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Tribal Livelihoods and Forest Management in Manipur

Rabikanta Singh¹, Huidrom Chitra Devi², Ng. Pungfa Singh³, S. Sumanta Singh⁴,
K. Ingocha Singh^{5*}

^{1,3-5}P.G. Department of Anthropology, D. M. College of Science, Imphal (India)

²Department of Botany, Kha-Manipur College, Kakching (Manipur - India)

*Corresponding Author, Email: kingcha2010@gmail.com

Abstract:

Manipur, the north easternmost state of India, features a central valley surrounded by hilly terrain and is home to thirty-four Scheduled Tribes (ST), comprising 35.1% of the population according to the 2011 Census. In these forest-dominated hilly regions, many tribes still rely on shifting cultivation, which is deeply intertwined with their cultural practices, highlighting a unique environment-behaviour relationship (EBR). For example, the Khoibus, a subgroup of the Maring tribe, practice traditional jhum cultivation, accompanied by rituals and festivals during crop cycles. This form of agriculture, while culturally significant, contributes to slow forest regeneration and increased soil erosion, presenting significant environmental challenges. The objective of this study is to explore the subsistence livelihoods of these tribes and examine forest management strategies aimed at sustainable development. Methodologically, the study is based on first-hand data collected through interviews and observation techniques. Addressing the ecological impact of traditional agro-systems and the extensive collection of minor forest resources like firewood is essential. Developing a better understanding and cooperation with tribal communities is crucial for ensuring the sustainability of both forests and tribal economies. Government initiatives such as Joint Forest Management (JFM) must be strengthened to serve as effective strategies for Sustainable Forest Management (SFM).

Keywords: Tribe, Manipur, shifting cultivation, forest management, sustainable development

Introduction

Manipur, the north easternmost state of India, is geographically located between latitudes 23°50' N to 25°41' N and longitudes 93°02' E to 94°47' E. It features a central valley encircled by high hills. The hilly region of Manipur is home to thirty-four Scheduled Tribes (STs), along with several unrecognized tribal groups seeking inclusion in the Scheduled List under the Indian Constitution. According to the 2011 Government Census, these Scheduled Tribes comprise 35.1% of the state's total population, amounting to 902,740 out of 2,570,390 individuals. The recognized STs in Manipur include Aimol, Anal, Angami, Chiru, Chothe, Gangte, Hmar, Kabui (Inpui, Rongmei), Kacha Naga (Liangmei, Zeme), Koirao (Thangal), Koireng, Kom, Lamkang, Mao, Maram, Maring, Mizo (Lushai) tribes, Monsang, Moyon, Paite, Purum, Ralte, Sema, Simte, Sahlte (Sukte), Tangkhul, Thadou, Vaiphei, Zou, Poumai Naga, Tarao, Kharam, Kuki tribes, and Mate (Singh 2015). Manipur spans a geographical

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territory of 22,327 sq km of which 17,346 sq km are forest areas, as per the State Forest Department (Manipurforest.gov.in 2020). The hilly regions cover a significant portion of the state, totaling 20,571 sq km while the flat valley region occupies 1,843 sq km (Laiba 1992:113). This extensive forest area highlights the close relationship between the livelihood of the tribes and the forest ecosystem.

In the hilly regions, many tribes still rely on shifting cultivation, also known as jhum cultivation, which is deeply influenced by their environment and forms the basis of their subsistence economy. However, the increasing population density in a finite land area poses significant challenges. The traditional slash-and-burn method of cultivation leads to slow forest regeneration, increased soil erosion, and decreased agricultural productivity. These environmental impacts are not sustainable in the long term. Therefore, it is essential to examine the livelihood strategies of these tribes and explore effective forest management practices aimed at achieving sustainable development. Addressing the ecological impact of shifting cultivation and ensuring sustainable forest use are critical for the future well-being of both the tribal communities and the forest ecosystems they depend on.

Literature Review

India, home to the largest tribal population globally, recorded 104.3 million individuals in the 2011 Census. Recognizing the importance of improving tribal livelihoods, the Ministry of Tribal Affairs, in partnership with the United Nations Development Programme (UNDP), initiated a program in 2018 aimed at recognizing the forest rights of both individuals and communities. This initiative is guided by the Forest Rights Act, 2006, which grants Forest Rights to various forest-dwelling communities, fostering the convergence of sustainable livelihoods and ecosystem preservation (MOTA 2020).

