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Unveiling the Inequality: The Intersectional Analysis of Climate Change and Women in Manipur

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Abstract: Climate change is one of the most critical challenges of the twenty-first century. It impacts unevenly across social categories, including gender, class, caste, ethnicity, and geography. In the Northeastern Indian state of Manipur, these disparities are further intensified by ecological fragility, socio-political conflict, and entrenched patriarchal structures. This paper examines the gendered impacts of climate change in Manipur through an intersectional, ecofeminist and political ecology lens. It argues that women, particularly those from rural, tribal, and economically marginalized backgrounds, face disproportionate burdens in coping with climate- induced disruptions. Through an analysis of qualitative and quantitative secondary data, the study reveals how structural barriers such as landlessness, exclusion from decision-making processes and gendered socio-economic roles compound women's vulnerabilities to climate impacts. However, the analysis moves beyond narratives that portray women solely as passive victims. It concludes with policy recommendations that advocate gender-responsive climate governance and building resilience strategies to suit the changing socio-ecological realities of Manipur.

Keywords: Climate Change, Gender Inequality, Ecofeminism, Intersectionality and Patriarchy.

Introduction

Statistical indicators of climate change, such as the increase in global average temperatures, sea level rise, and the growing frequency and severity of extreme weather events, provide compelling evidence of its far-reaching impacts. However, these impacts are not distributed evenly across populations. Though often approached as a technical and environmental problem, its roots and ramifications are deeply political, reinforcing and exacerbating pre-existing systems of power and inequality. Manipur, a small state in the Northeastern part of India, situated in the Eastern Himalayas' foothills, is at the forefront of these cascading climate impacts. The state's socio-political landscape, marked by entrenched structural inequalities, militarization, and intra-community conflict over land and natural resources, further compounds its climate vulnerability. The region is characterised as a biodiversity hotspot with a fragile mountain ecosystem and an agrarian economy.

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Within this precarious context, it is the marginalised, particularly women from the tribal, rural and economically disadvantaged communities, who shoulder the disproportionate burden of climate disruptions. In Manipur, the tradition of women's political engagement and their acts of resistance against socio-political injustice is noteworthy. Historical movements such as Nupi Lan (Women's War) and the activism of women's groups like Meira Paibi have demonstrated women's critical roles in resisting colonialism, militarisation, and state repression. Yet, despite their activism, contemporary climate governance often overlooks the voices and experiences of women. Women continue to be excluded from the decision-making process and denied access to crucial adaptive resources. These exclusions are rooted in longstanding structural inequalities that mediate both vulnerability and resilience in climate-affected communities.

Understanding climate change through a gendered and intersectional lens is critical for formulating just and effective responses. Intersectionality, as theorised by Crenshaw (1989), underscores the importance of analysing overlapping systems of disadvantage, such as gender, class, caste, ethnicity, and geography. In the context of climate change, intersectionality helps us move beyond generalisations, allowing us to examine how differential exposure, access to resources, and adaptation capacities are mediated by power hierarchies. Complementing this, Shiva (1988) and Mies and Shiva (1993) draw attention to the parallel forms of domination that oppress both women and nature. It highlights women's traditional ecological knowledge and resource stewardship practices, positioning them simultaneously as victims of environmental degradation and as agents of ecological sustainability.

Political Ecology provides an analytical framework to understand how environmental degradation is not merely a biophysical phenomenon but one deeply entwined with power and politics. It elucidates how gendered institutions perpetuate access and control over natural resources, often reinforcing existing social hierarchies and marginalisation. As Robbins (2012) notes, state-driven development, militarisation, and market-led conservation efforts disproportionately displace and disempower indigenous and rural women. Finally, the Gender and Development (GAD) approach, as articulated by Rathgeber (1990) and Pearson (2000), offers a critical departure from earlier Women in Development (WID) paradigms for treating women as a homogenous group. Instead, it focuses on the structural roots of gender inequality, advocating for the transformation of institutional and cultural norms that marginalise women and recognition of women's agency in shaping adaptive and equitable solutions.

This study contends that gender-neutral or technocratic climate policies fail to address the fundamental causes of vulnerability, as they tend to overlook the specific vulnerabilities and needs of women and other marginalised groups. Instead, a feminist political ecology approach, grounded in principles of justice,

participation, and local knowledge, is essential to ensure climate resilience efforts which do not reinforce existing exclusion.

Methodology

The study adopts a mixed-methods approach to examine the gender aspects of climate change in Manipur. Grounded in feminist methodological principles, the research prioritises intersectionality, attentiveness to local context, and the amplification of women's voices often marginalised in mainstream climate discourse.

