

Role of Tribal Women in Biodiversity Conservation in North East India with Special Reference to Assam: An Eco-Feminist Approach

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Abstract: This paper attempts to explore the critical yet often overlooked role of tribal women in biodiversity conservation in North East India, with a specific focus on Assam. Drawing upon an eco-feminist framework, the study highlights how the intersection of gender, ecology, and indigenous identity shapes environmental practices in tribal communities such as the Mishing, Bodo, and Karbi. These women are deeply embedded in the stewardship of local ecosystems, engaging in sustainable practices such as wetland management, agroforestry, seed preservation, and the protection of sacred groves. Their knowledge is transmitted through oral traditions, songs, rituals, and hands-on labor, forming a living body of ecological wisdom. Despite their significant contributions, tribal women remain largely invisible in state-led conservation efforts and environmental policy-making. Modern development, deforestation, displacement, and climate change continue to threaten both biodiversity and the socio-cultural systems that sustain it. Additionally, the erosion of traditional ecological knowledge among younger generations poses a serious challenge to long-term conservation. By using secondary sources, ethnographic literature, and a thematic analysis grounded in eco-feminist theory, this study argues for the urgent need to recognize and integrate the roles of tribal women into formal conservation frameworks. It advocates for community-led, gender-inclusive, and culturally sensitive environmental governance models. Ultimately, this research positions tribal women not merely as resource users but as custodians of biodiversity and agents of ecological resilience in Assam's diverse landscapes.

Keywords: Eco-feminism, Tribal women, Biodiversity conservation, Indigenous knowledge, Assam

Introduction:

The relationship between indigenous communities and their surrounding ecosystems is deeply symbiotic, often structured around traditional ecological knowledge (TEK), spiritual beliefs, and subsistence practices. In this dynamic, tribal women have historically played an indispensable role, acting as stewards of biodiversity through their everyday interactions with land, water, and forests. Nowhere is this more evident than in North East India, and particularly in Assam, a region marked by remarkable ecological and cultural diversity. With over 30 tribal communities and a range of ecosystems—ranging from wetlands to forests and hills—Assam presents a rich context for studying gendered environmental engagement (Das & Pegu, 2020).

In recent years, eco-feminism has emerged as a powerful theoretical lens for understanding how environmental degradation and gender oppression are interconnected. Eco-feminist theorists argue that patriarchal structures that dominate nature also marginalize women, especially those in rural and indigenous settings (Sharma, 2019). Within this framework, the lived experiences of tribal women in Assam illustrate a form of resistance and resilience that not only sustains biodiversity but also challenges prevailing gender hierarchies. These women actively engage in biodiversity conservation through practices such as shifting cultivation, wetland management,

seed banking, and the preservation of sacred groves. Their roles, though vital, are often overlooked in both academic literature and policy frameworks.

In Assam, communities like the Mishing, Bodo, Karbi, Dimasa, and Rabha have long histories of ecological stewardship that are deeply gendered. Women are involved in the cultivation of traditional crops, the collection of medicinal plants, the maintenance of home gardens, and the conservation of local seed varieties (Choudhury & Deka, 2021). Through oral traditions, folktales, and rituals, knowledge is passed from one generation to another, reinforcing cultural identity and ecological ethics. However, such contributions are often seen as informal or invisible within state-centric conservation efforts.

The contemporary conservation paradigm in India has largely been technocratic and top-down, often displacing local practices with scientific forestry and exclusionary protected area policies. These approaches have not only alienated indigenous communities but have also erased the nuanced gender roles that sustain local ecosystems (Sen & Barman, 2022). In contrast, community-led conservation offers a more participatory and context-sensitive approach, which aligns with both biodiversity goals and social equity.

