few educated women who actively engaged in forest conservation emphasised the environmental and ecological aspects of preserving the forest.

6.3 Suggestions

According to the situations discussed above, the forest is crucial for the survival of the Kandha people in Kandhamal. Therefore, the forest department should take necessary steps to facilitate the Kandha communities in securing their livelihood and cultural

rights over the forest. The department should stop thinking of itself as the absolute authority of the forest and must acknowledge and address the presence of other stakeholders like Kandha communities, particularly women. Natural forests near villages must be preserved and maintained sustainably to benefit local people, especially women. Forest management strategies should prioritise the local people's ecological knowledge to protect the forest. Efforts should be made to re-establish and maintain the symbiotic relationship of the Kandha people with the forest.

Women are highly vulnerable to deforestation and species change in a natural forest. So their issues must be prioritised in forest policies and community-based forest management initiatives. The forest management strategy of VSSs should be reconsidered, and gender mainstream approaches should be incorporated to benefit women and make their participation meaningful. Commercial plantations in community land and local forests should be prohibited because they evict women from their land and forest rights and disrupt the natural ecology of forests. Moreover, commercial tree plantations are not based on the ethics of environmental protection or ecological balance, as they intend to cut down trees for industrial use. Instead, fruit-bearing and medicinal trees such as mango, jackfruit, tamarind, cashew, mahula, harida, bahada, amla, siali, and other fruit-bearing trees would provide a livelihood to locals, particularly women, and contribute to environmental service for a long time.

Despite collecting various forest products, Kandha women encounter challenges when accessing markets and face exploitation by local brokers. As they occupy lower positions in the forest products value chain, they receive low compensation for their labour-intensive work. Therefore, more inclusive measures should be implemented to establish direct links between cooperative societies and the

gatherers. Gram Panchayats can serve as a mechanism and infrastructure to procure, store, and market forest products obtained by gatherers. Regular forest gatherers should be acknowledged and registered under a government account to grant them direct benefits. They should receive training and access to mechanisms for improved collection and utilisation of their forest products. These beneficiaries should also be provided with nets at minimal or no cost, enabling them to gather products more effectively, reducing their effort and time expenditure.

Giving priority to commercial trees endangers forest food, native species, and the species supporting Kandha women financially. Integrating wild food rights with forest protection can enhance the declining symbiotic relationship between the Kandha women and the forest. Incorporating wild food promotion into forest conservation projects could ensure a year-round food supply for women. Identifying and promoting medicinal plants found in the forest within protected areas would allow women to harness their economic benefits. It is important to mobilize and provide support to grassroots institutions like SHGs and VSSs for the cultivation of forest foods. Apiculture could be integrated in the forest conservation activities, as the forest of Kandhamal is a natural setup and suitable ecosystem for that.

The corporate sector is a significant contributor to deforestation and environmental pollution. Tribal communities, such as the Kandha community in Kandhamal, have made sacrifices by giving up their land for forest conservation to compensate for the environmental harm caused by corporations. Therefore, it is essential to establish connections between the corporate sector and community forest conservation groups like VSS and CFM. This linkage is meant to promote education, employment opportunities, and social welfare within the villages as a reward for their

ecosystem services. By engaging in such collaborations, corporations can encourage tribal communities to participate in forest conservation and also can support them economically.

Education is an essential tool for empowering Kandha women and facilitating their pursuit of alternative livelihoods. It plays a crucial role in enhancing their political participation within forest governance institutions, enabling effective forest protection and rational resource utilisation for maximum economic benefit. Education also empowers women by strengthening their bargaining power and expanding their career opportunities. In addition to formal and higher education, Kandha women can greatly benefit from vocational training in agriculture, horticulture, and various crafts. Such educational programs equip them with the necessary skills to harness local resources effectively. Consequently, these educational courses open doors to diverse sectors for Kandha women. Women's education is closely linked to improved health, sanitation, enhanced food intake, and the education of children. Therefore, women's education is indispensable for the overall development of the Kandha community and the preservation of the natural ecology.

