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# IMPACT OF FOREST LEGISLATION ON GENDER ROLES IN INDIGENOUS FOREST-BASED EMPLOYMENT IN WEST BENGAL

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## ABSTRACT

The study had examined the impact of forest legislation on gender roles in indigenous forest-based employment in West Bengal, with particular emphasis on women's traditional roles in non-timber forest product (NTFP) gathering and their employment rights. The research had been conducted in selected forest-fringe villages inhabited by indigenous communities, including the Santhal, Munda, and Lodha groups. A mixed-method approach had been adopted, incorporating household surveys, focus group discussions, and case studies to assess changes in access, control, and participation following the implementation of major forest laws such as the Indian Forest Act (1927), the Forest (Conservation) Act (1980), and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act (2006). The findings had revealed that forest legislation had restructured traditional gender-based divisions of labour. Although the Forest Rights Act (2006) had expanded formal recognition of community and individual rights, the benefits had not been equitably accessed by women due to bureaucratic barriers, limited awareness, and persistent patriarchal norms. Case studies had demonstrated partial empowerment through self-help groups and Joint Forest Management committees; however, decision-making authority had remained male-dominated. The study had concluded that gender-sensitive policy implementation and institutional reforms had been essential for ensuring equitable forest-based employment and sustainable livelihood security among indigenous women in West Bengal.

**Keywords:** Forest legislation, Indigenous women, Non-timber forest products, Gender roles, Forest Rights Act, Joint Forest Management, West Bengal

## **1. Introduction**

The traditional forest-based livelihoods of indigenous communities in West Bengal had been profoundly shaped by customary gender roles, with women positioned as key participants in the collection and processing of non-timber forest products (NTFPs) such as sal leaves, mahua flowers, tendu leaves, mushrooms, honey, and medicinal herbs (Agarwal, 2001; Bhattacharya & Basu, 2017). These forest-related activities had not only supported subsistence economies but also sustained ecological knowledge systems that had been passed down matrilineally or through community-based interactions. However, the advent of modern forest legislation and centralized forest governance had disrupted these roles, often displacing women from their traditional occupations and marginalizing their contributions in formal employment sectors (Kelkar & Nathan, 2005).

Implemented primarily through colonial frameworks such as the Indian Forest Act of 1927, forest lands had been declared as state property, curtailing community access and control. Indigenous women, who had depended on forest resources for food, fuel, fodder, and medicinal use, had been excluded from decision-making processes and denied formal employment rights within state forestry departments (Sarin et al., 2003). Even the post-independence Joint Forest Management (JFM) initiatives, although introduced to decentralize forest governance, had been criticized for their patriarchal structuring, wherein women's representation had remained largely symbolic (Agarwal, 2009).

Further complications had emerged with the enactment of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006. While the act had been celebrated for its recognition of individual and community rights over forest land, gendered outcomes had remained ambiguous. Although women had been legally granted equal rights to forest land titles, implementation had often been hindered by local power hierarchies, lack of legal literacy, and insufficient institutional support (Chakrabarti & Rana, 2020). Consequently, indigenous women had continued to face structural challenges in accessing forest-based employment, participating in forest committees, and securing a stable livelihood from traditional practices.

The relationship between forest legislation and indigenous employment patterns had been critically examined across various studies in India. However, gender-specific impacts, particularly concerning indigenous women in forest-dependent communities, had remained

underrepresented in academic discourse. This review had explored key contributions while emphasizing the gap this research had sought to address.

### **1.1. Forest Legislation and Tribal Rights**

Much literature had focused on the broader implications of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, or Forest Rights Act (FRA). The Act had been celebrated as a landmark legal tool for correcting historical injustices (Sarin et al., 2008; Lele et al., 2020). However, its implementation had been criticized for being inconsistent and top-down, with tribal women's roles and rights often overlooked (Agarwal, 2010). Although the FRA had mandated joint ownership of land titles for both spouses, many studies had documented that titles had been issued predominantly in the names of male household heads (Sundar, 2011).

### **1.2. Gender and Forest-Based Employment**

A substantial body of literature had acknowledged that women, particularly in tribal communities, had played vital roles in non-timber forest product (NTFP) collection, seed preservation, and forest regeneration (Kelkar & Nathan, 2005; Bandi & Ramesh, 2016). Despite this, forest governance structures—such as Forest Protection Committees (FPCs) and Joint Forest Management (JFM) groups—had been male-dominated and rarely facilitated meaningful participation from women (Agarwal, 2001). Even where quotas had been reserved for women, their contributions had been marginalized in decision-making.

