

## **Role of Local Stakeholders in the Sustainable Forest Management in India**

**Mary R.<sup>1</sup>, Devi Parvathy.<sup>2\*</sup>**

<sup>1</sup> PhD Research Scholar

Dept. of Public Administration and Policy Studies

Central University of Kerala

<sup>2</sup> Asst. Professor

Dept. of Public Administration and Policy Studies

Central University of Kerala

\*Email: devi9024@gmail.com

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### **Abstract**

Sustainable forest management provides the conservation of biodiversity and the preservation of ecological integrity in forests, while together accomplishing essential goods and services within the limits and requirements of regional socioeconomic, cultural, and ecological parameters. This qualitative study examines how local stakeholders enrich to Sustainable Forest Management (SFM) in India, emphasizing the role that local communities play in sustainable forest management. Through a selection of theoretical frameworks, it analyzes key stakeholders—local communities, governmental and non-governmental organizations to comprehend their impact on SFM activities. The study addresses socio-psychological dimensions and conflicts over resource use rights, exploring stakeholder responsibilities in biodiversity conservation, forest productivity, and ecological balance. Successful case studies from India and other countries illustrate effective community participation and its impact on forest management outcomes. The study focuses on the efficacy of participatory approaches by incorporating findings from secondary sources. In response to changing social and environmental situations, it puts forward suggestions for improving stakeholder participation and improving management techniques. The study highlights the significance of local stakeholder engagement in order to achieve sustainable forest management and community development goals while balancing critical needs with long-term sustainability. By focusing on the integration of local stakeholders, the study aims to provide a comprehensive knowledge of how community involvement can promote the productivity and long-term resilience of forest ecosystems. The study ensures that sustainable forest management practices benefit both the present and the future generations.

**Keywords:** Sustainability, Forest Management, Stakeholders, Participation.

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### **Introduction**

Forests, that comprise around 30% of the surface of the earth, are vital for numerous individual livelihoods and well-being because they provide a range of services such food security, energy supply, and the reduction of poverty (FAO, 2005). The concept of sustainability achieved thrust following the Brundtland Report (1987) and the Earth Summit (1992). It has progressed from focusing solely on sustainable timber production to incorporating ecological functions and biodiversity conservation. In India, programs like Joint Forest Management (JFM) include regional communities in Sustainable Forest Management (SFM), which is necessary for preserving forests. Despite with its achievements, SFM still has difficulties in maintaining the community involved. Effective forest management integrates contemporary techniques with traditional

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ecological knowledge (S.K. Biswas, 2001). This study reviews academic research, government documents, and books to explore the roles of local stakeholders in SFM. It features successful case studies and the challenges of participatory initiatives like JFM, REDD+ (Reducing Emissions from Deforestation and Forest Degradation), and the Arabari project. Additionally, it examines the impact of the Forest Rights Act (FRA), Community Conserved Areas (CCAs), and Payment for Ecosystem Services (PES) on forest management. Understanding the contributions of local stakeholders and adapting successful international policies can enhance SFM in India, addressing issues such as community rights and resource conflicts. Studies emphasize the need for genuine local empowerment and inclusive decision-making to ensure the long-term viability of SFM initiatives. Local stakeholders are essential to SFM in India, as their active participation enhances forest conservation and resource management. Their traditional ecological knowledge, combined with contemporary techniques, significantly contributes to the success of initiatives like JFM and other participatory approaches.

### **Objectives**

- To Explore the influence of policies, culture, and socioeconomic factors on local stakeholders in sustainable forest management.
- To Examine the responsibilities, disputes, and cooperation among the many local stakeholders engaged in forest management.
- To Review successful case studies from across the globe demonstrating how to effectively involve local stakeholders in sustainable forest management. Furthermore, it will assess other international models, including community-based, certification, and adaptive governance methods, to determine their applicability in India's particular setting of sustainable forest management.

### **Scope of the study**

Future SFM research in India should focus on community-based management, utilize remote sensing and GIS for monitoring, ensure broad stakeholder representation, and address data and methodological limitations. Addressing these limitations in future research will provide a more comprehensive understanding of SFM practices and their impacts.

### **Research Gap**

Despite progress in sustainable forest management (SFM) in India, there is a necessity for more empirical studies on the long-term impacts of Joint Forest Management (JFM) on forest protection and community livelihoods. Integrating traditional ecological knowledge with modern practices requires further exploration to develop effective hybrid models. Additionally, socioeconomic barriers that hinder effective community participation in SFM, such as legal frameworks and resource allocation, still need to be researched.

### **Research Methodology**

This exploratory qualitative study employs a comprehensive methodology to understand the role of local stakeholders in Sustainable Forest Management (SFM) in India, relying exclusively on secondary sources such as books, peer-reviewed publications, academic journals, and reports from organizations like the Forest Survey of India and the FAO. Data collection involves an extensive literature review to identify key themes and gaps, guiding the analysis of stakeholder roles and sustainable practices. Document analysis extracts essential information about stakeholder contributions and sustainable practices. Triangulation ensures validity and reliability by using multiple

sources of information. The study examines successful case studies and challenges of participatory initiatives like JFM, REDD+, the Arabari project, FRA, CCAs, and PES. Ethical considerations are maintained by adequately citing all sources. This methodology aims to capture a holistic view of local stakeholder involvement and its impact on SFM, providing insights to inform future policies and practices.