Kandha women could earn a good living by gathering forest products, making them economically independent and contributing significantly to their standard of living. But, in the value chain of forest products, they are not adequately remunerated and face significant economic exploitation. For example, the locals said that the brokers pay fifteen rupees per kilogram of dried mahula flower, which they then sell to the distilleries for forty to forty-five rupees. On the other hand, local distilleries produce an average of 1.5 litres of liquor per kilogram of mahula, which costs around 350 rupees. After deducting the costs of transportation, processing, labour, and government taxes,

the factories still make high profits. In comparison, the mahula flower gatherers remain poverty-stricken and do not get their labour charge for harvesting the flower. Similar circumstances apply to other forest-based products like siali plates and sal seeds.

Furthermore, the government can provide material and financial assistance to primary forest product gatherers. For example, if mahula flower gatherers are given low-cost nets at a discount, the women can gather the flowers more quickly. Such incentives will also save their time, relieve their domestic burden, protect them and their products from wild animals, increase the quality of the product, and, most importantly, help reduce forest fires. To economically empower tribal women, appropriate price mechanisms and market linkages for forest products are necessary. Furthermore, the government should facilitate procurement and storage facilities for forest products to provide a reasonable price to the gatherers and prevent the products from being damaged. Such initiatives would benefit the women and encourage them to continue the forest-based occupation.

6.4 Implications and Further Research

In gender studies, gender and forestry are emerging sectors that have received relatively less attention. The current research aims to contribute significant literature on the subject of gender and forestry. However, it should be noted that this research is limited to the Kandha women in a specific area of Kandhamal. Conducting similar studies in other parts of the district or various tribal areas across the country can provide diverse findings and contribute to a more comprehensive understanding of the field.

In Kandhamal, the Kandha community is experiencing rapid modernisation, and there is an increasing trend of education among the younger generation, especially girls. Exploring how these changing scenarios within the Kandha community influence the

relationships between Kandha women and the forest can shed light on new dimensions of knowledge.

Furthermore, the implications of the Community Forest Resource Rights (CFRR) on women in the Kandhamal district have not been thoroughly studied, making it an important area for future researchers to explore. Examining the impact of CFRR on women can provide valuable insights into the challenges and opportunities they face in the context of forest governance and resource management.

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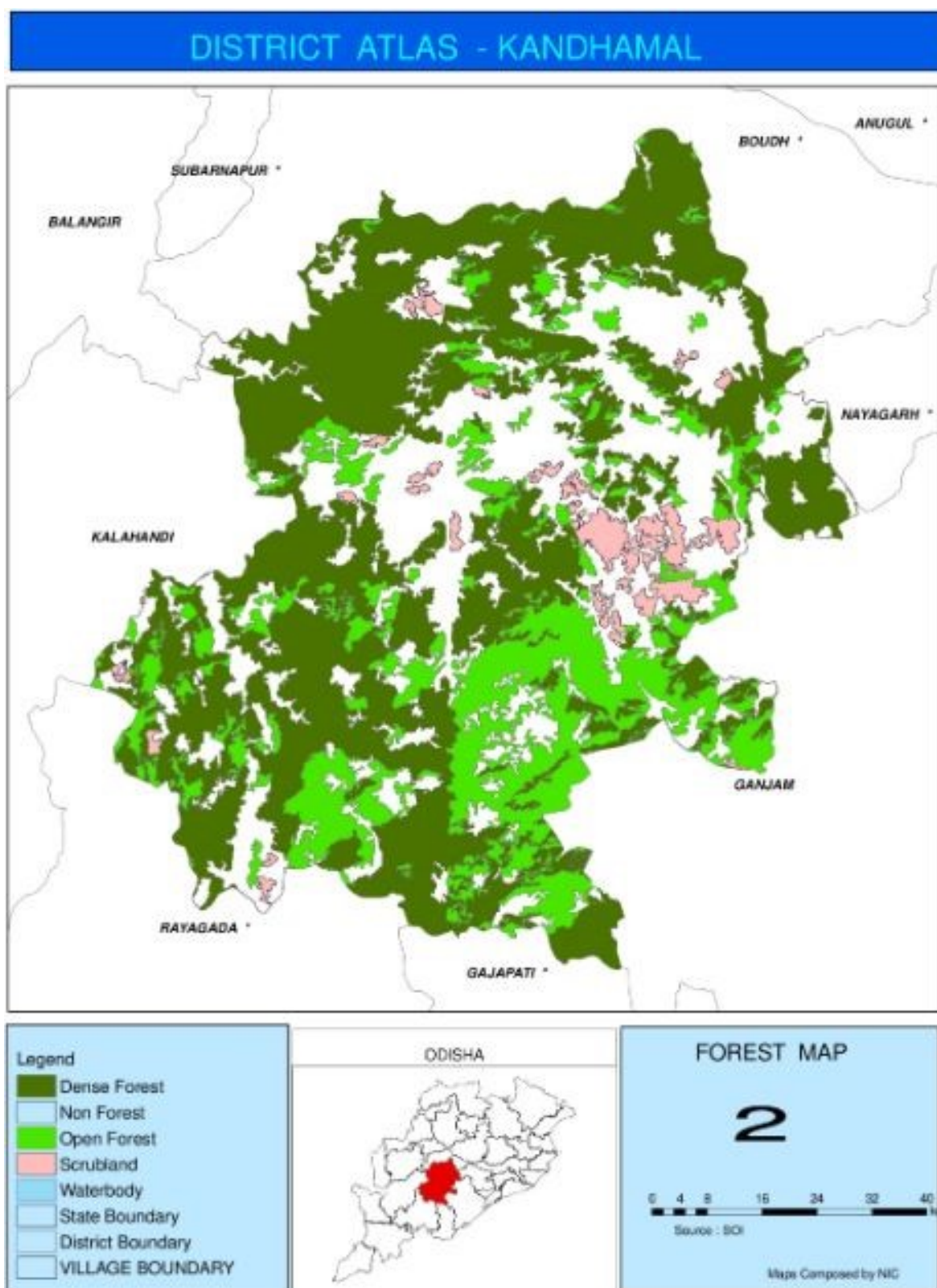
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Forest Coverage of Kandhamal District