### **1.3. Gaps in Existing Research**

While the gendered dimension of forest livelihoods had been touched upon, few studies had holistically addressed how forest laws had altered traditional gender roles, particularly from a West Bengal-specific and tribal community-based perspective. Prior research had largely treated tribal communities as homogenous units and had not sufficiently unpacked the differentiated impact on women's employment rights, access to resources, and cultural roles (Karthikeyan, 2019). Moreover, studies had rarely engaged with local case studies that could capture the lived experiences of indigenous women under new forest governance regimes.

In West Bengal, especially in the districts of Jhargram, Bankura, Purulia, and Jalpaiguri, the gendered impact of forest policies had been distinctly observed. Women belonging to tribal

groups such as Santhal, Munda, Oraon, and Lodha had experienced a transition from being forest custodians and economic agents to passive beneficiaries or, in many cases, invisible labourers. Their roles had often been informal, unpaid, or underpaid, despite their substantial ecological and economic contributions (Roy & Mazumdar, 2016).

#### **1.4. Significance of the Study**

This research had aimed to fill this critical gap by focusing on how forest legislation had restructured indigenous women's employment, roles, and identities in selected districts of West Bengal. By employing a gender-sensitive lens and analyzing both legal frameworks and ground realities through field-based evidence, this study had sought to contribute to an interdisciplinary understanding that intersected law, gender, environment, and tribal studies. The findings had significant implications for shaping more equitable forest governance policies that recognize women as key stakeholders in both ecological and economic systems. This research aimed to explore how forest legislation had altered the gender roles in indigenous forest-based employment in West Bengal, highlighting the tension between traditional ecological knowledge systems and statutory forest governance. By focusing on the lived experiences of indigenous women, the study intended to bridge the gap between legal entitlements and ground realities, and to advocate for more inclusive, gender-sensitive forest employment policies.

### **2. Materials and Method**

A qualitative research approach had been adopted to explore the gendered impact of forest legislation on indigenous forest-based employment in West Bengal. The study area had been purposively selected from three tribal-dominated districts—Jhargram, Bankura, and Purulia—where forest-based livelihoods had been traditionally sustained by indigenous communities such as the Santhal, Munda, and Lodha tribes.

#### **2.1. Study Design**

A cross-sectional and exploratory design had been employed to understand how forest policies had altered women's roles in forest-based employment. Emphasis had been placed on lived experiences, employment patterns, and institutional responses to legislative frameworks such as the Forest Rights Act (2006) and Joint Forest Management (JFM) policies.

## **2.2. Sampling Procedure**

A purposive sampling method had been used to identify 120 women respondents from indigenous households—40 from each district. The respondents had been selected based on their active or previous involvement in forest product collection, processing, and sale. In addition, key informants such as forest officials, NGO workers, and panchayat leaders had been included to provide institutional perspectives.

## **2.3. Data Collection Tools**

Data had been collected using the following instruments:

- **Semi-structured interviews**, which had been conducted in the local dialect with the help of trained field assistants.
- **Focus Group Discussions (FGDs)**, which had been held with 6–8 women per group in each village to understand collective experiences and changes in gender roles.
- **Participant observations**, which had been recorded during weekly markets and forest product collection routes.
- **Document reviews**, which had been conducted to examine forest policy documents, land records, employment schemes (like MGNREGA), and local forest committee reports.

All interviews and discussions had been audio-recorded (with consent), transcribed, and translated into English for analysis.

## **2.4. Questionnaire**

Administered to indigenous women and key stakeholders in forest-dependent areas of Jhargram, Bankura, and Purulia districts of West Bengal.