More than 50% of India's tribal population depends on forests for their livelihood (GoI, TRIFED, 2019). The Indian Constitution includes specific provisions for tribal communities under the V and VI Schedules, emphasizing their substantial dependence on forest resources. Forests serve as a "safety net" for tribals, providing essential resources during times of hardship (Wollenberg and Ingles 1999; Campbell and Luckert 2002). However, in certain regions, traditional forest management practices have weakened, leading to a need for more robust and sustainable policies (Tiwari et al. 2010). Despite these efforts, there remains a critical need for a more suitable forest policy that ensures the sustainable livelihoods of tribal communities. Such policies must address the ecological challenges posed by traditional practices and promote the effective management of forest resources to support both the environment and the tribal populations who depend on them.

Objectives

The primary objectives of the present study are to:

- Provide a detailed geographical and demographic profile of Manipur, including its central valley and surrounding high hills.
- Identify and enumerate the thirty-four Scheduled Tribes (STs) and unrecognized tribal groups based on the 2011 Census.
- Analyse forest coverage in Manipur, emphasizing the distinction between hilly and valley regions.
- Investigate the interdependence of tribal livelihoods and the forest ecosystem.
- Investigate the impact of shifting cultivation on tribal communities' livelihoods.

- Assess environmental challenges such as slow forest regeneration, soil erosion, and decreased agricultural productivity.
- Evaluate the effectiveness of current forest management practices in tribal areas.
- Propose strategies for sustainable forest use and addressing ecological impacts.

Research Methodology

The study explores the environment-behaviour relations (EBR) of tribal communities and forest management. An empirical approach is used within the study area. Structured and semi-structured interviews are conducted with tribal community members to gather qualitative insights into forest management practices and cultural norms. Direct observations supplement interview data, allowing observation of tribal activities and land use patterns. Secondary data sources, including literature and statistical data, provide context. The empirical study immerses researchers within the community to understand dynamics between tribal lifestyles and forest ecosystems. By combining interviews, observations, and secondary data analysis, the study uncovers factors influencing EBR and their implications for forest management. Comparative analysis enhances understanding by comparing findings with existing literature. Triangulating data sources enhances reliability and validity. The methodology enables a comprehensive examination and informs policy decisions for promoting tribal community and forest ecosystem well-being.

Analysis and Results

Forest in Manipur:

The forest cover in Manipur, according to satellite data from Oct-Dec 2015, spans 17,346 sq km, accounting for 77.69% of the state's geographical area. This includes 908 sq km of Very Dense Forest, 6,510 sq km of Moderately Dense Forest, and 9,928 sq km of Open Forest (MDONER 2017). Additionally, 8.42% of the total forest area comprises Reserved Forests (36 forests), which include the Wildlife Protected Area Network, while 23.95% is Protected Forests (22 forests), with the remainder categorized as Un-classed Forests, including 18 forests proposed to be reserved forests (Forest Department GOM 2018). Manipur is home to two of India's four hotspots – the Himalayan and Indo-Burma hotspots. Its biodiversity boasts approximately 4,000 angiosperms, 1,200 medicinal plants, 34 species of edible fungi, around 500 orchids, 55 species of bamboo, 695 bird species, 160 fish species, 21 migratory aquatic birds, and a multitude of butterflies and insects.

Forest types in Manipur encompass Tropical Semi Evergreen forests, Tropical Moist deciduous forests, Subtropical Broadleaved hill Forests, Subtropical Pine Forests, and Montane Wet temperate forests (Champion and Seth's 1968). Notably, the Tropical semi-evergreen forests are rich in diverse flora, including Adina cordifolia, Sundi (*Acer niveum*), Toon (*Cedrella toona*), Jarul (*Lagrostomia flosregina*), Bonsum (*Phoebe* spp.), and high-quality canes and Muli Bamboos (*Melocanna bambusoides*). The Tropical moist deciduous forests feature Teak (*Tectona grandis*), Kanyin, Khen (*Melanorhoa usitata*), and Toon. Sub-tropical pine forests are characterized by Uchal (*Pinus khasya*) interspersed with oak and chestnuts, while dry temperate forests in the Manipur valley contain mixed forests of Semul (*Bombax malabaricum*), Pareng (*Alnus nepalensis*), Pine (*Pinus Khasya*), oak, and chestnuts. Temperate forest areas comprise *Quercus-Magnolia-Acer* with conifers, while Sub-alpine Forests feature *Prunus*, *Pyrus*, *Ligustrum*, *Taxus*, *Bucklandia populnea*, *Acer campbelli*, *Magnolia campbelli*, *Castanopsis tribuloides*, among others.