Source: District Home Portal (<https://kandhamal.nic.in/>)

Appendix-2

Questionnaire

Women and Forest: A study on Kandhamal district of Odisha

Basic information about the village

1. Name of the village
2. Significance of the name of the village, if any
3. Total population
4. Man and women ratio
5. Educational level of man, women and children
6. Livelihood options in the village
7. Major livelihood of man
8. Major livelihood of women
9. Sources of water
10. Infrastructure and facilities available in the villages: road, electricity, transport, teliconnectivity, school, AWS, common room, VSS room, primary health centre etc.
11. How does the presence or absence of these facilities affected the villagers particularly women.

Basic information of individual respondents

12. Name
13. Age
14. Education
15. Livelihood

General Information of forest

16. How much forest is covered in the village?
17. What are the forest products available in the nearby forest of the village?
18. What are the useful trees available in the forest?
19. What are the fruits trees available in the forest?
20. What are the medicinal plants available in the forest?
21. Where do you get water during staying in the forest?
22. What are the animals staying in the forest?
23. For what purposes local people go to the forest?
24. Do the villagers go for hunting? Do the women participate in the hunting of animals?

Man and forest

25. How often man go to the forest?
26. How was the forest in the past and what are the changes happened now?
27. For what purpose they go to the forest?
28. What are the forest products collect from the village forest?
29. Whether men selling these product in the market?
30. Are men cutting trees for commercial purpose?
31. How do men respond to the outsider interference to the forest?
32. Everyday work schedule of men.

Women and forest

33. How often women go to forest?
34. Who are he women basically go the forest? economic class/age group?
35. Are they going with men or separately?
36. For what purpose they used to forest?
37. What are the forest products they collect form the nearby forest?How far they usually travel to collect the forest product?
38. What are the forest product women collect for economic gain?
39. Where are they selling those products in the market/brokers/co-operative societies/panchayats?
40. Are they getting satisfactory price for their product?
41. Who used to control over the money they earn?
42. Do women cutting trees for selling purposes?
43. Would they like do any other work if provided against the forest based livelihood?
44. What type of work they want to do?
45. What are the food item women collect from the forest?
46. How does those forest food help them to meet women food and nutrition needs?
47. What are raw materials women collect from forest and for what purpose they use them?
48. What are the medicinal plants available in the forest?
49. Do women posses usage knowledge on these medicianal plants?
50. Is there any specific women or men who have extensive knowledge of medicinal plants?
51. How do they use their knowledge? For commercial porpose of the service of the people?
52. How far they travel to collect firewood?
53. How do they treat the forest? (conservative/destructive way)
54. What are the challenges women faces in the forest?
55. Does the forest helpful for the women to combact the poverty?
56. Whom do women think owner of the forest and why?
57. How do women look the presense and absence of forest in their life?