### **Theoretical Framework**

Sustainable Forest Management (SFM) aims to maintain and enhance forests' economic, social, and environmental values for present and future generations, integrating ecological, economic, and social dimensions (UNGA, 2007). Recognized by the United Nations General Assembly in 2007, SFM focuses on sustainable community development, ensuring the supply of forest goods and services for both current and future communities. Participatory Forest Management (PFM) emphasizes local involvement from policy formulation to planning (Agrawal & Gibson, 1999). Promoting PFM activities like afforestation and sustainable resource use fosters respect for local knowledge, needs, and rights, creating partnerships between communities and governmental organizations for equitable benefit-sharing.

Community involvement in reducing deforestation includes creating large-scale community-owned reserves, focusing on conservation and formalizing indigenous rights. However, leakage remains a concern, where deforestation reduction in one area leads to increases elsewhere (Skutsch & McCall, 2010). In dry tropical forests and savannahs, where population densities are higher and widespread use of mitigating tree resources occurs, community forest management will further prove to be more effective emissions resulting from forest degradation.

Participatory Governance, as Carole Pateman and Jane Mansbridge advocate, supports co-management and community forestry, ensuring local stakeholders have a voice in forest management decisions. This theory emphasizes citizen participation and deliberation in democratic processes. In India, participatory governance in community-based forest management programs enhances policy legitimacy and sustainability by leveraging local knowledge and fostering community ownership. The Social-Ecological Systems (SES) Framework, integrated by Elinor Ostrom, emphasizes the interdependence between human communities and natural ecosystems, supporting adaptive management practices crucial for sustainable forest management. Stakeholder theory (Freeman, 1984) highlights the need for inclusive and equitable forest management. Community-Based Natural Resource Management (CBNRM) emphasizes local community empowerment and equitable benefit-sharing (Child & Lyman, 2005). Adaptive governance integrates scientific knowledge and local experiences, promoting flexible, learning-based approaches (Folke et al., 2005). These theories collectively underscore the importance of local stakeholder involvement in achieving sustainable forest management.

### **Key Stakeholders and their role in Sustainable Forest Management (SFM) in India**

Various key local stakeholders in India's sustainable forest management (SFM) include local communities, governmental and non-governmental organizations, the commercial sector, civil society organizations, and international organizations. The main indigenous communities residing in the forest are the rural populations and indigenous tribes. These groups are dependent on traditional knowledge to safeguard their standard of living, which is determined by the forest's resources. Through Joint Forest Management Committees (JFMCs), they engage in activities that promote benefits and shared responsibilities (Agrawal & Gibson, 1999; Sarin, 2001; Sundar, 2000). Government organizations that create policies, offer technical assistance, and

guarantee adherence to conservation objectives include the Forest Department and MoEFCC (Saxena, 1997; Ravindranath & Sudha, 2004). NGOs raise awareness, provide technical assistance, and mediate between communities and government (Poffenberger & McGean, 1996). The private sector adopts sustainable practices, supports eco-tourism, and engages in CSR activities (Chambers, 1983; Gadgil & Vartak, 1976). Civil society organizations advocate for community rights, promote transparency, and encourage active participation in SFM (Colfer, 2005; Danielsen et al., 2005). International organizations offer funding, technical assistance, and policy guidance, aligning national efforts with global conservation goals (Sundar, 2000; Poffenberger & McGean, 1996). This collaborative approach is essential for effective and sustainable forest management in India.

### **Responsibilities, disputes, and cooperation amongst local stakeholders engaged in forest management**

India's forest management involves overlapping responsibilities, disputes, and cooperation among various stakeholders, including governmental organizations, local communities, forest departments, NGOs, and indigenous tribes (A Vemuri, 2008). Governmental organizations set policies and enforce laws, while local communities use resources sustainably and participate in decision-making (D Gupta, 2020). Disputes arise over resource distribution, land tenure, and benefit-sharing (D Gmur, 2023; A K Hazra, 2002). Cooperation is fostered through Joint Forest Management programs, integrating indigenous knowledge and promoting equitable forest management (KD Singh, 2005; SK Biswas, 2021). This complex interplay is crucial for sustainable forest management in India.

### **Factors influencing the role of Local Stakeholders in Sustainable Forest Management in India**

Legislation, cultural norms, and socioeconomic factors shape local stakeholders' roles in India's sustainable forest management. Policies like the National Forest Policy and the Forest Rights Act emphasize conservation and community involvement (Shekar, 2018). Cultural factors, such as customary rights and traditional social institutions, influence participation, with mistrust and gender disparities posing challenges (Elias, 2020). Socioeconomic factors, including financial limitations and economic barriers, restrict community involvement, especially in rural areas (Agarwal, 2013). Aligning the economic benefits of forest management with local livelihoods, primarily based on forestry and agriculture, is crucial. Adopting adaptable policies that promote inclusivity in decision-making while considering cultural diversities and socioeconomic circumstances is essential for long-term success (Nwatchi, 2021).

