Terms of Reference (ToR)

for

Impact Assessment of Linear Infrastructure Projects in Kangchenjunga Conservation Landscape (KCL), Nepal
Activity 4.1 under NPELA: Informing Policy and Practice for Green and Resilient Infrastructure

1. Introduction

The Kangchenjunga Conservation Landscape (KCL), located in the eastern Himalayas, is one of Nepal's most ecologically diverse and environmentally sensitive regions. Spanning the districts of Ilam, Panchthar, Jhapa and Taplejung, KCL encompasses vital ecological zones in the eastern hills and mountains of Nepal. Although the Jhapa district lies outside the formal KCL boundary, it contains critical forest areas such as the Charali Forest that functions as a key movement corridor for Asian Elephants (*Elephas maximus*) and connect the hill ecosystems of KCL with the Terai Arc Landscape. These transitional zones are essential for maintaining ecological connectivity across elevational gradients.

At the heart of this landscape lies the Kangchenjunga Conservation Area (KCA)- Nepal's first and only community-managed conservation area, covering more than 2,035 square kilometers in Taplejung District. The KCA features a wide range of ecosystems, from subtropical forests to alpine meadows and glaciated peaks, including Mt. Kangchenjunga, the world's third-highest mountain. The area provides habitat for globally endangered species such as the Snow Leopard (*Panthera uncia*) and the Red Panda (*Ailurus fulgens*).

KCL as a whole covers 5,190 square kilometers across four districts-Taplejung, Panchthar, Ilam (partially), and Jhapa- and spans an altitudinal range from 60 meters above sea level in the Terai to 8,586 meters in the high Himalayas within a mere 70 km aerial distance. This dramatic elevation gradient makes it one of the steepest terrains in the world. The landscape is part of a broader transboundary conservation effort, maintaining ecological connectivity with the Quomolangma Nature Reserve in Tibet (China) and the Khangchendzonga Protected Area Complex in Sikkim, India, as recommended by WWF and IUCN (2001).

However, the region faces increasing threats from expanding linear infrastructure such as the East-West Highway, Mechi Highway, Mid-Hill Highway, Postal Road, East-West Railway, and the North-South Corridor. These developments intersect or fragment biodiversity-rich zones, disrupting the movement of wildlife and their habitats. Moreover, the construction of roads for hydropower development (often in remote and fragile areas) further exacerbates these threats. While such infrastructure is crucial for national development, it often results in habitat fragmentation, heightened human-wildlife conflict, and long-term ecological degradation.

In addition to infrastructure-related threats, climate change is accelerating ecological shifts within the landscape, adding to the vulnerability of species and ecosystems.

In response, WWF Nepal is collaborating with the Department of National Parks and Wildlife Conservation (DNPWC) and the Department of Forest and Soil Conservation (DoFSC) to initiate a systematic impact assessment evaluating the combined effects of linear infrastructure and climate change on the biodiversity and ecosystem integrity of the Kangchenjunga Conservation Landscape. This initiative will involve:

- Deploying camera traps in key biodiversity hotspots across Taplejung, Ilam, Panchthar, and Jhapa, in collaboration with local citizen scientists.
- Conducting Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs) with local communities, infrastructure developers, government agencies, and conservation stakeholders to gather site-specific qualitative data.
- Reviewing Environmental Impact Assessment (EIA) reports of existing and proposed hydropower and road projects, and evaluating the implementation and effectiveness of proposed mitigation measures.
- Collecting photographic and observational evidence on wildlife movement patterns, infrastructure impacts, and climate-induced changes to the landscape.

The insights from this assessment will be synthesized into a comprehensive impact report, providing actionable recommendations for integrating biodiversity safeguards into infrastructure planning and policy-making within the KCL.

To ensure effective implementation of this initiative, WWF Nepal is seeking a qualified and experienced consultant who will be leading and managing field-level activities, including the supervision and training of citizen scientists, coordination of data collection, facilitation of

stakeholder engagement, and preparation of technical reports. This role is critical for ensuring consistency, data integrity, and the overall quality of project outcomes.

2. Objectives

The primary objective of this consultancy is to conduct an evidence-based biodiversity impact assessment of linear infrastructure (roads and hydropower projects) and climate change in the KCL. Specifically, the consultant will:

- Train and supervise Citizen Scientists on camera trap methods.
- Document and analyze the biodiversity impacts of linear infrastructure and climate change.
- Review EIA reports of key hydropower projects and monitor mitigation measures.
- Provide evidence-based recommendations for improved safeguards.

3. Scope of Work

The consultant will be responsible for the following tasks:

A. Identification of locations for camera trap installation and Citizen Scientist Capacity Building & Supervision

- Identify suitable locations for camera trap installations and carry out the installation in the field.
- Train citizen scientists from **five locations** (KCA, Ilam, Panchthar, Jhapa, etc.) on camera trap techniques.
- Supervise installation, retrieval, and data extraction from camera traps.
- Assist in species identification, photo/video analysis, and data documentation.