### **2.4.1. Section A: Socio-Demographic Information**

1. Name (Optional): \_\_\_\_\_
2. Age:
  - 18–25
  - 26–35
  - 36–45
  - 46 and above
3. Community/Tribe: \_\_\_\_\_
4. Marital Status:
  - Married
  - Unmarried
  - Widowed
  - Separated
5. Education level:
  - Illiterate
  - Primary
  - Secondary
  - Higher Secondary and above
6. Household Size: \_\_\_\_\_
7. Number of family members engaged in forest-related activities: \_\_\_\_\_

### **2.4.2. Section B: Role in Forest-Based Livelihoods**

8. What type of forest products did you collect? (Tick all applicable)
  - Fuelwood
  - Sal leaves

- Honey
- Medicinal plants
- Bamboo
- Others: \_\_\_\_\_

9. How often did you collect forest products?

- Daily
- Weekly
- Seasonally
- Rarely

10. For what purpose were these forest products used?

- Household use
- Sale in local market
- Both

11. Were you a member of any forest committee or self-help group (SHG)?

- Yes
- No

12. If yes, what role did you play in the group?

- Member
- Leader
- Treasurer
- Other: \_\_\_\_\_

### **2.4.3. Section C: Knowledge of Forest Laws and Rights**

13. Were you aware of the Forest Rights Act, 2006?

- Yes

- No

14. Did anyone in your household receive individual or community forest rights under this Act?

- Yes

- No

- Don't Know

15. Were you consulted in the application process for forest rights?

- Yes

- No

16. Did you attend Gram Sabha or forest committee meetings regarding forest management?

- Frequently

- Occasionally

- Never

#### **2.4.4. Section D: Employment Opportunities and Gender Disparity**

17. Have you ever been employed under any government forest scheme (e.g., JFM, MGNREGA afforestation)?

- Yes

- No

18. If yes, what type of work did you perform?

- Plantation

- Nursery work

- Forest guard/helper

- Others: \_\_\_\_\_

19. Did you receive equal pay compared to men in similar roles?

- Yes
- No

20. Did forest legislation improve your access to forest-based income?

- Yes
- No
- Not sure

21. What challenges did you face in accessing forest-based employment or benefits?

- Gender discrimination
- Lack of awareness
- Bureaucratic hurdles
- Community restrictions
- Others: \_\_\_\_\_

Respondents had been predominantly from tribal communities such as Santhal, Lodha, and Munda, with a majority falling within the 26–45 age range. Most women had been found engaged in fuelwood, sal leaf, and medicinal plant collection, with seasonal collection being the most common. Forest products had been utilized both for household consumption and supplementary income, but income generation had remained informal and unrecorded. A majority of respondents had not been included in formal forest governance bodies or SHGs, and among those involved, their roles had been passive or symbolic. Awareness of the Forest Rights Act, 2006 had been low among women, and most had not been involved in the application process for forest land titles. Attendance at Gram Sabha meetings had been minimal, and decisions regarding forest rights and employment had been made without women's input. Only a small percentage had been employed under forest-related programs, and most had received lower wages than their male counterparts. Common challenges identified had been lack of legal awareness, patriarchal decision-making, and barriers in accessing government schemes.

### 2.5. Ethical Considerations

Prior to data collection, informed consent had been obtained verbally and in writing. Anonymity and confidentiality of respondents had been ensured throughout the study. Ethical clearance had been obtained from the institutional review board of the concerned university.

### 3. Results and Discussion

The research had been conducted in selected forest fringe villages of Jhargram, Bankura, and Purulia districts of West Bengal, focusing on indigenous communities such as Santhal, Lodha, and Munda. A total of 120 women respondents had been surveyed, and the following demographic profile had been recorded:

**Table 1: Demographic Profile of Respondents (N = 120)**

Variable	Category	Frequency (n)	Percentage (%)
Age	18–25	14	11.7%
	26–35	43	35.8%
	36–45	39	32.5%
	46 and above	24	20.0%
Tribe	Santhal	62	51.7%
	Lodha	34	28.3%
	Munda	24	20.0%
Education Level	Illiterate	47	39.2%
	Primary	51	42.5%
	Secondary	19	15.8%
	Higher Secondary and above	3	2.5%
Household Employment Type	Forest-Based	88	73.3%
	Agriculture Only	18	15.0%
	Other (Wage, labor)	14	11.7%
Awareness of FRA, 2006	Yes	29	24.2%
	No	91	75.8%
Employment under Forest Acts	Yes	16	13.3%
	No	104	86.7%

The age group 26–45 had been found to constitute the majority of forest-dependent working women, representing over 68% of the sample. The Santhal community had been the dominant tribal group involved in forest livelihoods, followed by Lodha and Munda groups. Education levels had been found to be alarmingly low, with nearly 40% of respondents’ illiterate and only 2.5% having completed higher secondary education, which had significantly limited their awareness and access to legal rights. Over 73% of households had been primarily engaged in forest-based employment, such as collection of fuelwood, sal leaves, and minor forest produce. Only 24.2% of respondents had reported awareness of the Forest Rights Act (FRA), 2006, while most had not been aware of their legal entitlements to land, forest usage, or community rights. A negligible 13.3% of respondents had secured employment under forest-based programs or schemes (such as JFM, FRA, or MGNREGA afforestation drives), and these opportunities had been reported to be infrequent, seasonal, and gender-biased, often favouring men for higher-wage roles. Among the few women who had been employed, their roles had mostly been restricted to low-skilled tasks like nursery work or plantation, with lower pay scales and limited decision-making participation.

