Exploratory Visit to Tea Plantation Landscapes and Tourism Sustainability Initiatives in Munnar, Kerala

19–23 January 2026

Overview

An exploratory field visit was undertaken to Munnar and Kochi, Kerala, with the objective of *strengthening academic–industry–administration linkages related to tea plantation research and tourism sustainability in high-altitude ecosystems*. The visit focused on understanding plantation-level challenges, identifying potential institutional and funding partners, and initiating dialogue with the district administration on research-driven decision-support tools. The visit included interactions with plantation companies, research institutions, government officials, and plantation workers, alongside site visits to tea estates and ecologically significant landscapes.

1. Academic and Institutional Interaction – GEC, Munnar and NABHA Laboratory

The visit commenced with an interaction at the Government Engineering College (GEC), Munnar. Discussions focused on the proposed tea plantation research initiative, particularly the importance of accounting for complex terrain, altitude variability, and multiple climatic and environmental parameters while developing predictive models. As part of the research collaboration, the NABHA (Natural Aerosol and Bioaerosol studies at High-Altitude) laboratory was established by IITM and GCE, Munnar, and is equipped with PRT-MS, SMPS, gas analyser and various other equipment to support research on *air quality, aerosol characterisation, climate change, and environmental monitoring in high-altitude ecosystems.*

2. Tea Museum Visit and field interaction

The visit to the Kannan Devan Tea Museum provided historical and technological context to the evolution of tea cultivation in Munnar. The museum documents the transition from early manual processes to modern automated systems, offering insights into the region's plantation legacy and its socio-economic significance over the past century.

A field visit to a tea estate facilitated direct interaction with plantation workers, providing first-hand understanding of work practices, living arrangements (lines), wage structures, and long-term settlement patterns (migration). The interaction underlined the generational continuity of the workforce, gender participation in plantation activities, and evolving mechanisation in leaf plucking. Workers also shared perspectives on employment stability, retirement practices, and coexistence with surrounding natural ecosystems.

3. Engagement with Plantation Management

Detailed discussions and presentations were held with representatives of a major tea plantation companies (*KDHP & AVT*). The interactions focused on plantation operations, sustainability initiatives, climate-related risks, and long-term sectoral challenges. Emphasis was placed on climate variability, pest and disease management, market volatility, and the need for science-based decision-support systems. The company also shared its ongoing efforts towards sustainability, renewable energy integration, ecological restoration, and worker welfare. The interaction helped identify potential areas where collaborative research, particularly in climate and production forecasting, could support adaptive plantation management.

4. Environmental and Tourism Context

The projects on tea plantation and TCC (Tourism Carrying Capacity) were briefed to the district collector (*Dr Dinesan Cheruvat, IAS*, District Collector & District Magistrate, Idukki) and the Sub collector, Devikulam (*Ms Arya, IAS*). In parallel, a visit to Eravikulam National Park offered a valuable ecological context for understanding high-altitude landscapes in the Western Ghats and the relevance of carrying capacity assessment tools for fragile mountain ecosystems such as Munnar.

Outcomes and Way Forward

- **Strengthened Institutional Linkages:** The visit facilitated meaningful engagement between academic researchers, plantation industry stakeholders, and district administration.
- **Refinement of Research Focus:** Inputs from industry and academic partners helped refine research priorities, particularly in climate-linked production forecasting and environmental monitoring.
- **TCC Initiative:** District administration expressed interest in advancing the Tourism Carrying Capacity for Munnar, opening pathways for collaborative implementation.
- **Funding and Submission Pathways:** Suitable institutions were identified for submitting research proposals related to tea plantations and sustainability.