58. How do they look the presence of forest department and their reaction to the activities and behavior of the FD staffs?
59. Everyday work schedule of women

Deforestation

60. Is deforestation occurring in your locality?
61. What are the causes of the deforestation?
62. What are the problems arising because of deforestation?
63. What are the problems women are facing because of deforestation?
64. Who are the people /group/organizations involve in the process of deforestation?
65. How the outsider causing deforestation?
66. Are women involved in deforestation?
67. What is their (local men and women) response to the deforestation

Afforestation

68. Is there any planation taking place in their locality?
69. Are the local people participating in the plantation?
70. How women participate in the plantation programme?
71. What are the organization supporting for the afforestation/
72. In what way these organization supporting them?
73. What are the trees they generally plant?
74. Are those trees helpful to the local people?
75. Are these trees particularly of benefit to the women?
76. What is their (local man and women) response to the afforestation?
77. How do the afforestation programme help or affect the local people in general and women in specific?

Conservation and management of forest

78. Are the villagers initiated any programme for the conservation of forest?
79. Who are the villagers conserving the forest?
80. Are women participating in the conservation of forest? In what way they participate?
81. Do the villagers self-protecting the village forest?
82. What are the role women play in the community forest conservation?
83. Whether the SHGs of the village have any initiative to conserve the forest?
84. How do they contributing?
85. Does the village has government supported forest conservation programme VSS/VFC/or any orther?
86. Who constituted such forest organization and for what purposes?
87. What are the roles of VSS for the conservation of forest?
88. Whether women participate in the VSS committee? What role they play in the VSS?

- 89. Are they holding office bearing position on the VSS?
- 90. Does the VSS helpful or important for women? How?
- 91. What are the obstacle women while participating in the forest conservation activities?
- 92. How does the VSS can helpful for the
- 93. Who generally takes decision over the issues and management of forest?
- 94. Whether women participate in the decision making process?

Practice/Belief/ tradition and forest

- 95. What are the festival celebrated in respond to forest
- 96. How often they worship mountain stream, trees? What is the purpose?
- 97. Folk stories/ folksongs related to forest and environment

Other

- 98. Images and descriptions of forest by the local people
- 99. Their profession and pastimes (traditional and modern) not related to the forest
- 100. The space of opportunities and promise- forest or outside world according to them

Appendix-3

Field Photos



Field Site Villages



Women's Life in Forest



Interaction at the Field



Women Gathering Forest Products

Appendix-4

Publication

South India Journal of Social Sciences, Vol. XXI No. 1

KANDHA WOMEN OF ODISHA: MAPPING SOCIAL WORLD AND THEIR ASSOCIATION WITH FOREST

Asish Kumar Sahu *

Introduction

Odisha is a state located in the eastern part of the Indian sub-continent with a substantial portion of its land being located in the coastal region of Bay of Bengal. This eastern Indian state is also known for its dense forest cover and a diverse wildlife. Consisting of the thick forest area makes this state rich in forest-based resources as a result of which the state has seen the settlement and development of various tribal communities in different forested region within it. Amongst many such tribal communities, the Kandha tribe is an indigenous community that has been residing in the forest areas of Odisha for hundreds of years.

Like many forest-dwelling communities, the Kandha tribe too has developed a deep connection with the forests for they have been feeding them through their resources for ages. They see their relationship with the forests as 'holy' for they have been taking care of all their physical needs like that of providing food, clothing and shelter and protecting them from all hardships of the life. Even as some of the male members of the community gradually started moving out of the forest for some alternate ways of finding livelihood sources - mostly lured by the communities residing in the outside world in the vicinity of these forest-dwelling tribes, the women of the Kandha communities continued their dependency on the forest resources to fulfil the everyday household needs of the family. Their dependency on the forests were based on their needs to obtain resources like water (from the forest springs), natural food items in the forms of leaves, roots, fruits, vegetables etc. and also woods required for firing chulhas in their households to cook food for their family and feed them.