This paper seeks to explore the intersection of eco-feminism, tribal identity, and biodiversity conservation in Assam. Using qualitative data from secondary sources and ethnographic studies, it focuses on how tribal women's knowledge systems, labor, and cultural practices contribute to ecological sustainability. The research is particularly concerned with how these roles can be better recognized, protected, and integrated into formal conservation discourse. The paper positions tribal women not just as passive beneficiaries of natural resources but as active agents of biodiversity conservation and ecological justice. Their work, often grounded in sustainability, reciprocity, and care, offers vital lessons for reshaping conservation governance in Assam and beyond.

Purposes of the Paper:

- a. To explore the role of tribal women in Assam in conserving biodiversity through indigenous knowledge systems, cultural practices, and daily ecological engagement.
- b. To analyze these gendered environmental roles through an eco-feminist framework, highlighting the intersection of patriarchy, ecology, and tribal identity.
- c. To identify the challenges and policy gaps that hinders the recognition and integration of tribal women's contributions into formal biodiversity conservation strategies.

Literature Review:

Eco-feminism, emerging in the 1970s and 1980s, highlights the parallels between the exploitation of nature and the subjugation of women, particularly in non-Western, indigenous, and rural contexts. Foundational scholars such as Vandana Shiva (1989) and Maria Mies (1993) argue that women, especially those in agrarian and forest-dependent societies, possess a profound ecological consciousness rooted in care, interdependence, and subsistence ethics. Eco-feminist thought critiques patriarchal capitalism for commodifying both women and the environment, emphasizing instead the importance of traditional ecological knowledge and grassroots environmental stewardship.

In the Indian context, eco-feminism finds strong resonance among tribal communities where women's lives are closely linked to the natural world. Shiva (1993) has argued that Indian women's environmental practices, such as seed preservation, forest protection, and water conservation, are forms of ecological resistance. These ideas have been further expanded by scholars like Bina Agarwal (2010), who emphasizes the need to go beyond symbolic representations of women in environmental discourse and to examine their agency and participation in decision-making processes.

Assam, located in the Indo-Burma biodiversity hotspot, is home to a wide variety of tribal groups such as the Mishing, Bodo, Karbi, and Rabha. These communities have long practiced sustainable land-use systems like jhum (shifting cultivation), agroforestry, and wetland management, supported by intricate knowledge systems passed down through generations (Boruah & Das, 2017). Tribal women, in particular, play vital roles in

conserving seed varieties, cultivating medicinal plants, and preserving sacred groves. However, their contributions are often overlooked in mainstream conservation models that prioritize technocratic interventions over local knowledge.

Ethnographic studies in Assam have revealed how women's environmental roles are embedded in everyday cultural practices—festivals, rituals, songs, and folklore—which serve as vehicles for ecological knowledge transmission (Hazarika, 2018). Yet, conservation policies in India have historically marginalized these roles. The Forest Rights Act (2006) and other community-based forest management programs often fail to explicitly acknowledge the gendered nature of environmental labor and decision-making. As a result, tribal women continue to be excluded from formal conservation planning, despite their frontline involvement in biodiversity protection.

Mainstream conservation in Assam has largely followed a top-down approach that favors scientific forestry, wildlife protection laws, and national park-centric models. These strategies, while valuable for preserving charismatic fauna and forest cover, often ignore the socio-ecological realities of tribal populations. Furthermore, they risk displacing traditional practices that have long contributed to ecological balance. Scholars argue that a shift toward inclusive, feminist, and community-centered conservation is essential for sustainable outcomes (Saikia, 2020).

Thus, the literature reveals a growing recognition of tribal women's role in biodiversity conservation, but also a pressing need to bridge the gap between indigenous knowledge and institutional conservation frameworks.

Theoretical Framework:

This study draws upon eco-feminism as its primary theoretical framework to understand the roles of tribal women in biodiversity conservation in Assam. Eco-feminism is an interdisciplinary approach that links ecological issues with feminist theory, emphasizing the parallel and interrelated oppressions of women and nature. It challenges the patriarchal logic that both women and the environment are subordinate and exploitable, arguing instead for a vision of social and ecological justice that centers care, reciprocity, and sustainability (Warren, 2000).

