

6. Biodiversity Governance in India - Environment

The Ministry of Environment, Forest and Climate Change and the National Biodiversity Authority launched a five-year project to strengthen grassroots biodiversity governance in Tamil Nadu and Meghalaya.

Background

India's extraordinary biodiversity—ranking among the world's 17 megadiverse countries—spans diverse ecosystems from Himalayan alpine zones to Western Ghats rainforests, Thar Desert landscapes to coastal mangroves, supporting countless species and human communities. However, centralized conservation approaches implemented since colonial times often alienated local communities from forests and wildlife they traditionally managed, creating conflicts between conservation objectives and livelihood needs. The Biological Diversity Act of 2002 marked a paradigm shift, mandating decentralized governance through Biodiversity Management Committees at panchayat and municipal levels, recognizing that local people possessing traditional ecological knowledge and direct dependence on natural resources are the most effective stewards of biodiversity. Despite this legislative framework, implementation remained weak with many BMCs existing only on paper, lacking resources, training, and meaningful authority.

The recent five-year project launched with Global Environment Facility and UNDP support represents renewed commitment to operationalizing grassroots biodiversity governance. Focusing on ecologically critical landscapes—Sathyamangalam in Tamil Nadu encompassing tiger reserves and Garo Hills in Meghalaya including biosphere reserves and national parks—the initiative adopts a bottom-up model integrating biodiversity conservation into gram panchayat planning while empowering women, Scheduled Castes, and tribal communities. This approach aligns with global frameworks including the Kunming-Montreal 30×30 target and domestic commitments under the National Biodiversity Strategy and Action Plan 2024–2030.

Understanding Grassroots Biodiversity Governance

Conceptual Framework

1. Grassroots biodiversity governance refers to decentralized management of biological resources by local communities and village-level institutions.
2. The approach operates on the principle that local people with intimate knowledge of ecosystems and direct livelihood dependence are the most effective nature stewards.
3. Governance decisions occur at community level rather than distant bureaucratic centers, ensuring context-appropriate, locally-owned conservation strategies.

Legislative Foundation

1. The Biological Diversity Act, 2002, mandates decentralized governance establishing Biodiversity Management Committees at panchayat and municipal levels.
2. BMCs function as primary institutions documenting local biodiversity, preparing People's Biodiversity Registers, and regulating access to biological resources.
3. The Act empowers communities to participate in conservation decisions and share benefits arising from commercial utilization of traditional knowledge and genetic resources.

Project Overview and Structure

Institutional Partnership

1. The project represents a joint initiative of the Government of India, Global Environment Facility, and United Nations Development Programme.
2. GEF provides USD 4.88 million grant for the five-year period spanning 2025–2030, supplemented by government and partner contributions.
3. This multilateral partnership combines global financing, technical expertise, and domestic institutional capacity for effective implementation.

Geographic Coverage

1. In Tamil Nadu, the project covers the Sathyamangalam landscape including Mudumalai and Sathyamangalam Tiger Reserves in the Western Ghats.
2. This landscape connects protected areas forming critical wildlife corridors for elephants, tigers, and other threatened species.
3. In Meghalaya, implementation spans the Garo Hills region encompassing Nokrek Biosphere Reserve, Balpakram National Park, and Siju Wildlife Sanctuary.
4. Garo Hills' unique biodiversity includes rare citrus varieties, medicinal plants, and endemic species requiring community-based conservation.

Strategic Objectives

1. The initiative supports India's biodiversity and climate commitments including the National Biodiversity Strategy and Action Plan 2024-2030.
2. Alignment with the Kunming-Montreal Global Biodiversity Framework's 30×30 target aims to conserve 30% of terrestrial and marine areas by 2030.
3. Climate goals under the Paris Agreement receive support through ecosystem-based adaptation and nature-based solutions.

Governance Model

1. The project follows a bottom-up governance approach integrating biodiversity conservation into gram panchayat development planning.
2. Strengthening local institutions including Panchayati Raj bodies and Biodiversity Management Committees ensures sustainable institutional foundations.
3. Multi-stakeholder platforms facilitate coordination between communities, government agencies, research institutions, and civil society organizations.

Financing Innovation

1. Access and Benefit Sharing mechanisms enable communities to receive equitable compensation when traditional knowledge or genetic resources are commercialized.
2. Corporate Social Responsibility funds from private sector companies support biodiversity projects addressing social and environmental objectives.
3. Green micro-enterprises including eco-tourism, sustainable harvesting, and value addition create livelihood opportunities linked to conservation.

Social Inclusion

1. Special focus on women, Scheduled Castes, and tribal communities ensures marginalized groups lead and benefit from biodiversity governance.
2. Capacity building programs develop leadership, technical knowledge, and organizational skills among underrepresented community members.
3. Inclusive decision-making processes ensure diverse perspectives shape conservation strategies and benefit-sharing arrangements.