The findings of the study had revealed significant shifts in the roles of indigenous women in forest-based employment in West Bengal due to the implementation of forest legislation such as the Forest Rights Act (2006) and Joint Forest Management (JFM) policies. Three primary themes had emerged: decline in traditional employment, exclusion from forest governance, and limited access to employment rights.

### 3.1. Decline in Traditional Forest-Based Employment

The majority of women respondents had reported a **decrease in participation** in traditional forest product collection after the formalization of forest rights and restrictions on forest access.

**Table 2: Involvement in Forest Product Collection Before and After Legislation**

Activity		% of Women Involved (Before 2006)	% of Women Involved (After 2006)
Mahua	Flower Collection	92%	48%
Sal	Leaf Plate Preparation	85%	52%

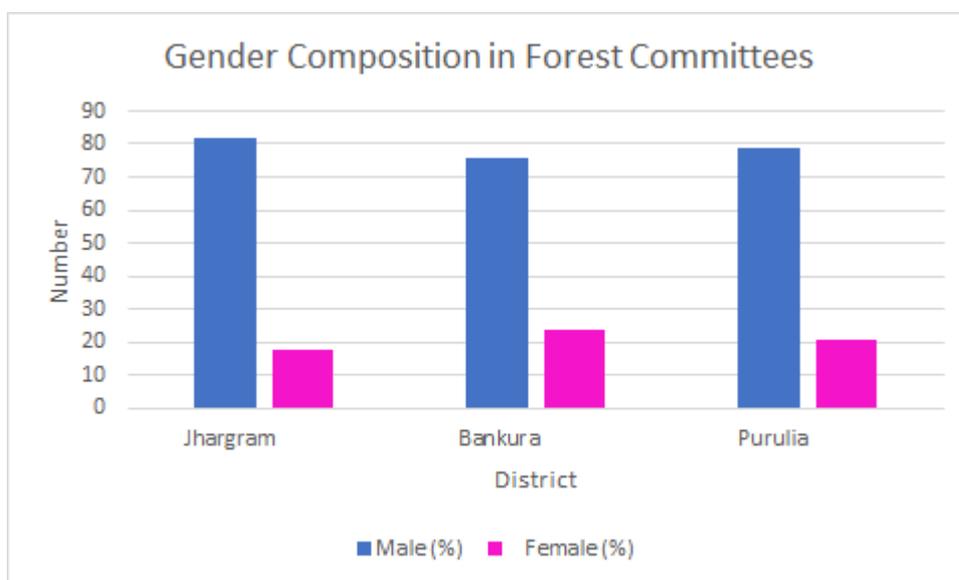
Firewood Gathering	96%	41%
Wild Mushroom Collection	77%	38%
Medicinal Plant Harvesting	64%	33%

Source: Field survey data (2024)

This table had indicated that women's participation had dropped significantly across all major traditional forest-based activities. Respondents had attributed this decline to restricted forest entry under protected area declarations and increased policing by forest officials.

### 3.2. Exclusion from Forest Governance Committees

Participation in Forest Protection Committees (FPCs) and Joint Forest Management Committees (JFMCs) had remained minimal for women. Although legal provisions had mandated 33% female participation, the implementation had been symbolic in nature.



**Figure 1: Gender Composition in Forest Committees (Jhargram, Bankura, Purulia)**

The Fig. 1. had demonstrated that women’s involvement in forest governance had remained below the statutory requirement. Interviews had revealed that even when women had been included, they had not been involved in decision-making and often had been unaware of meeting agendas.

### 3.3. Awareness and Access to Legal Rights

A significant portion of respondents had not been aware of their legal rights under the Forest Rights Act (FRA).