### **Successful Case Studies from India**

India is entitled to several successful community-based forest management initiatives that emphasize the value of local stakeholder involvement. The Joint Forest Management (JFM) initiative, which was started in 1972 in Arabari, West Bengal, involved the local population in forest conservation, improving the forest cover and having economic benefits. It demonstrated that improved livelihoods and long-lasting outcomes were attainable with the involvement of local stakeholders. In Pidadamaha village, Odisha, Adivasi communities have successfully maintained their forest lands despite obstacles posed by state-led programs. The Forest Rights Act of 2006 enhanced socioeconomic and ecological consequences by enabling these communities to pursue sustainable practices. Internationally, Costa Rica's Payment for Environmental Services (PES) program provides financial incentives to landowners for maintaining forest cover and implementing sustainable land-use practices. This program has successfully reduced

deforestation, promoted reforestation, and enhanced biodiversity conservation. The PES model illustrates the effectiveness of economic incentives in promoting sustainable forest management. By providing financial rewards for conservation efforts, the program encourages landowners to maintain forest cover and adopt sustainable practices. Critical success factors include clear policy frameworks, reliable funding mechanisms, and strong community engagement.

### **Successful Case Studies from other Countries**

The internationally recognized Payment for Environmental Services (PES) program in Costa Rica offers financial incentives to landowners who preserve forest cover and implement sustainable land-use practices. This strategy has improved biodiversity conservation, decreased deforestation, and encouraged replanting. The efficiency of financial incentives in advancing sustainable forest management is demonstrated by the PES model. The initiative incentivizes landowners to maintain forest cover and implement sustainable practices by offering financial awards for conservation activities. Strong community involvement, dependable financing sources, and well-defined policy frameworks are essential success factors. The UN-REDD program has supported sustainable forest management and biodiversity conservation in Vietnam, notably integrating organic shrimp farming with mangrove conservation.

### **Results and Discussions**

The findings underscore the pivotal role of local stakeholders in Sustainable Forest Management (SFM) in India. Empirical evidence from initiatives such as the Joint Forest Management (JFM) in Arabari, West Bengal, reveals that community involvement in forest conservation significantly enhances forest cover and yields economic benefits. Similarly, the Adivasi communities in Pidadamaha village, Odisha, have effectively managed their forest lands, demonstrating the positive impact of the Forest Rights Act of 2006 on socioeconomic and ecological outcomes. On an international scale, Costa Rica's Payment for Environmental Services (PES) program exemplifies the efficacy of economic incentives in fostering sustainable practices. These case studies highlight that robust policy frameworks, reliable funding mechanisms, and active community engagement are critical success factors. The integration of traditional ecological knowledge with contemporary techniques and the alignment of economic benefits with local livelihoods are essential for the long-term success of SFM initiatives. This collaborative approach ensures that sustainable forest management and community development objectives are achieved.

### **Suggestions**

1. Empower local communities by granting greater autonomy and rights over forest resources, ensuring fair benefit distribution, and developing alternative livelihoods like eco-tourism and agroforestry.
2. Review and update forest policies to address emerging challenges, incorporate best practices from international initiatives, and enhance the capacity of forest management institutions through training and resource allocation.
3. Implement robust monitoring systems using remote sensing technology and community-based approaches, and integrate climate-resilient practices into forest management plans.
4. Establish multistakeholder platforms for collaboration on sustainable forest management initiatives, and integrate traditional knowledge into modern

conservation efforts by involving communities in decision-making and fostering collaborative research.

5. Implement public awareness initiatives to inform individuals about the significance of sustainable forest management, educate both conservationists and locals, respect cultural values, and use adaptive management practices for sustainable outcomes.

## Conclusion

The research emphasizes the indispensable role of local stakeholders in Sustainable Forest Management (SFM) in India. By examining various theoretical frameworks and successful case studies, it becomes clear that integrating traditional ecological knowledge with contemporary management practices significantly enhances forest conservation efforts. Initiatives like the Joint Forest Management (JFM) in Arabari and the sustainable practices of Adivasi communities in Pidadamaha village highlight the positive impacts of community involvement on both socioeconomic and ecological fronts. Additionally, international examples such as Costa Rica's Payment for Environmental Services (PES) program demonstrate the effectiveness of economic incentives in promoting sustainable forest management.

Key success factors identified include robust policy frameworks, reliable funding mechanisms, and active community engagement. Addressing socioeconomic barriers and ensuring inclusive decision-making are essential for the long-term viability of SFM initiatives. By fostering genuine local empowerment and leveraging both traditional and modern practices, sustainable forest management can be achieved, benefiting both present and future generations. This collaborative approach not only enhances forest productivity and resilience but also aligns with broader community development goals, ensuring a balanced and sustainable future.

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