B. Field Data Collection

- Conduct **Key Informant Interviews (KIIs)** and **Focus Group Discussions (FGDs)** with:
    - Local communities
    - Hydropower developers
    - Forest/wildlife officials
- Collect qualitative and quantitative data on:

- Wildlife presence and movement
- Infrastructure-related disturbances
- Observations on climate-induced shifts

C. Desk Review

- Review Environmental Impact Assessment (EIA) reports of ongoing and planned hydropower projects.
- Evaluate the proposed mitigation measures and assess their implementation status through field verification.

D. Climate Change Impact Assessment

- Compile and analyze local reports and evidence of climate-related biodiversity changes (e.g., species range shifts, conflict).
- Collect hydrological and meteorological data from hydropower projects.

E. Final Report

- Prepare a comprehensive impact assessment report covering:
  - Species distribution and threats
  - Infrastructure and climate change impacts
  - Effectiveness of mitigation efforts
  - Visual documentation (photos/videos)
  - Practical, science-based recommendations

4. Methodology

- Participatory, evidence-based approach.
- Mixed methods: ecological surveys (camera traps), social data (KIIs/FGDs), document review.
- Use GIS and photographic evidence to illustrate impacted areas.

5. Deliverables

The consultant is expected to deliver the following:

- Identify suitable locations for camera trap installations and carry out the installation in the field.
- Training and supervision of Citizen Scientists completed, and report shared with attendance sheet and photographs.
- Field notes, photos, and camera trap data analyzed and shared.
- Summary of KIIs and FGDs.
- Reviewed EIA reports with mitigation measure assessments.
- Comprehensive final report with:
    - Maps and species records
    - Infrastructure impact matrix
    - Climate vulnerability findings
    - Recommended mitigation actions

6. Duration

- The assignment will be completed within **6 months** from the date of contract signing.

7. Required Expertise

- Minimum of a Master's degree in Environmental Science, Wildlife Biology, or a related field.
- Proven experience in biodiversity assessments, GIS, and camera trapping.
- Experience collaborating with local communities and government agencies.
- Experience working in the Kangchenjunga Conservation Landscape.
- Familiarity with Environmental Impact Assessment (EIA) processes and climate change impacts in Nepal.

8. Reporting and Coordination

The consultant will report to WWF Nepal and maintain regular communication throughout the consultancy period. Progress updates, reports, and deliverables should be submitted as per the agreed-upon schedule.

9. Confidentiality and Intellectual Property

All information and data collected during the consultancy will be treated as confidential and should not be shared without prior written consent from WWF Nepal. The intellectual property rights of the data will belong to WWF Nepal.

10. Proposal Submission Details

Interested VAT registered organizations in Nepal are requested to submit technical and financial proposals providing a detailed breakdown of total budget in Nepali rupees, electronically to proposalsubmission@wwfnepal.org

Please mention "Impact Assessment of Linear Infrastructure Projects in KCL" as an email subject and submit the proposal by 5 p.m. Nepal Standard Time**, 19 August 2025.**

The proposal must include the following:

- Signed cover letter specifying the value of the proposal.
- Curriculum Vitae of team members
- Technical proposal (Not exceeding 5 pages)
- Financial proposal.
- Organization Registration, and latest renewal
- VAT registration certificate
- Latest tax clearance certificate
- Registration with Social Welfare Council, applicable for NGO
- Tax Exemption Certificate, if applicable
- Latest Audit Report

Please refer to Annex 1 for Budget Sample.

11. Mode of Payment

The payment will be made as per WWF Nepal norms and upon submissions of satisfactory deliverables. Note that payments are subject to tax deduction as per prevailing government rules.

Annex 1: Budget Sample

S.N.	Description	Unit	Qty.	Rate	Amount (NPR)
1	**Fee**				**XXXX**
1.1	Expert-Name	Days			XXXX
1.2					XXXX
1.3					XXXX
	Sub-Total Fee (1.1+1.2+1.3+…)				XXXX
	VAT 13% on Fee				**XXXX**
2	**Other Expense**				**XXXX**
2.1	Field Visit Cost				
2.1.1	Accommodation	PersonxNights			XXXX
2.1.2	Food	PersonxDays			XXXX
2.1.3	Transportation				XXXX
2.1.4	FGDs and KIIs				
2.2					
2.2.1					
	Sub-Total Other Expense (2.1+2.2+….)				XXXX
	VAT 13% on Other Expense				**XXXX**
	GRAND TOTAL (1+2)				**XXXX**

Note: please add/edit rows as required.