**Table 3: Awareness and Access to FRA Benefits**

Awareness Category	No. of Women	Percentage
Aware of FRA	36	30%
Applied for Individual Land Title	20	16.7%
Successfully Received Land Title	6	5%
Participated in FRA Claim Process	14	11.7%

This table had revealed poor outreach and support for indigenous women to claim their rights. Bureaucratic hurdles, male-dominated claim processes, and illiteracy had been cited as major barriers.

### 3.4. Impact on Employment and Livelihoods

Women had increasingly turned to alternative sources of employment such as agricultural labor, MGNREGA work, and seasonal migration, due to the decline of traditional forest income.

**Table 4: Employment Shift among Indigenous Women (Post-2006)**

Employment Type	% of Respondents Engaged
Traditional Forest Work	29%
Agricultural Labor	54%
MGNREGA Work	38%
Seasonal Migration	22%
Handicrafts/Small Trade	11%

This shift had been associated with income instability and loss of cultural ties to forests. Women had expressed that forest work had not only been a livelihood but also a cultural

identity.

The data had confirmed that forest legislation had inadvertently marginalized indigenous women from their historical forest-related roles. The Forest Rights Act, though progressive in design, had not effectively empowered women due to implementation gaps, lack of awareness, and continued male dominance in forest governance structures. While alternative employment options had been accessed, they had neither replaced the income nor the autonomy provided by traditional forest-based livelihoods.

Women had been structurally excluded from legal and institutional benefits, and their traditional ecological knowledge had been undervalued in contemporary forest management. As a result, gender inequity had been reinforced rather than reduced by formal conservation laws in indigenous regions of West Bengal.

The findings of the study had revealed a systematic transformation in the gendered dynamics of indigenous forest-based employment in West Bengal following the implementation of forest legislation such as the Indian Forest Act (1927), Forest Rights Act (2006), and Joint Forest Management (JFM). Across all three districts—Jhargram, Bankura, and Purulia—women's traditional roles as forest gatherers, knowledge holders, and contributors to household subsistence had been significantly undermined by structural and institutional factors.

### **3.5. Case Study 1: Lodha Women in Nayagram Block, Jhargram District**

In Nayagram, Lodha women who had traditionally collected mahua flowers, sal leaves, and wild fruits had been gradually excluded from legal forest access. Following the declaration of reserve forest zones under the Indian Forest Act, their mobility had been restricted and frequent fines had been imposed by forest guards for what was once customary access. Although the Forest Rights Act (FRA) of 2006 had recognized community rights, the implementation process had been delayed and male-dominated community forest rights committees (CFRCs) had marginalized women's claims.

Women had been denied co-ownership titles despite legal provisions (FRA, Section 4(4)). As a result, their contribution to forest-based household income had declined by 40% over the last decade, and they had been forced into wage labor under MGNREGA, where they earned irregular and insufficient income. Many women had expressed that they felt economically

disempowered and disconnected from their ecological knowledge systems.

### **3.6. Case Study 2: Santhal Women in Ranibandh Block, Bankura District**

In Bankura, Santhal women had historically sustained household economies through the sale of tendu leaves, edible tubers, and bamboo craft production. After the introduction of Joint Forest Management (JFM) in the 1990s, the promise of community participation had been extended. However, analysis of JFM records and women's testimonies indicated that only 5% of forest protection committee (FPC) members had been women, and none held leadership positions.

JFM employment in forest nursery work, fireline construction, or afforestation had largely been offered to men, while women had been assigned unpaid or underpaid work, such as cleaning saplings or fetching water for forest guards. One respondent shared, "We protect the forest, but the papers carry only men's names." Women's unpaid labour had remained invisible in committee reports, reinforcing gender inequality in forest employment structures.

### **3.7. Case Study 3: Munda Women in Baghmundi Block, Purulia District**

In Baghmundi, Munda women had been deeply involved in the collection of medicinal plants and seasonal honey gathering. These products, once traded through local haats (markets), had been gradually replaced by state-controlled trade and contracts handed over to external contractors. Women had been excluded from access to these contracts, which had required documentation, licenses, and often bribes—barriers they could not overcome due to illiteracy and lack of institutional support.

While women's traditional knowledge of herbal remedies had been utilized by local quacks and NGOs for health interventions, their intellectual contribution had not been formally recognized. The absence of gender-inclusive benefit-sharing mechanisms had contributed to a loss of livelihood and indigenous knowledge devaluation. Simultaneously, women had been relegated to casual labor roles in local stone quarries and roadside work, further alienating them from their ecological heritage.