The qualitative component is based on thematic content analysis of secondary materials, such as reports from NGOs and UN reports, which reveal recurring narratives in women's lived experiences, adaptive strategies, and climate vulnerabilities. The quantitative data, primarily from the Government of India Census 2011, National Sample Surveys, and regional climate vulnerability assessments, provide contextual information on socio-economic indicators such as land ownership, forest access, livelihood patterns, and exposure to environmental risks. Specific focus is given to how structural factors such as patriarchal norms, exclusion from land rights, traditional gender roles, and conflict-related insecurities shape women's exposure to and ability to respond to environmental stressors across hill, rural and urban settings. To interpret these patterns, the study draws on three key theoretical frameworks: Intersectionality and Feminist Political Ecology to interpret how overlapping structures of power shape women's experiences of climate change.

Climate change and women

A substantial and expanding body of literature affirms that the impacts of climate change are profoundly gendered and deeply stratified across lines of class, caste, ethnicity, and geography. Women, particularly those from rural, indigenous, and economically marginalised communities, experience disproportionate vulnerability owing to their social roles, limited access to resources, and systematic exclusion from formal decision-making processes as highlighted by Alston (2013), Dankelman (2010), and Nellemann et al. (2011). Despite their indispensable roles in agriculture, water management, and community resilience, women remain underrepresented in climate governance both globally and within the Indian context. This persistent underrepresentation reflects a broader oversight in mainstream environmental policy and research. MacGregor (2009) critiques mainstream environmental social science for its historical neglect of gender analysis, arguing that this oversight has led to the proliferation of climate policies that fail to recognise women's distinct needs, responsibilities, and adaptive capacities. It calls for a feminist

environmentalism that advocates for a transformative approach that challenges technocratic and male-dominated paradigms.

Empirical studies from diverse contexts illustrate the relevance of these frameworks. For instance, Omollo's (2010) study in Turkana, Kenya, demonstrates how climate stress intensifies food insecurity and displacement among poor pastoralist women. In rural Australia and across the Global South, Alston (2013) emphasises that many adaptation strategies fail because they ignore women's structural disadvantages, such as landlessness and exclusion from formal agriculture. Whyte (2014) demonstrates how indigenous women in North America are leading grassroots environmental justice movements grounded in cultural values of ecological stewardship. In Bangladesh, Tanjeela and Rutherford (2018) argue that women are frequently treated as passive recipients rather than active agents in climate adaptation efforts. Other scholars highlight women's roles as agents of resistance and transformation. In Nigeria, Onwutuebe (2019) links heightened female vulnerability to patriarchal land tenure and institutional exclusion. Similarly, Balehegn and Kelemework (2013) show that customary governance structures in Ethiopia reinforce male dominance, further marginalising women during climate crises.

Mellor (1992) and Shiva (1988) argue that environmental degradation and gender subordination share a common root in patriarchal systems that devalue both care and nature. Mellor articulates how patriarchy feminises the private sphere associated with nurturing, subsistence, and unpaid labour while masculinising the public sphere of policy and science. This division places disproportionate burdens of adaptation on women while excluding them from shaping institutional responses. Shiva's work, especially in India, critiques market-driven, technocratic solutions that erase indigenous knowledge systems and overlook the environmental roles of local women. Bina Agarwal (1992, 2010) made foundational contributions to the discourse on gender and environmental justice, critiquing the systemic neglect of women's land rights and emphasising the role of rural women's collective action in fostering more sustainable and equitable resource governance. Complementing this, Rao et al. (2021) argue that caste, class, and gender hierarchies co-construct climate vulnerability, and therefore, adaptation strategies must be intersectional and locally grounded.

Despite a growing body of international and national literature on gender and climate change, region-specific studies focusing on Northeast India and, in particular, Manipur, remain relatively scarce.

Impacts of Climate Change on Women in Manipur

Empirical studies and field-based narratives underscore how women, particularly those from tribal and economically disadvantaged communities, bear a disproportionate burden of ecological degradation. The

