



Costs, Skills and Opportunities in the Electric Transition: A Case Study of Tourist Transport in the Nilgiris, Tamil Nadu, India

1. Name of proposing Party or organization.

Progyan Foundation for Research and Innovation (PFRI) (1)

2. Brief description of the proposed study:

Problem Statement India's Long-Term Low-Carbon Development Strategy identifies development of an 'integrated, efficient, inclusive low-carbon transport system' as a strategic route towards its 2070 net-zero objective, alongside electric-vehicle adoption and workforce reskilling (Government of India, 2022). The Western Ghats, recognised by UNESCO as "one of the world's eight 'hottest hotspots' of biological diversity", contain tourism-dependent hill economies where transport supports livelihoods but rising vehicle use increases emissions and ecological pressure (UNESCO, 2012). The Nilgiris district provides a strong setting to examine this transition. Around 2.5 million tourists visit annually, while peak periods bring an average daily inflow of 20,011 vehicles. The Nilgiris District Decarbonisation Plan calls for 30% of buses serving tourists and commercial vehicle fleets to be electric by 2030, progressing to fully electric tourist services by 2040, together with e-bus and e-auto deployment, expanded charging facilities and walking and cycling infrastructure (TNGCC, 2025). The transition can reduce transport emissions but may distribute costs and opportunities unevenly across drivers, vehicle owners, mechanics and other tourism-transport workers. While the affected transport segments and electrification pathways are identified, available evidence does not systematically assess how conversion costs, financing and infrastructure access vary across worker groups; how existing occupations and skills may change; who can access emerging EV-related employment; whether such jobs meet decent-work standards; or whether available support enables an equitable transition. This evidence gap limits understanding of how the transport transition will affect the workforce in practice. Aim To assess management of workforce transition arising from transport decarbonisation in the Nilgiris tourism economy, focusing on distributional impacts, access to emerging employment and adequacy of transition support. Objectives and Methodology 1. Tracing the impacts of transport electrification on the associated workforce: Stratified



surveys, focus-group discussions and key-informant interviews with taxi, auto-rickshaw and tourist-bus operators, drivers, mechanics and related workers will assess vehicle dependence, conversion costs, finance and charging access, income effects, occupational movement and entry into EV-related work. Transition matrices and comparative analysis will identify differential impacts across worker groups. 2. Evaluating the quality of emerging employment in the transport sector: Workers entering electric-vehicle operation, maintenance, charging and related services will be assessed against relevant International Labour Organization decent-work indicators covering pay, continuity, safety, social protection, training and progression. 3. Examining support for workforce adjustment: Institutional interviews and programme-document review will examine incentives, credit access, reskilling, charging provision, scheme convergence, social protection and mechanisms supporting workers unable to transition directly. Expected outcomes 1. A profile of worker groups facing adjustment burdens or gaining new opportunities, to guide differentiated transition support. 2. An assessment of skills needs and employment conditions in emerging electric-transport roles, to inform quality-job pathways. 3. Identification of effective and inadequate finance, reskilling, infrastructure and protection measures, to strengthen workforce adjustment during implementation. The case will offer transferable lessons for managing workforce transitions as tourist transport is decarbonised across Western Ghats hill destinations.

3. United Nations region to be covered by the case study:

Asia-Pacific;

4. Country or countries to be covered by the case study

India

5. Area of the case study:

Managing workforce transitions ;

6. Expected duration for completion of the case study (in months):

8- 10 months

7. Contribution of the submitting organization



Technical inputs;Data;Authorship;including development of survey and interview tools, engagement with transport-worker groups, and analysis of transition costs, occupational change, skills and access to emerging electric-transport employment; decent-work assessment of new employment opportunities and examine the adequacy of finance, reskilling, charging access and social-protection measures available to affected workers; synthesise the evidence across worker categories and contribute towards drafting the final case study, policy recommendations and dissemination outputs;

8. *Can the study be developed without financial support from the UNFCCC?*

No

9. *If no, please provide the estimated range of required financial support in USD (Please note that the UNFCCC is not a donor organization and has limited funding):*

8500

10. *Please provide the status of any preliminary work undertaken that could serve as a basis for the study, including a link to any available reports, if available.*

i. Secondary data on tourist inflow, peak-period vehicle volumes and the district's electrification targets have already been compiled from the Nilgiris District Decarbonisation Plan (TNGCC, 2025) and related tourism records, providing the baseline context set out in Section 9. ii. PFRI's ongoing Tourism Carrying Capacity Assessment of Kodaikanal with IIT Madras has established working relationships with tourism and transport stakeholders across Tamil Nadu, which will support rapid stakeholder access and engagement in the Nilgiris.

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