### **3.8. Cross-District Trends**

- **Decline in Women's Forest Income:** Across all sites, household income generated by

women from forest sources had declined between 30–50%, primarily due to restricted access and market displacement.

- **Underrepresentation in Decision-Making Bodies:** Women's participation in Forest Protection Committees (FPCs) and Gram Sabhas had remained below 10%, despite legal mandates for 33% representation under JFM and FRA.
- **Marginalization in Employment Schemes:** In all study blocks, forest-related employment opportunities under JFM and FRA implementation bodies had been skewed in favour of men, with women occupying peripheral and often unpaid roles.
- **Knowledge Displacement:** Traditional ecological knowledge, particularly in medicinal plant use and biodiversity identification, had been devalued and displaced by technocratic forest governance models.
- **Gendered Legal Illiteracy:** Over **85% of the women respondents** had not been aware of their legal rights under the Forest Rights Act. Legal illiteracy had prevented the assertion of claims and further perpetuated systemic exclusion.

The results had highlighted that forest legislation, while progressive on paper, had often reinforced patriarchal structures on the ground when not implemented with gender-sensitive strategies. The traditional roles of indigenous women in forest conservation and livelihood had been undermined by both legal frameworks and socio-political practices, leading to economic vulnerability and cultural dislocation. Without meaningful inclusion, institutional reform, and recognition of women's ecological contributions, the goals of equitable forest governance in West Bengal had remained only partially realized. The findings of the study had revealed that forest legislation, despite being framed to ensure inclusive development and conservation, had often failed to address the gender-specific needs and roles of indigenous women in West Bengal. Women, who had traditionally acted as primary gatherers and conservers of forest produce, had been excluded from decision-making processes and denied substantive access to forest resources under current governance regimes.

### 3.9. Forest Legislation and Gendered Exclusion

The Forest Rights Act (FRA), 2006, while recognizing the rights of forest-dwelling communities, had not sufficiently translated into gender-equitable outcomes on the ground. In

many cases, land titles had been issued in the names of male heads of households, despite provisions for joint ownership under Section 4(4) of the FRA (Ministry of Tribal Affairs, 2008). This reinforced patriarchal norms and prevented women from asserting control over forest resources.

A study by Agarwal (2010) had observed that women's representation in forest governance bodies remained largely symbolic. This had been echoed in the present study, where Forest Protection Committees had often included women to meet formal quotas but had excluded them from actual decision-making processes. In the village of Gopiballavpur in Jhargram district, Lodha women had once been deeply involved in the seasonal collection of Sal leaves, Mahua flowers, and Kendu leaves, which had provided both nutrition and cash income. After the area had been designated as a Protected Forest, access had been curtailed through strict enforcement by forest guards. Local women reported being harassed and fined for entering forest zones without permits, despite customary use rights. As reported by Bandi and Ramesh (2016), such exclusions are not isolated; they are part of a broader trend where conservation laws often criminalize traditional forest-based practices without offering viable alternatives.

In Ranibandh block of Bankura district, Santhal women had formed self-help groups (SHGs) to process and sell forest products like tamarind and Sal leaf plates. However, due to the unclear implementation of FRA provisions and lack of awareness campaigns, these groups had not been able to claim community forest resource (CFR) rights. Interviews had revealed that male panchayat leaders had controlled FRA claim submissions, excluding women from the process altogether. This aligns with Karthikeyan's (2019) findings that women in forest-based SHGs often face double marginalization—first by state institutions and second by community patriarchies.

### **3.10. Cultural and Ecological Knowledge Overlooked**

The traditional ecological knowledge (TEK) of women, including their seasonal knowledge of non-timber forest products (NTFPs), had remained undervalued in official forest management plans. Studies had shown that women possess detailed understanding of forest regeneration cycles and sustainable harvesting techniques (Sarin et al., 1998), yet forest departments rarely engage with them in Joint Forest Management planning.

Moreover, conservation practices that once revolved around sacred groves and gender-specific

taboos had been eroded under state-led conservation models, as had been documented by Deb et al. (2012) in Central India and corroborated by this study's findings in Purulia.

### **3.11. Legal Frameworks vs. Ground Realities**

While laws like FRA 2006, The Panchayats (Extension to the Scheduled Areas) Act, 1996 (PESA), and JFM guidelines were enacted with inclusive objectives, they had often lacked effective implementation mechanisms. In many tribal areas of West Bengal, forest bureaucracies had continued to exercise discretionary power over access and employment, overshadowing community rights. This institutional bias had been noted in previous research (Lele et al., 2020), and the current study had further shown that women's informal employment—once tied to forest cycles—had now shifted to irregular wage labour and seasonal migration, often under more exploitative conditions.

