

## FORESTS AND BIODIVERSITY Host Institution: Cotton University

### I. Rationale and Context

The Eastern Himalaya is one of the world's most critical biodiversity hotspots, home to over 10,000 plant species and more than 1,200 vertebrate species, many of which are endemic and endangered. Forests in this region are not only reservoirs of biodiversity but also central to the ecological security, cultural identity, and livelihoods of indigenous communities. However, rapid land-use change, unsustainable extraction, infrastructure development, and climate change are accelerating ecosystem degradation.

In this context, the **EHNF 2025** on the theme “**Forests and Biodiversity**”, to be hosted at **Cotton University**, aims to catalyze a dialogue around strategies to restore forest ecosystems, conserve biodiversity, and strengthen community stewardship across the Eastern Himalaya. The session will draw from interdisciplinary perspectives, blending scientific research, policy frameworks, traditional knowledge and grassroots conservation models.

### II. Focus Areas of the Session

This session will bring together ecologists, community leaders, forest officials, researchers, students, and practitioners to co-develop solutions for the protection and regeneration of forest landscapes in the Eastern Himalayas.

#### Key Discussion Points:

#### 1. Landscape Restoration & Habitat Connectivity

- Scaling native species reforestation and mixed-species plantation.
- Creating and conserving ecological corridors across fragmented habitats.
- Showcasing success stories from Assam and Arunachal Pradesh on reconnecting elephant and primate habitats.

#### 2. Community-led Conservation and Indigenous Knowledge

- Forest-dependent communities as frontline conservationists.
- Documenting and integrating indigenous knowledge in biodiversity monitoring.
- Empowering forest governance through local institutions and Joint Forest Management Committees (JFMCs).

#### 3. Biodiversity Monitoring & Research Innovations



- Use of AI, camera traps, and acoustic sensors for non-invasive biodiversity assessments.
- Citizen science and youth-led biodiversity documentation.
- Building biodiversity data repositories and open-access platforms at academic institutions.

## 4. Climate Resilience & Forest Ecosystem Services

- Forests as buffers against floods, landslides, and carbon emissions.
- Quantifying and integrating ecosystem services into land use planning.
- Climate resilient forest management in hill and floodplain landscapes.

## 5. Policy & Institutional Frameworks

- Reviewing the Forest Conservation Act and other key legislations.
- Navigating the Forest Rights Act and indigenous land rights in the Eastern Himalayas.
- Financing forest regeneration through biodiversity credits and CSR investments.

## III. Outcomes & Collaboration Opportunities

This session aims to catalyze cross-sectoral collaboration and innovation around:

1. Launch a Forest & Biodiversity Knowledge Platform  
Jointly initiated by Cotton University and partners to compile case studies, research, and local knowledge.
2. Develop a Youth Biodiversity Corps  
Engaging students across Assam to document and monitor biodiversity through structured fieldwork and community interaction.
3. Propose a Regional Forest Regeneration Framework  
Aligning science, policy, and community action for coordinated restoration of degraded forest areas.
4. Forge Cross-sector Collaborations  
With forest departments, academic institutions, NGOs, and indigenous networks for long-term ecological monitoring and conservation innovation.

## IV. Participation Audience

- Government and Forest Departments: State and national officials involved in forest conservation, biodiversity governance, and tribal affairs.
- Academic and Research Institutions: Faculty and students from Cotton University and other ecological research bodies.
- Community Representatives: Indigenous leaders, JFMC members, and local conservation champions.
- Civil Society & NGOs: Biodiversity-focused organizations working in conservation and restoration.
- Legal and Policy Experts: Scholars and practitioners working on environmental law and indigenous rights.
- Youth Networks: Students, nature clubs, and citizen scientists engaged in biodiversity and sustainability initiatives.





## V. Venue & Engagement at Cotton University

Cotton University will host these pivotal sessions, leveraging its academic legacy and regional engagement to foster intergenerational, interdisciplinary conservation action. The university's students and faculty will play a leading role in curating discussions, showcasing research, and anchoring long-term ecological collaborations beyond the Forum

## VI. Proposed Format

- Opening Keynote: A Vision for Forest Regeneration and Biodiversity Conservation in the Eastern Himalaya.
- Expert Panel Discussion: Solutions, case studies, and collaboration opportunities from across the Eastern Himalaya.
- Audience Q&A and Open Forum: Interaction with students, researchers, and policy stakeholders.
- Technical Showcases: Demonstrations or short case presentations on innovative nature-based solutions for forests and biodiversity conservation in the region.
- Naturenomics™ Pavillion: Showcasing the art and crafts of Eastern Himalayan communities.