Indian Network for Climate Change Assessment (2010) projected significant climate vulnerabilities in Manipur across four critical sectors: water resources, forests, health, agriculture, and its allied sectors. These sectors not only constitute the ecological backbone of the state but also represent domains in which women play vital socio- economic and cultural roles. Consequently, climate impacts in these sectors directly affect women's livelihoods, health, food security, and daily survival. Das (2022) highlights that tribal women engaged in jhum (shifting) cultivation in the hill districts of Manipur are acutely affected by erratic rainfall, landslides, and forest fires. Chitnis (2017) recounts the experience of Lalzamien, a woman farmer from Churachandpur, who describes how shifts in precipitation patterns, such as the disappearance of the ai-ruo rains (November rains; in Hmar dialect, "ai" means crab and'"ruo" means rain), once a key ecological signal for planting, underscoring the erosion of indigenous knowledge systems due to climate instability. The drying up of perennial springs in hill areas is a critical ecological concern. Historically used for domestic and agricultural irrigation purposes, these water sources have been severely depleted due to deforestation and changes in land use. The depletion of these sources has dire consequences for women, who are culturally and practically responsible for water collection. UN Women (2018), alongside Mary Beth Sanate of the Rural Women's Upliftment Society (RWUS), emphasises that women are now forced to walk greater distances, often through militarised and conflict-prone areas, to access water and fuelwood. In Saidan village, Churachandpur, the lack of adequate public water infrastructure has left women relying on unpredictable rainfall and rapidly depleting springs to meet their daily water needs. This situation increases their exposure to the risk of gender-based violence. What may appear as a logistical and infrastructural challenge is, in fact, a deeply gendered issue.

Meanwhile, as forests are increasingly designated as 'reserves', access to forest products is restricted. These conservation policies, although ecologically beneficial, often fail to recognise women's traditional roles in forest management. This institutional marginalisation, particularly in conflict-prone areas, exacerbates daily burdens and exposes women to higher levels of risk.

Most rural farmers in valley areas engage in paddy cultivation, a sector highly sensitive to shifting monsoon patterns and extreme weather. As Rao et al. (2017) observe, climate-induced droughts and flash floods have severely affected agricultural yields. Moreover, the feminisation of the labour force in rural Manipur is not matched by institutional recognition. Devi and Singh (2015) observed that, according to the 2011 Census, 42.59% of the female workforce in Manipur was engaged in sectors such as agriculture, handloom, and small-scale trade. Women constituted 44.46% of cultivators and 6.71% of agricultural labourers. These figures highlight the significant concentration of women in climate-sensitive sectors such as subsistence farming and allied rural occupations. Environmental disruptions including erratic monsoons, prolonged

droughts, and flash floods have severely affected crop yields, deepening food insecurity and income instability, particularly for female-headed households.

One of the most enduring challenges women faces is landlessness, a structural barrier that severely limits their ability to adapt to climate stress. Under both statutory and customary laws, women, especially tribal women in the hill areas, continue to be systematically denied ownership and inheritance of land. As a result, many women farmers are excluded from critical institutional support systems, including access to agricultural credit, crop insurance, subsidies, and state compensation in the aftermath of natural disasters. This exclusion is not incidental it is deeply political, reflecting systemic inequalities embedded in legal and customary frameworks that continue to marginalise women from resource governance and climate resilience efforts. As Rocheleau, Thomas-Slayter, and Wangari (1996) argue in their feminist political ecology framework," access to and control over resources are politically contested and socially mediated by gender, class, and ethnicity". In the context of Manipur, land allocation and forest management are typically controlled by male-dominated village councils and customary governance institutions and in some cases, by insurgent or militarised actors.Women's lack of voice in these governance structures reproduces their marginalisation, even as they bear the brunt of climate disruptions.

Urban centres such as Imphal and others illustrate how climate change intersects with informal economies and gendered precarity. Many women are engaged in informal and unpaid labour, which often goes unrecognised in official data and remains invisible in policy planning. As agriculture becomes increasingly unsustainable, a growing number of women are pushed into the informal economy, taking up small-scale vending, handicrafts, and domestic work. Yet these sectors offer little in terms of job security or social protection, leaving women highly vulnerable to economic shocks and with limited institutional support. The rising temperatures threaten the livelihoods of women working as street vendors, domestic workers, and market traders. For example, women in Ima Keithel (Mother's Market), one of Asia's largest women-run markets, face declining sales and harsh working conditions due to extreme heat and flooding. These women, many of whom are primary breadwinners, lack access to basic infrastructure such as cooling shelters, potable water, or any form of disaster relief. During climate-induced events, they are among the most at-risk groups to suffer financial and health setbacks without compensation or institutional support.

The climate crisis in Manipur is further complicated by internal displacement, driven by both ecological stress and ethno-political conflict. Recent ecological collapses in Manipur reveal how environmental degradation acts not only as a catalyst for internal displacement but also as an intensifier of gendered vulnerability. As Down To Earth (2025) reports, the torrential rains and flooding of May–June 2025 triggered devastating landslides in Ukhrul, Pherzawl, Noney, and Churachandpur districts, and inundated

parts of the Imphal Valley, displacing over 1,600 individuals and damaging more than 3,300 homes, many of them women and children. These events, magnified by deforestation, quarrying, encroachment of wetlands like Lamphelpat and militarised land use, transformed climate shocks into cascading crises.