As a result of this, the women of the Kandha tribal communities developed a stronger relationship with the forests compared to the men of their communities. However, in last few years, things have been changing drastically. As one looks deeply into the changing lives and lifestyles of these communities, one can easily find that there has been a growing distance between Kandha women and the forest due to numerous challenges implicated by the modern societies. This paper aims to explore these challenges and implications in

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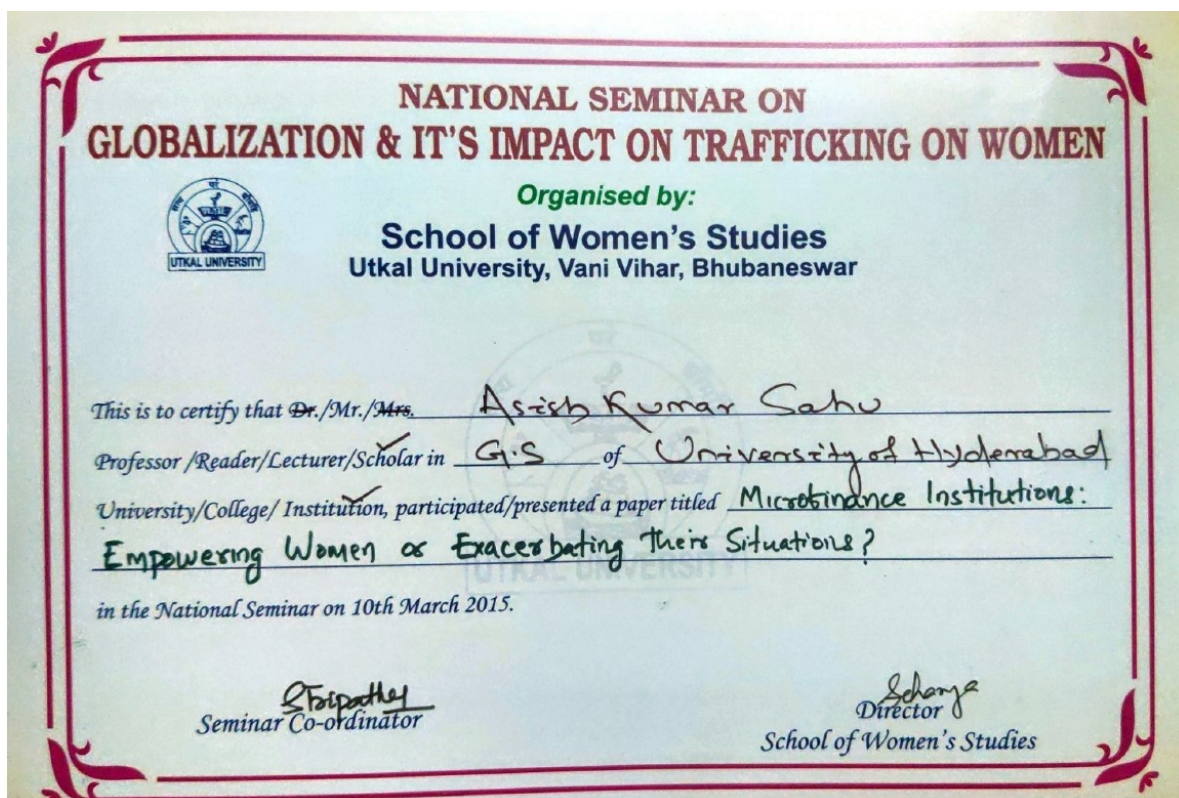
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Seminar Presentation

Presentation-1

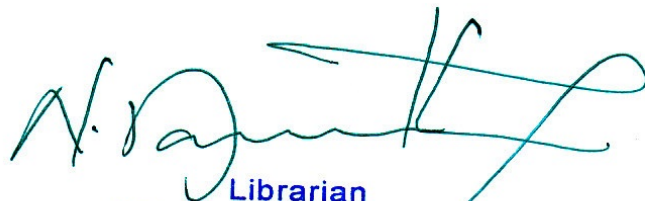


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Forest, Women, and Transition: A Study of Desia Kandha Community of Kandhamal

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