

## Ecosystems in Action: Collaborative Strategies for Biodiversity Conservation

The session brought together experts from various domains to discuss collaborative approaches and strategies for biodiversity conservation and the importance of multistakeholder engagement and ecosystem-based approaches for effective conservation outcomes.

### Speakers

- Ms Pankti Shah, State CSR Head, Adani Foundation, Ahmedabad
- Shri R K Sugoor, IFS, Chairman, Gujarat Biodiversity Board, and Director, GEER Foundation, Gandhinagar
- Dr V Vijay Kumar, Director, Gujarat Institute of Desert Ecology (GUIDE), Bhuj, Kachchh
- Ms Neha Raghav, Director, Education, World-Wide Fund for Nature (WWF) India, Delhi
- Mr David Manski, Former Director, Acadia National Park, USA
- Dr Biswajit De, Founder President, WildRoots India, Guwahati
- Dr Gayatri Doctor, Program Chair, Masters in Urban Management Program, CEPT University, Ahmedabad
- Dr Mohmadnavaz Dahya, BKM Science College

### Welcome Address

Mr Tushar Jani, Senior Programme Director, Environment Management Group (EMG), welcomed the participants and moderated the session, underscoring the necessity of moving beyond fragmented efforts in biodiversity conservation. He highlighted the potential of multi-stakeholder collaboration in reducing resource duplication and achieving impactful results. He emphasised that further stakeholder coordination is crucial while significant work is being done.

### Presentations and Key Messages

**Ms Pankti Shah (Adani Foundation)** elaborated on the strategic initiatives by the Adani Foundation aimed at enhancing biodiversity and sustainability. She highlighted the development of a lush green campus at Mundra through biodiversity enhancement initiatives, as well as mangrove plantation efforts, which have expanded the total plantation area from 10 acres to over 160 hectares, involving species such as *Avicennia marina*, *Rhizophora mucronata*, and *Ceriops* spp. Additionally, she discussed the creation of a biodiversity park that benefits local fisherfolk by providing alternative livelihood opportunities during off-fishing seasons. The foundation has also contributed to waste management by recycling 1,440 tonnes of plastic and converting 1,400 tonnes of organic waste into compost fertiliser. Furthermore, native instruments and cultural elements have been utilised to raise awareness about biodiversity.

**Shri R K Sugoor, IFS (GEER Foundation)**, discussed the challenges in achieving biodiversity conservation targets and emphasised the importance of preserving genetic diversity. He highlighted the role of apex predators, such as wolves, in maintaining ecosystem balance, using the Velavadar Blackbuck National Park. He also stressed the significance of People's Biodiversity Registers at the village level to safeguard agricultural and genetic biodiversity. Furthermore, he advocated for an ecosystem-based approach to biodiversity conservation, underscoring the need for robust cross-sector collaborations.

**Ms Neha Raghav (WWF India)** emphasised the importance of education and responsible ecotourism in biodiversity conservation. She highlighted the necessity of capacity-building among stakeholders, promoting nature-friendly urban planning, and implementing resource-sharing mechanisms. Additionally, she underscored the effectiveness of mock exercises, such as Mock COP, in engaging students with environmental challenges. The Mock COP (MCOP), organised by WWF, is an initiative to educate and empower future changemakers.

**Mr David Manski (Acadia National Park)** shared insights from his 35 years of experience in managing natural and cultural resources. He emphasised the importance of habitat-specific threat identification, ecosystem health monitoring, and the role of teacher rangers in public education and local ecosystem restoration efforts. He also highlighted the need for collaborative responsibility involving government and non-government organisations.

**Dr V Vijay Kumar (GUIDE)** discussed technological advancements in ecosystem management, focusing on using GIS, satellite studies, and AI to monitor large ecosystems effectively. He provided examples of ecological studies conducted in Kachchh by GUIDE.

**Dr Biswajit De (WildRoots)** presented successful initiatives engaging youth in biodiversity conservation, including interdisciplinary projects like wildlife and pollinator-friendly gardens, the Youth Climate & Conservation Fellowship Programme, knowledge and skill exchange programmes connecting rural and urban students, and innovative approaches such as gamified education and conservation through arts and cartoons. He also shared about

**Dr Gayatri Doctor (CEPT)** provided insights into achieving carbon neutrality on Indian campuses, using the Pune Campus as a case study. She recommended mapping and calculating carbon emissions and maximising carbon sequestration through tree plantations, particularly banyan trees.

**Dr Mohmadnavaz Dahya** addressed the issue of human-animal conflicts, focusing on community awareness and multi-stakeholder partnerships to manage leopard-human interactions. He also emphasised the ecological benefits of leopards in controlling wild boar populations, which indirectly support farmers.

## Session Highlights

- **Collaborative Efforts for Impactful Conservation:** Emphasis was placed on moving beyond fragmented efforts, with multistakeholder collaboration identified as a key to resource efficiency and effective biodiversity conservation.
- **Corporate Role in Biodiversity and Community Well-being:** Strategic corporate initiatives, such as those by the Adani Foundation, were highlighted for enhancing biodiversity while promoting community well-being through alternative livelihoods and sustainable practices.
- **Education and Capacity Building:** Conservation education, particularly for youth, and capacity building among stakeholders were stressed as critical for fostering long-term commitment to biodiversity preservation.
- **Technology-Driven Ecosystem Management:** Advanced technologies like GIS and AI were identified as transformative for large-scale ecosystem monitoring and data-driven decision-making.
- **Collective Responsibility and Data-Driven Restoration:** The session underscored the need for collective responsibility and detailed, data-based ecosystem health monitoring plans to ensure sustainable conservation efforts.

## Key Remarks from the Participants

- Current efforts in biodiversity conservation are commendable but often fragmented, leading to resource inefficiencies. A coordinated, multi-stakeholder approach is essential for achieving impactful results.
- Ground-level collaboration and community engagement are pivotal for biodiversity enhancement. Efforts like mangrove plantation, biodiversity parks, and sustainable livelihood initiatives can significantly impact the environment and local communities.
- Sensitizing and empowering youth through education and innovative programs like gamified learning, conservation fellowships, and cultural tools (e.g., art and cartoons) can drive grassroots-level changes in biodiversity conservation.

## Key Recommendations from the Session

- Strengthen multistakeholder collaboration across sectors and integrate conservation education at all levels to raise awareness and build capacity.
- Implement data-driven ecosystem management leveraging advanced technologies like GIS, AI, and satellite monitoring.
- Focus policy efforts on preserving genetic and agro-biodiversity while empowering local communities through initiatives like People's Biodiversity Registers.
- Promote responsible ecotourism, sustainable urban planning, efficient waste management, and nature-friendly livelihood opportunities for long-term environmental sustainability.

## Who Acts?

- Government agencies and policymakers
- Educational institutions and researchers
- Non-governmental organisations and community groups
- Youth and local communities

## Case Studies presented during the session

- Mangrove plantation at Luni Bandar and the biodiversity park developed by the Adani Foundation at Kachchh.
- Carbon-neutral campus initiatives at Pune, CEPT.
- Knowledge exchange programs and gamified education by WWF and IUCN.
- Use of advanced technologies in Gujarat by GUIDE.

## Photographs

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