Such disasters intersect with spatial and social inequalities. Moreover, when militarised zones and ethnic boundaries already restrict women's mobility, climate-induced destruction of infrastructure such as roads and bridges further severs access to essential services and increases isolation. Many displaced persons, particularly women and children, were forced into overcrowded and under-resourced relief camps, where poor sanitation, inadequate shelter, and limited healthcare services heighten the risks of disease and gender-based violence. Displacement is also closely linked to resource dispossession. As forested areas such as the Churachandpur–Khoupum and Nongmaiching hills are converted into reserves or militarised zones, women lose access to customary resources and are forced into high-risk foraging and labour. These areas, marked by insurgent activity and military presence, are dangerous spaces for women who must traverse them to gather basic necessities. According to Binalakshmi Nepram, founder of the Manipur Women Gun Survivors Network, over 20,000 widows in the state have lost their spouses to conflict. These women, already bearing emotional and social burdens, are now facing intensifying climate stress, which further destabilises their livelihoods and access to resources. The resulting exposure adds another layer of insecurity and trauma. In such contexts, displaced women experience what feminist scholars Crenshaw (1989), Shiva (1988), and Rocheleau et al. (1996) describe as "compounded precarity", wherein both ecological and political structures jointly intensify marginalisation.

Across rural, urban and hill regions of Manipur, women are disproportionately affected by climate-induced precarity. These women face not only growing environmental uncertainty but also a persistent dual burden of productive and reproductive labour. Although the feminisation of agriculture and its economic contribution have intensified, it has not translated into greater institutional recognition or support. These gendered disparities are rooted in Patriarchal social structures that systematically restrict women's access to resources, mobility, education, and participation in governance.

Discussion

The findings of this study suggest that climate change in Manipur is not solely an environmental phenomenon, but a crisis deeply embedded in structures of gendered power. Structural inequalities entrenched in patriarchal norms, socio-economic marginalisation and customary practices render women particularly vulnerable to the adverse impacts of climate change. One of the paradoxical situations emerges in this context; while women are highly visible in economic activities and have historically led grassroots

political movements, they remain largely absent from formal decision-making processes and are systematically excluded from institutional frameworks.

The invisibility of women's contributions, despite their central role in sustaining households, local economies, and ecological practices, reveals a critical gap between practice and policy. This exclusion aligns with what Cornwall and Goetz (2005) term the distinction between "participation by presence" and "participation by influence", where women may be visible and vocal in public life, yet lack meaningful participation and power in shaping policy and governance.

This gap is especially noticeable in the ability to address the differentiated needs and capabilities of women. Climate policy in Manipur, as elsewhere in India, remains largely technocratic and gender-neutral, lacking mechanisms to incorporate women's knowledge, leadership, or lived experiences. The exclusion of women from planning and decision-making processes has led to what Alston (2013) terms "gendered silence" in climate policy.

Conclusion

The evidence presented in this study affirms that the impacts of climate change in Manipur are profoundly gendered. Women, particularly those from rural, tribal, and economically disadvantaged communities, experience overlapping and intersecting vulnerabilities shaped by structural inequalities in land ownership, access to resources, and underrepresentation in institutional decision-making. It originates from entrenched patriarchal structures ingrained in cultural, social, legal and political institutions.

To build just, inclusive, and resilient climate responses, climate governance in Manipur must adopt a feminist political ecology approach that integrates intersectionality, recognises women's ecological knowledge, and actively dismantles patriarchal barriers to participation. Climate justice cannot be achieved through rhetorical gender mainstreaming alone; it requires institutional reforms that centre women's agency, leadership, and lived experiences. The recommendations of the study include:

- Institutionalising gender-responsive climate planning at state and local levels
- Securing land rights and equitable access to natural resources for women
- Integrating indigenous and rural women's ecological knowledge into adaptation strategies
- Increasing women's participation in environmental governance and the policy-making process
- Adopting intersectional, ecofeminist frameworks that address both material and symbolic exclusions

Ultimately, women must be recognised as frontline victims and central architects of sustainable futures. Manipur thus stands at a crucial crossroads. It must reconcile its rich traditions of women's collective resistance and entrepreneurship with the need to dismantle patriarchal barriers in climate governance. Only through intersectional, ecofeminist, and decolonial frameworks can climate resilience in Manipur be just and effective. The gendered nature of climate vulnerability in Manipur demands more than adaptation; it necessitates a transformative reimagining of environmental governance.

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