At its core, eco-feminism critiques dualisms embedded in Western thought—man/woman, culture/nature, reason/emotion—that associate women with nature in a negative, inferior light. However, eco-feminist thinkers like Vandana Shiva (1989) reinterpret this connection positively, positioning women—particularly those in indigenous and agrarian communities—as custodians of biodiversity and bearers of ecological knowledge. Shiva's concept of the "feminine principle" underscores how women's daily interactions with land, seeds, and forests foster ecological balance, a perspective particularly relevant to tribal women in Assam.

In addition to classical eco-feminism, this research incorporates indigenous eco-feminism, a strand of thought that emphasizes culturally specific relationships between women and nature within colonized and marginalized societies. Indigenous eco-feminism recognizes that tribal women's ecological roles are not merely symbolic or essentialist but are shaped by specific historical, political, and ecological contexts. In Assam, tribal women do not just reflect ecological wisdom—they actively shape environmental governance through cultural practices, labor, and resistance to external interventions (Smith, 2005).

The political ecology dimension of eco-feminism is also relevant to this study. It acknowledges that environmental degradation is not just an ecological concern but a socio-political process shaped by power relations, land tenure, state control, and development agendas. Tribal women often find themselves at the nexus of these forces, simultaneously preserving biodiversity while resisting dispossession through state forest policies, displacement, and militarization (Agarwal, 2010).

Furthermore, the study engages with postcolonial feminist environmentalism, which critiques the Universalist assumptions of Western eco-feminism and calls for attention to local histories, identities, and struggles. In Assam, where tribal communities have long faced political marginalization and cultural assimilation, women's environmental knowledge is also a form of resistance—a way to sustain not only ecosystems but also indigenous sovereignty and cultural continuity.

The gendered division of ecological labor is another critical lens. Tribal women in Assam are primarily responsible for seed saving, medicinal plant use, water collection, home gardening, and sacred rituals. These tasks, while often unrecognized in formal conservation discourses, constitute forms of environmental stewardship that are communal, sustainable, and generationally sustained. Eco-feminist theory helps bring these practices into analytical focus, arguing for their political and ecological significance.

Methodology applied:

This paper adopts a qualitative and descriptive research design to explore the role of tribal women in biodiversity conservation in Assam from an eco-feminist perspective. The qualitative approach is well-suited for understanding complex, context-specific phenomena such as indigenous environmental knowledge and gendered ecological practices. It enables the analysis of cultural narratives, traditional practices, and social dynamics that may not be captured through quantitative methods.

Data collection relies exclusively on secondary sources, including academic literature, peer-reviewed journal articles, ethnographic case studies, government and NGO reports, and policy documents. These sources provide detailed insights into the ecological practices of tribal women and the socio-political challenges they face in conservation. Literature focused on eco-feminism, traditional ecological knowledge, and tribal community governance forms the backbone of the analytical process.

The study focuses on three tribal communities in Assam—Mishing, Bodo, and Karbi—which are purposively selected for their strong environmental interactions and well-documented traditions of biodiversity stewardship. These communities represent diverse ecological zones such as wetlands, forests, and hills, offering a broad lens through which to understand gendered environmental roles.

For data analysis, thematic content analysis is applied, guided by eco-feminist concepts such as care, sustainability, and resistance. This allows the research to identify recurring themes and interpret the socio-cultural significance of tribal women's environmental engagements within a feminist ecological framework.

Case Studies and Findings:

- **Bodo Women and Agro-Forestry Practices**

The Bodo tribe of Assam has historically practiced agro-forestry systems that integrate agriculture, forest conservation, and sustainable resource use. Central to these systems are Bodo women, who play a critical role in managing land, preserving indigenous plant species, and maintaining ecological balance. These women are involved in all stages of farming, from seed selection to harvesting, and are known for their deep knowledge of forest-based livelihoods, including the collection and use of medicinal plants for healing and ritual purposes.