Shifting Cultivation in Tribal Life of Manipur:

In the tribal context of Manipur, tribes are characterized by close-knit social structures centered on kinship ties and reciprocal exchange, relying predominantly on their land for sustenance (Paul, 2006). Many tribes in Manipur subsist through dry cultivation of rice and vegetables on hilly terrain, with shifting cultivation (known as pamlou) being a traditional practice dating back centuries. This method persists due to the absence of permanent cultivable fields and plowing technology until the advent of terrace farming. The Khoibu tribe, with approximately 2000 members spread across several villages in Chandel, Senapati, and Ukhrul districts, heavily relies on shifting cultivation for their livelihoods. Their justice system, intricately tied to land ownership and cultivation, imposes penalties on social deviants by confiscating their cultivated plots, reflecting the deep connection between land and social order. Festivals and religious ceremonies among the Khoibus and other tribes are intricately linked to the agricultural cycle of shifting cultivation, reinforcing ethnic identity and cultural practices.

Among the Kukis, land ownership is vested in hereditary chiefs known as Haosa, who allocate plots for jhum cultivation after consulting their council of ministers. In exchange, families pay annual taxes in the form of paddy baskets to the chief, highlighting the communal ownership and governance of village land. Despite its significance in tribal social and economic life, shifting cultivation requires judicious management to maintain soil fertility and water resources. Leaving fields fallow for ten to fifteen years allows for natural regeneration, but the slow pace of regeneration coupled with population growth has led to significant forest degradation. Thus, shifting cultivation is deeply ingrained in the cultural and economic fabric of tribal communities in Manipur, but its sustainability is challenged by contemporary pressures such as population growth and environmental degradation.

Peeping for Change:

As tribal populations increase and forest areas diminish, the traditional fallow cycle in shifting cultivation has shortened, leading to increased deforestation for short-term gains. However, awareness of the ecological importance of forests has begun to spur changes in tribal communities. In villages like Chingjaroi in Ukhrul district, community leaders, youth societies, and women's groups have taken proactive measures to preserve village forests. Strict regulations prohibit tree cutting without valid reasons, ensuring the sustainable management of forest resources. Similarly, in villages like Purum Tampak, Chandel district, selective thinning and pruning of trees are permitted, with certain species like sahi (*Pasania dealbata*) and uyung (*Querus semi serrata*) protected from any form of cutting. While this restriction may inconvenience impoverished women who rely on selling firewood, it underscores the village's commitment to preserving vital ecological functions such as groundwater retention and soil erosion prevention.

In many areas, village authorities have taken on the responsibility of managing and selling timber from village reserve forests for the collective welfare of the community. This community-based approach to forest management reflects a growing recognition of the need for sustainable practices that balance economic needs with ecological conservation. These initiatives represent a shift towards more environmentally conscious practices within tribal communities, highlighting the potential for positive change when local knowledge and leadership are leveraged to protect and sustainably manage forest resources.

Forest Management:

The National Forest Policy 1988 of the Government of India emphasized community involvement in forest conservation, protection, and management. In Manipur, Joint Forest Management (JFM) was initiated in 2000, engaging 22,000 tribal families. JFM aims to enhance forest productivity and availability of forest products through collaborative efforts. The process begins with the Divisional Forest Officer selecting degraded forest areas near villages willing to cooperate in protection and development. A Joint Forest Management Committee is formed, comprising one member from each family nominated during a general meeting. The committee's executive arm, comprising elected representatives, NGO members, local teachers, and forest guards, oversees activities for a year.

However, the success of JFM remains questionable. Many tribal villages report limited effectiveness. For instance, in Salam Patong village, Ukhrul district, the JFM committee formed years ago has been forgotten, and shifting cultivation continues under the chieftainship. The state forest department acknowledges widespread inefficiency, attributing it to villagers' changing interests and insufficient departmental oversight. Sustainable forest management (SFM) is essential for balancing ecological, economic, and socio-cultural aspects. It seeks to satisfy society's demands for forest products while preserving forest health and diversity. Yet, SFM in Manipur is still in its nascent stage, according to forest department officials, highlighting the need for improved implementation and community engagement to achieve long-term sustainability.