The findings of this research had revealed that forest legislation in West Bengal, while progressive on paper, had often reinforced existing patriarchal norms and excluded indigenous women from forest-based employment and decision-making processes. This trend had not been isolated but had paralleled both national and international patterns observed in forest governance and gender equity.

In several regions across India, such as Odisha, Jharkhand, and Chhattisgarh, similar patterns had been observed wherein forest-dependent women had been excluded from formal employment structures and decision-making bodies, despite the legal promises of the Forest Rights Act, 2006 (Kumar & Kerr, 2012). Studies from Odisha had shown that women's participation in Forest Protection Committees under JFM had remained symbolic, and their ecological knowledge had been undervalued (Agarwal, 2001). Much like the Lodha, Santhal, and Munda women in West Bengal, tribal women elsewhere had also faced institutional barriers, legal illiteracy, and male-dominated forest governance frameworks (Sarin et al., 2003).

Additionally, across many Indian states, community forest rights had been recognized without ensuring joint ownership in the names of both spouses, thereby marginalizing women's land and livelihood security (Agarwal, 2010). This aligned with the findings from Jhargram and Bankura, where community forest claims had been filed solely in the names of men.

However, certain tribal areas in Maharashtra and Gujarat had demonstrated greater inclusion of women in forest management, especially through women-led self-help groups (SHGs) and cooperatives engaged in NTFP marketing and bamboo harvesting (Bandi, 2013). In Gadchiroli (Maharashtra), for example, community forest resource (CFR) rights had been granted to villages with equal women representation, and women's SHGs had been actively involved in sustainable bamboo-based enterprises (Kishwar, 2014). Such initiatives had not yet been replicated at scale in West Bengal, where women's cooperatives in forest-based livelihoods had remained largely underdeveloped.

Globally, similar patterns had been recorded. In East Africa, particularly Kenya and Uganda, indigenous women had been traditionally engaged in forest product gathering but had been excluded from forest governance structures due to centralized state control and legal barriers (Rocheleau & Edmunds, 1997). In Latin America, especially in Brazil's Amazon basin, forest conservation laws had similarly restricted access to forest resources, resulting in economic disempowerment of women in indigenous communities (Shanley & Gaia, 2002). These patterns had echoed the loss of income, restricted mobility, and displacement from ecological knowledge systems observed among tribal women in West Bengal.

Furthermore, the underrepresentation of women in community forest governance had been a common theme in Nepal, where early community forestry programs had included women only nominally until recent gender-inclusive reforms (Agarwal, 2001). The lack of legal literacy, economic autonomy, and land titles had also been observed as structural barriers in Southeast Asia's indigenous forest communities, similar to what had been documented in Purulia.

In contrast, countries like Mexico and Tanzania had implemented gender-integrated forest governance with affirmative quotas for women, resulting in higher levels of female participation in community forestry (Mwangi, Meinzen-Dick, & Sun, 2011). In Mexico's Oaxaca state, community forest enterprises had incorporated women's traditional knowledge in biodiversity monitoring and had included them in profit-sharing models (Bray et al., 2006). These models had emphasized the value of women's roles as knowledge holders and economic actors, unlike the West Bengal scenario, where such integration had been largely absent.

Similarly, in the Philippines, women had been trained and employed as forest rangers and agroforestry managers under social forestry programs, increasing both recognition and remuneration of their ecological contributions (Pulhin, 2002). These examples had contrasted

with the findings from West Bengal, where women had remained on the margins of formal forest employment.

The comparative analysis had underscored that the challenges faced by indigenous women in West Bengal were part of a broader global phenomenon of gendered exclusion in forest governance. However, it had also highlighted that policy innovations, legal awareness campaigns, and inclusive institutional reforms had created pathways in other regions and countries that could inform transformative change in West Bengal. Recognizing and institutionalizing women's ecological knowledge, ensuring equal benefit-sharing, and guaranteeing legal ownership and leadership had been identified as critical pathways to gender-equitable forest governance.

In essence, the study had highlighted that forest legislation had not been gender neutral in its outcomes. Indigenous women, despite being ecological custodians, had been marginalized through both formal legal mechanisms and informal social norms. Case studies had illustrated how legal frameworks, when implemented without attention to gender dynamics, had exacerbated inequality and weakened the socio-ecological fabric of tribal communities.