Bodo women actively manage rotational farming systems that allow the soil to regenerate, ensuring long-term fertility and productivity. These practices are not only ecologically sound but also reflect indigenous knowledge systems passed down through generations via oral traditions and communal labor (Brahma & Basumatary, 2020). Their understanding of seasonal cycles, soil types, and plant diversity enables them to maintain a sustainable balance between cultivation and conservation.

In addition to cultivating crops, Bodo women are also responsible for preserving wild edible plants and medicinal herbs found in the forests surrounding their villages. These plants are essential for both dietary diversity and traditional medicine. By cultivating home gardens that integrate forest species, they create micro-ecosystems that support biodiversity even outside core forest areas (Narzwary, 2019).

Despite these contributions, Bodo women are often excluded from formal environmental governance and land management policies. Their roles are viewed as domestic rather than ecological, and the knowledge they hold is frequently undervalued in scientific discourse. However, eco-feminist frameworks argue that such everyday practices are deeply political, as they challenge dominant modes of resource extraction and promote community-centered sustainability.

Agro-forestry among the Bodos thus stands as a powerful example of gendered environmental stewardship. It highlights how traditional ecological knowledge—anchored in care, reciprocity, and lived experience—can

contribute to sustainable development when given institutional recognition and support. As pressures from climate change and commercial agriculture grow, protecting and uplifting the role of Bodo women in agro-forestry becomes essential not only for biodiversity but also for cultural survival.

- **Karbi Women and Sacred Ecology**

The Karbi community of Assam, residing primarily in the hills of Karbi Anglong, has long integrated environmental conservation with spiritual and cultural traditions. A key feature of Karbi ecological thought is the practice of preserving sacred groves, forest patches dedicated to ancestral deities and guarded by customary taboos. Karbi women are deeply involved in the ritual, symbolic, and practical upkeep of these groves, making them central figures in both spiritual and ecological domains.

Karbi women serve as custodians of sacred ecology, overseeing festivals, fertility rites, and other community rituals that reinforce the sacred status of forests. These rituals are not only spiritual in function but also serve as mechanisms of environmental governance, discouraging tree felling, hunting, and commercial intrusion (Ingtipi, 2018). By embedding conservation in the cultural fabric, Karbi women sustain biodiversity while strengthening community identity and cohesion.

Beyond ritual involvement, women contribute through intergenerational knowledge transfer. Songs, stories, and taboos around sacred spaces are passed from mothers to daughters, creating a continuous thread of ecological consciousness. This narrative-based conservation is particularly resilient, as it shapes values and behavior more effectively than formal enforcement mechanisms (Tisso, 2021).

However, with the growing influence of modernization, resource extraction, and state-led development projects, many sacred groves face degradation. The erosion of belief systems and increasing marginalization of women's roles in public decision-making threaten the efficacy of sacred ecology. Young women, in particular, are becoming distanced from traditional roles due to formal education systems that fail to include indigenous knowledge.

Despite these challenges, Karbi women continue to assert their roles as protectors of the sacred landscape. Through informal networks, women's groups, and cultural festivals, they resist ecological destruction and uphold customary conservation norms. From an eco-feminist perspective, their practices exemplify gendered resistance against patriarchal and extractivist frameworks, highlighting the interconnection between culture, ecology, and identity.

Karbi women's involvement in sacred groves presents an alternative model of conservation rooted in care, reverence, and indigenous sovereignty. Recognizing and institutionalizing such models can enrich formal environmental strategies while honoring the cultural rights of indigenous communities.

Analysis:

The roles of tribal women in biodiversity conservation in Assam, as illustrated through the cases of Bodo and Karbi communities, reflect a complex and holistic engagement with the natural environment. Their contributions go beyond utilitarian interactions with nature; they embody a lived ecological wisdom that is embedded in cultural, spiritual, and social frameworks. From an eco-feminist perspective, this engagement represents a form of gendered ecological stewardship, resisting not only environmental degradation but also patriarchal marginalization.