Pragmatic View:

The constitutional right to livelihood, as enshrined in Article 21 of the Indian Constitution, is considered an integral aspect of the right to life. In Manipur, shifting cultivation is predominantly practiced by the poor, as observed in various regions. In Meizailung village, Ukhrul, widows primarily engage in jhum cultivation for their sustenance. Conversely, informants from Khoibu villages highlight its importance for unemployed individuals and tenants. However, the adverse effects of soil erosion and reduced agricultural productivity underscore the need for alternative livelihood options. Government initiatives like the Manipur Tribal Development Corporation (MTDC) should ensure equitable distribution of resources down to the grassroots level. The strategic plantation of bamboo, known for its versatility and rapid growth, holds promise for minor forest product management. Manipur boasts 53 bamboo species, including the endemic *Bambusa manipureana* and *Dendrocalamus manipureanus*. Large-scale bamboo cultivation could rejuvenate degraded lands, easing pressure on forests and providing income opportunities. Integrating bamboo into agroforestry systems and open forest areas could yield various products while enhancing environmental aesthetics.

Reinventing the Wheel:

The intricate relationship between culture and the environment has long been a focal point in environmental-behaviour relations (EBR). Shifting cultivation, deeply rooted in culturally adapted lifestyles, exemplifies this connection. For marginalized groups like the poor and tenants, traditional agricultural practices often represent their sole means of sustenance. However, fostering awareness and implementing sustainable forest management plans are imperative to ensure the preservation of forest resources and promote equitable access to beneficial programs. By acknowledging the cultural context and environmental impact of traditional practices, policymakers can devise inclusive strategies for sustainable development.

Discussion

Manipur's forest ecosystem, covering 77.69% of the state's area, is crucial to its ecological, economic, and cultural landscape (MDONER 2017). The forests, including Very Dense, Moderately Dense, and Open types, support rich biodiversity and ecological stability. Reserved and Protected Forests account for 8.42% and 23.95% of the total forest area, respectively (Forest Department GOM 2018). Manipur, home to the Himalayan and Indo-Burma biodiversity hotspots, boasts about 4,000 angiosperm species, 1,200 medicinal plants, 34 edible fungi species, 500 orchids, and numerous bamboo, bird, fish, and insect species. Shifting cultivation (pamlou) is a traditional agricultural practice among Manipur's tribes, essential for their subsistence but posing environmental challenges like soil fertility loss and forest degradation due to shortened fallow cycles driven by population growth. In response, some tribal communities are adopting sustainable forest management practices, as seen in villages like Chingjaroi and Purum Tampak. The National Forest Policy 1988 and Joint Forest Management (JFM) aim to involve communities in forest conservation, but JFM's success has been mixed due to inadequate oversight and changing community interests. Sustainable forest management (SFM) in Manipur requires improved implementation and community engagement. Addressing the socio-economic needs of those practicing shifting cultivation is vital. Alternative livelihoods, such as large-scale bamboo cultivation, can alleviate forest pressure and provide economic opportunities. Manipur's bamboo diversity offers potential for sustainable forest product management and ecological restoration. Thus, a balanced approach to forest management is needed, recognizing the cultural significance of traditional practices and promoting sustainable alternatives to foster ecological conservation and socio-economic development. Policymakers should leverage local knowledge and leadership to preserve forest resources and enhance tribal livelihoods.

Conclusion

The extensive forest cover in Manipur, spanning 17,346 sq km encompasses diverse ecosystems and abundant biodiversity. However, the persistence of shifting cultivation among tribal communities poses significant challenges to forest sustainability. Despite efforts such as Joint Forest Management (JFM), obstacles remain, underscoring the necessity for improved implementation and community engagement. Sustainable forest management, crucial for ecological, economic, and socio-cultural balance, is emphasized by the National Forest Policy. Implementing alternative livelihood options like bamboo cultivation can ease pressure on forests while providing income opportunities. Recognizing the cultural significance of traditional practices, policymakers must integrate local knowledge into conservation strategies for long-term sustainability and equitable development. Formal recognition of village forest protection committees and the establishment of memorandums of understanding between communities and the government are essential steps for effective collaboration. Given the longer gestation period required for forestry compared to agriculture, facilitative processes prioritizing community welfare and equitable implementation are vital. Effective partnership harnessing is Key to achieving environmental stability and sustainable rural livelihoods. Balancing conservation efforts with local needs can catalyse holistic development and ensure long-term ecological resilience.

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