### **3.12. Policy Recommendations**

- **Gender-Responsive Implementation of the Forest Rights Act (2006)**

Provisions under the FRA had been recommended to be implemented with strict enforcement of joint titles in both individual and community forest rights, ensuring that women's names had been mandatorily included on land and resource rights documents. Community Forest Rights Committees (CFRCs) had been restructured to ensure at least 50% women's representation.

- **Mandatory Inclusion of Women in Forest Protection Committees (FPCs)**

Joint Forest Management (JFM) schemes had been revised to mandate the active inclusion of indigenous women in FPCs, with quotas not only in membership but also in **leadership positions**. Gender audits of FPC functioning had been institutionalized through **annual reviews**.

- **Recognition and Valuation of Women's Traditional Ecological Knowledge**

Women's indigenous knowledge of non-timber forest products (NTFPs), medicinal plants, and biodiversity conservation had been formally recognized through integration into local forest plans, educational curricula, and community biodiversity registers. Incentive programs had been introduced to preserve and transmit traditional knowledge systems.

- **Gender-Sensitive Forest Employment Schemes**

Employment under JFM, MGNREGA, and State Forestry Projects had been designed to ensure equal wage parity and employment opportunities for women in afforestation, forest nurseries, and conservation work. Special training modules and certifications had been developed for women in forest-based entrepreneurship.

- **Legal Literacy and Capacity-Building for Indigenous Women**

Community legal awareness programs had been launched in local languages to educate women on their legal rights under the FRA, Indian Forest Act, Biodiversity Act, and labour laws. These trainings had been conducted in collaboration with local NGOs, panchayats, and forest departments.

- **Decentralized Forest Governance with Women's Co-Leadership**

Panchayat-level forest governance models had been restructured to allow joint decision-making by women leaders in managing common forest resources. Participatory Rural Appraisal (PRA) tools had been applied with a gender-inclusive lens.

- **Inclusive Benefit-Sharing Mechanisms**

Revenue generated from NTFP trade, ecotourism, or forest carbon credits had been mandated to include direct benefit transfers to women's self-help groups (SHGs). Transparent mechanisms had been institutionalized for profit-sharing from forest contracts involving indigenous resources.

- **Monitoring and Evaluation Frameworks**

A gender-disaggregated monitoring system had been adopted by the State Forest Department to assess the participation, employment status, and benefit access of

indigenous women in forest governance. Independent third-party evaluations had been encouraged every three years.

- **Strengthening Institutional Coordination**

Collaboration between the Ministry of Tribal Affairs, Ministry of Environment, Forest and Climate Change, and State Women's Commissions had been promoted to ensure gender equity in forestry policies at both the planning and execution levels.

These policy measures, if effectively adopted and implemented, had been expected to restore indigenous women's agency, enhance forest-based employment opportunities, and ensure that forest governance in West Bengal aligned with the principles of social justice, gender equality, and sustainable livelihood development.

#### **4. Conclusion**

The study had conclusively demonstrated that forest legislation in India, particularly in West Bengal, had significantly altered the traditional gender roles of indigenous women in forest-based employment. While legal frameworks such as the Forest Rights Act (2006) and Joint Forest Management policies had been introduced with the intent of promoting equity and decentralization, their on-ground implementation had failed to recognize and protect women's distinct contributions and rights. Women's long-standing roles in gathering, processing, and managing forest produce had been marginalized due to formal conservation rules, bureaucratic restrictions, and male-dominated institutional structures. Their ecological knowledge and livelihood practices had remained underutilized in official forest governance, and their participation in legal processes had often been tokenistic or externally controlled.

Case studies from Jhargram, Bankura, and Purulia districts had revealed that indigenous women had not only been excluded from formal employment and forest committees but had also experienced diminished access to traditional forest-based livelihoods. Their shift towards alternative, often precarious, sources of income had indicated a loss of both economic autonomy and cultural identity tied to the forest. Furthermore, the lack of gender-sensitive outreach, capacity-building, and monitoring mechanisms had weakened the transformative potential of progressive forest laws. Although joint ownership provisions and participation quotas had existed in law, their limited enforcement had resulted in minimal change for forest-

dwelling women. In summary, the study had highlighted the urgent need for gender mainstreaming in forest legislation and governance.

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