One of the central insights from this study is the gendered nature of ecological labor. Bodo and Karbi women participate in seed selection, agro-forestry, medicinal plant cultivation, and sacred ritual practices—activities that are essential to biodiversity conservation but largely excluded from mainstream environmental policy and scientific recognition. As Leach (2007) argues, the division of ecological labor is often invisibilized within development narratives that prioritize male-dominated sectors such as commercial agriculture or formal forestry. Tribal women's work, though crucial, is relegated to the private or cultural realm and thus overlooked in conservation planning.

Moreover, these women serve as custodians of indigenous knowledge systems that foster sustainability through non-exploitative, cyclical, and care-oriented relationships with nature. For example, the practice of rotational farming among Bodo women not only maintains soil health but also conserves diverse seed varieties and medicinal flora. Similarly, Karbi women's preservation of sacred groves provides a sanctuary for endangered plant and animal species. These are not isolated or passive traditions but active, dynamic practices of ecological governance rooted in communal ethics. According to Chatterjee and Sinha (2012), such forms of community-based conservation are more effective in ensuring long-term biodiversity protection than state-led models because they integrate ecological care with cultural and spiritual continuity.

However, tribal women's contributions continue to be undermined by structural inequalities, including land insecurity, policy exclusion, and cultural devaluation. The Forest Rights Act (2006), though progressive in intent, has not adequately addressed gender equity in land entitlements, often favoring male household heads (Sarin et al., 2013). This limits women's ability to formally participate in decision-making processes concerning land and forest resources. Additionally, the dominance of top-down conservation approaches, which rely on external experts and scientific rationality, often clashes with localized, experiential knowledge held by women. As demonstrated by Agarwal (2010), the inclusion of women in participatory forest management tends to be superficial unless systemic gender norms are challenged.

The intergenerational transfer of ecological knowledge, another crucial aspect, is facing increasing threats. Younger tribal women are often disconnected from traditional roles due to formal education systems that marginalize indigenous epistemologies and favor globalized, technocratic models. Urban migration, the lure of non-traditional jobs, and a lack of institutional support for cultural preservation are contributing to the erosion of this knowledge. As Singh and Roy (2015) suggest, the devaluation of oral and experiential knowledge systems risks not only ecological loss but also the cultural disempowerment of indigenous women.

From a policy standpoint, the findings point to the need for inclusive and feminist conservation models that validate and institutionalize the knowledge and agency of tribal women. This includes integrating eco-feminist values into environmental education, supporting community-based initiatives led by women, and recognizing sacred ecological practices as legitimate forms of conservation. Initiatives such as women's forest collectives or seed-saving networks have proven effective in other parts of India and could be adapted to the Assamese context (Shiva & Jalees, 2003).

Furthermore, incorporating decolonial perspectives into environmental governance is essential. This means acknowledging that tribal women's ecological practices are not simply "local" or "traditional," but are forms of resistance against centuries of colonial, patriarchal, and extractive policies. As Tuck and Yang (2012) argue, decolonization involves the re-centering of indigenous ways of knowing and being—not as supplements to dominant systems, but as alternatives to them.

Therefore, the role of tribal women in Assam in biodiversity conservation cannot be separated from their identities as ecological, cultural, and political actors. Eco-feminism provides the conceptual tools to understand these interconnections and advocate for more just and effective conservation strategies. By listening to and learning from tribal women's voices, policies and practices can shift from exclusion to empowerment, from exploitation to sustainability.

Challenges and Issues:

Despite their vital contributions to biodiversity conservation, tribal women in Assam face a range of systemic and structural challenges that hinder their ecological roles and marginalize their knowledge systems. These challenges stem from a combination of socio-political, environmental, and cultural dynamics, many of which are embedded in larger issues of governance, modernization, and patriarchy.