Importance of Grassroots Biodiversity Governance

Community Stewardship

1. Grassroots governance empowers local communities to conserve and sustainably use biological resources they depend upon for livelihoods.
2. Community ownership creates intrinsic motivation for conservation as people protect resources directly supporting their wellbeing.
3. Traditional ecological knowledge accumulated over generations informs adaptive management practices suited to local conditions.

Livelihood Security

1. The approach supports traditional knowledge systems, agro-biodiversity maintenance, and ecosystem services vital for rural and tribal populations.

2. Diverse crop varieties, medicinal plants, forest products, and wild foods provide nutrition, income, and insurance against agricultural failures.
3. Sustainable resource use ensures long-term livelihood security rather than short-term extraction depleting natural capital.

Climate Resilience

1. Grassroots governance enhances climate adaptation through mangrove restoration protecting coasts from storms and sea-level rise.
2. Watershed protection through community management maintains water availability during droughts and reduces flood risks.
3. Sustainable agriculture practices including crop diversification, organic farming, and agroforestry increase resilience to climate variability.

Global Commitment Alignment

1. The approach fulfils India's obligations under the Convention on Biological Diversity requiring equitable benefit-sharing and community participation.
2. Sustainable Development Goals particularly SDG 15 on Life on Land and SDG 13 on Climate Action receive direct support.
3. International recognition of community-conserved areas contributes to global conservation targets while respecting local rights.

Challenges Constraining Effective Implementation

Capacity Deficits

1. Many Biodiversity Management Committees lack trained staff possessing technical expertise in biodiversity documentation, sustainable use practices, and legal frameworks.
2. Limited access to scientific resources, technology, and expert guidance constrains BMCs' ability to make informed management decisions.
3. High turnover in elected panchayat representatives disrupts institutional memory and continuity in conservation programs.

Financial Resource Constraints

1. Limited financial support for local biodiversity projects prevents BMCs from implementing conservation activities, community outreach, and monitoring programs.
2. Dependence on uncertain government grants creates planning difficulties and prevents long-term commitment to conservation initiatives.
3. Absence of dedicated biodiversity budgets in panchayat planning marginalizes conservation relative to infrastructure and welfare programs.

Coordination Failures

1. Poor integration between local bodies, State Biodiversity Boards, and the National Biodiversity Authority creates information silos and duplicated efforts.
2. Weak linkages between forest departments, agricultural departments, and panchayats prevent holistic landscape management.
3. Conflicting mandates and jurisdictional ambiguities generate institutional friction rather than collaborative governance.

Awareness and Rights Deficits

1. Communities often remain unaware of their rights under Access and Benefit Sharing provisions when traditional knowledge or genetic resources are commercialized.
2. Lack of legal literacy enables exploitation by researchers and companies extracting resources without equitable compensation.

3. Limited understanding of biodiversity's economic value beyond direct use prevents communities from recognizing conservation benefits.

Way Forward

Innovative Financing Mechanisms

1. Establish dedicated biodiversity funds at district and state levels pooling government allocations, international grants, and penalty collections, while leveraging Corporate Social Responsibility mandates requiring companies to invest in environmental sustainability and green bonds financing conservation projects generating measurable environmental outcomes.

Community Incentive Structures

1. Recognize and reward local conservation champions through awards, certificates, and public acknowledgment creating social prestige for environmental stewardship, while promoting eco-tourism enabling communities to earn income from biodiversity conservation and sustainable enterprises including organic farming, handicrafts, and medicinal plant cultivation linking livelihoods directly to healthy ecosystems.

Institutional Coordination Strengthening

1. Ensure synergy between the Ministry of Environment, Forest and Climate Change, State Biodiversity Boards, and Panchayati Raj Institutions through regular coordination meetings, joint planning exercises, and integrated monitoring systems, while clarifying roles, responsibilities, and decision-making authorities reducing jurisdictional conflicts and enabling collaborative landscape management.

Awareness and Capacity Building

- Expand Mission LiFE-style outreach campaigns highlighting biodiversity's role in daily life including food security, water availability, climate regulation, and cultural identity, while conducting systematic training programs for BMC members, panchayat representatives, and community leaders in biodiversity documentation, sustainable resource management, benefit-sharing negotiations, and legal frameworks.

Conclusion

Grassroots biodiversity governance represents both environmental necessity and democratic imperative, empowering local communities to protect India's natural heritage while securing livelihoods. The new five-year project in Tamil Nadu and Meghalaya with USD 4.88 million GEF-UNDP support demonstrates renewed commitment to operationalizing the Biological Diversity Act's decentralized vision. Despite challenges including capacity deficits, financial constraints, coordination failures, and awareness gaps, innovative financing, community incentives, and institutional strengthening can transform Biodiversity Management Committees into effective conservation institutions supporting India's climate goals and global commitments.

Source - <https://www.newsonair.gov.in/moefcc-and-nba-launch-5-year-project-to-strengthen-biodiversity-governance-in-tamil-nadu-and-meghalaya/>