- **Exclusion from Conservation Policy and Decision-Making**

One of the most significant challenges faced by tribal women is their exclusion from formal conservation policies and decision-making frameworks. Although these women are central to managing natural resources in their communities—through agriculture, forest use, and ecological rituals—they are rarely consulted in state-led

conservation initiatives. Most government policies and forest management bodies are dominated by male representatives, both from the state and within the community, leaving women's voices unheard. Even in instances where women are included in local governance, their roles tend to be symbolic rather than substantive. This exclusion perpetuates the invisibility of their ecological contributions and undermines community-based conservation practices that are more effective and sustainable.

- **Impact of Climate Change, Deforestation, and Displacement**

Environmental changes such as deforestation, erratic weather patterns, and increasing climate-induced disasters significantly impact tribal communities, particularly women. As primary gatherers of forest produce, water, and firewood, tribal women bear the brunt of resource depletion. Deforestation—driven by logging, monoculture plantations, and infrastructural projects—has not only reduced access to essential forest products but also disrupted traditional livelihood patterns. Climate change has intensified the unpredictability of farming cycles, affecting food security and increasing workloads for women.

Displacement due to infrastructure development, wildlife sanctuaries, and armed conflict has also led to the fragmentation of communities and the erosion of women's traditional knowledge systems. Once displaced, women often find themselves in resettlement areas where they are cut off from the lands that sustained their cultural and ecological identities. In these new environments, access to forest resources is restricted, and alternative livelihood options are often limited. The psychological toll of losing ancestral land further weakens their social agency and ecological connection.

- **Loss of Traditional Ecological Knowledge among Younger Generations**

Another growing concern is the erosion of traditional ecological knowledge (TEK) among younger generations. Much of the knowledge held by tribal women is oral, experiential, and transmitted through practices like storytelling, singing, farming, and ritual ceremonies. However, modern education systems do not integrate or value this form of knowledge, and instead emphasize scientific rationalism and standardized curricula that are disconnected from indigenous realities.

As younger tribal women increasingly pursue formal education and migrate to urban areas for work, they are less exposed to the day-to-day ecological practices of their elders. This disconnect is exacerbated by changing aspirations, media influences, and the stigma associated with indigenous identities. The resulting generational gap leads to a breakdown in the continuity of traditional conservation methods. Without mechanisms to document, preserve, and revitalize this knowledge, tribal communities risk losing centuries of ecological wisdom that has sustained both biodiversity and cultural resilience.

- **Gender Bias in Formal Conservation Schemes and Forest Governance**

Institutional frameworks for biodiversity conservation often operate with an implicit gender bias that sidelines women's knowledge and leadership. Many formal conservation schemes prioritize technical expertise, enforcement mechanisms, and top-down management strategies. These models tend to ignore the relational, caregiving, and collective dimensions of conservation practiced by tribal women. Even in participatory forest management programs, men are more likely to hold leadership roles or receive training and support, while women are relegated to auxiliary roles such as plantation work or data collection.

This gendered bias also reflects deeper cultural assumptions about women's place in society. In many communities, women's work is undervalued because it occurs in the domestic or informal sphere. Such biases reinforce structural inequalities and prevent women from asserting their rights over land, forest, and community resources. Unless these barriers are addressed, the full potential of tribal women as environmental stewards will remain untapped.

In sum, addressing the challenges faced by tribal women in Assam requires a comprehensive shift in policy, education, and social perception—one that affirms their ecological wisdom, ensures equitable participation, and strengthens intergenerational knowledge transmission.

Recommendations:

To strengthen the role of tribal women in biodiversity conservation in Assam and ensure sustainable ecological futures, a multi-layered and inclusive approach is required. The following recommendations address policy, institutional frameworks, education, and governance models, all with the aim of recognizing and empowering tribal women as key environmental stewards.

- **Policy Integration of Women's Ecological Roles**

Government and conservation agencies must formally acknowledge the contributions of tribal women in environmental policies. Their traditional knowledge, roles in agro-ecological practices, and custodianship of sacred natural sites should be included in biodiversity action plans and forest governance documents. Women's ecological work—ranging from forest regeneration and seed preservation to sustainable farming and wetland management—should not be viewed as supplementary, but as central to conservation strategies. Policies should promote women's direct participation in planning, implementation, and monitoring phases of conservation programs at all administrative levels.

- **Institutional Support for Women-Led Conservation Initiatives**

Concrete institutional mechanisms should be created to support and scale up women-led conservation activities. This includes providing funding for community-based biodiversity projects initiated and managed by women, supporting local cooperatives focused on medicinal plants and non-timber forest products, and facilitating training programs that enhance women's leadership in environmental governance. Local forest committees and conservation boards should reserve adequate representation for women, not only symbolically, but with decision-making authority. Women's self-help groups can also be mobilized as platforms for ecological action and advocacy.

- **Inclusion of Indigenous Ecological Knowledge in Education**

To prevent the erosion of traditional ecological knowledge, it must be systematically integrated into formal and non-formal education systems. Curriculum at the school and college levels in tribal regions should include indigenous environmental knowledge, oral traditions, and women's roles in conservation. This inclusion can foster pride in cultural heritage and create continuity between generations. Educational content should be developed in local languages and in collaboration with tribal elders and women leaders to ensure authenticity. Community learning centers and storytelling sessions can also be used to revive and sustain ecological knowledge among youth.

- **Feminist and De-colonial Frameworks in Conservation Governance**

Conservation must move beyond technocratic and extractive models by embracing feminist and de-colonial approaches that prioritize equity, care, and community well-being. These frameworks challenge patriarchal and colonial assumptions that have historically excluded indigenous women from resource governance. By grounding conservation in values of relationality, reciprocity, and justice, it becomes possible to build governance systems that are both ecologically resilient and socially inclusive. Emphasizing women's rights to land, forests, and leadership is essential for any long-term sustainability.

Conclusion:

The role of tribal women in biodiversity conservation in Assam is both foundational and transformative, yet it remains insufficiently acknowledged in mainstream environmental discourse and policy frameworks. Through their deep, intergenerational relationships with the land, forests, and natural resources, women from communities such as the Bodo, Mishing, and Karbi have sustained ecological knowledge systems that are vital for biodiversity preservation and environmental sustainability. Their practices—rooted in agro-forestry, sacred ecology, and community rituals—embody principles of balance, care, and resilience that align closely with the core values of eco-feminism.

This study has revealed that tribal women are not merely passive beneficiaries of nature but are active agents in maintaining ecological equilibrium. However, they continue to face a range of systemic challenges including exclusion from decision-making, erosion of traditional knowledge, gender bias in formal conservation schemes, and the disruptive impacts of climate change, deforestation, and displacement. These barriers not only marginalize their roles but also jeopardize the sustainability of conservation efforts at large.

Applying an eco-feminist lens has helped highlight how gender and ecology intersect in tribal contexts, allowing us to better understand the socio-political forces that shape conservation outcomes. The emphasis on care, sustainability, and resistance underscores the need for an alternative environmental paradigm—one that is inclusive, culturally rooted, and gender-just.

To create meaningful change, there must be a shift in how conservation is conceptualized and practiced. Tribal women's knowledge and leadership should be institutionalized through policies, educational systems, and governance models that value their contributions and protect their rights. Community-led, women-driven initiatives need to be supported not just as auxiliary efforts but as central strategies for biodiversity management.

Ultimately, acknowledging and empowering tribal women is not just a matter of gender equity—it is essential to achieving ecological justice and long-term sustainability. When these women are recognized as knowledge holders, decision-makers, and custodians of biodiversity, conservation becomes not only more effective but also more ethical and inclusive. Moving forward, any vision for ecological resilience in Assam must place tribal women at the center of its framework.

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