



Terms of Reference

E-Waste Assessment in Khumbu Region

1. Background

WWF is the world's leading independent conservation organization originated in Switzerland in 1961 and currently running in more than 100 countries across 6 continents. WWF initiated work in Nepal with a rhino conservation program in Chitwan in 1967 while the WWF Nepal set up its office formally on 19 May 1993. Currently, WWF Nepal works in five thematic areas – Wildlife, Freshwater, Forests, Climate and Energy, and Governance. WWF Nepal's focus has progressed from its localized efforts in conservation of a single species in the 1960s, to integrated and development approach in 1990s, to a new horizon of landscape-level conservation encompassing national, regional and global scales of complexity since the early 2000s.

WWF Nepal identifies climate change as an active driver of emerging issues in freshwater, forests and wildlife, and is working with partners and local communities including the government to address the critical issues through innovative and synergetic actions.

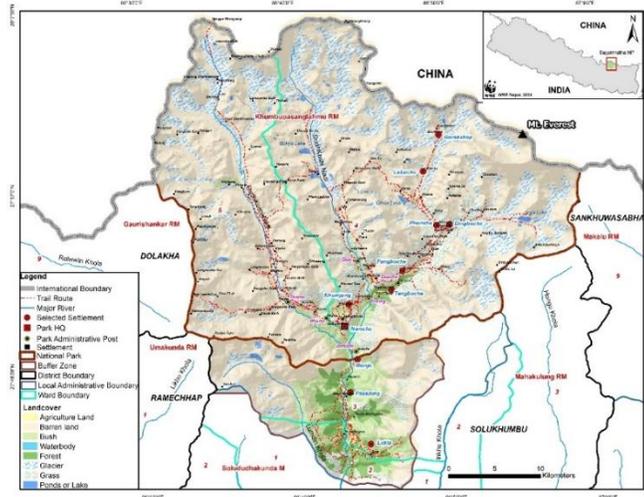
Sagarmatha National Park (SNP) and Buffer Zone (BZ), Khumbu region of Solukhumbu district, is one of the most popular tourism destinations of the world and is visited by thousands of trekkers each year from all around the globe. Since the first scaling in 1953 of Mount Everest situated in the SNP, the number of trekkers in the Khumbu Region has more than doubled: from about 20,014 in 1998 to ~ 52,371 foreign trekkers in 2023. To accommodate the growing number of visitors, businesses such as lodges, restaurants, shops are increasing in the Khumbu region. However, this influx has brought about some serious environmental challenges, in particular waste management. More recently, electronic waste (e-waste) has emerged as a growing concern. The Khumbu region, in particular, Namche Bazaar and surrounding Khumbu Valley settlements, has seen an increase in e-waste due to the growing influx of tourists, trekkers, and modernization of local amenities. E-waste encompasses a diverse range of electronic devices, such as telecommunications and information technology equipment, large household items, lighting equipment, automatic dispensers, medical devices, monitoring and control devices, as well as consumer electronics, including electronic and electrical tools, sports and leisure equipment, toys, mobile phones, and computers. Unlike organic waste, e-waste cannot be safely disposed of locally, posing serious environmental and health risks. The absence of proper e-waste management infrastructure in this ecologically sensitive area underscores the need for a sustainable solution. Therefore, there is an urgent need to develop sustainable waste management practices for a cleaner environment, empowered communities to safeguard SNP's fragile mountain ecosystem with co-benefits for climate action, tourism and human health.

The project, "Sustainable Waste Management for Clean Himalaya" (Swachya Sagarmatha in brief) aims to promote sustainable waste management practices for a cleaner environment in the Khumbu region of Nepal. By addressing the region's growing waste management crisis, the project seeks to safeguard its fragile mountain ecosystem and strengthen the tourism industry. This three-year project will be completed in December 2027. The project is funded by Thomas L. Kemper, Jr., Foundation and implemented by WWF Nepal in collaboration with local partner, Sagarmatha Pollution Control Committee (SPCC).

With this context, WWF Nepal seeks proposals to carry out initial assessment regarding e-waste in Khumbu Region of SNP.

2. Study Area

The project area covers SNP (1148 sq.km) and its buffer zone (275 sq. km) located in Solukhumbu district of Koshi Province. It focuses on Khumbu Pasang Rural Municipality (RM) in Wards 2, 3, 4, and 5. Wards 4 and 5 lie within the core area of SNP while Wards 2 and 3 lie in the buffer zone. The project targets major settlements along the Everest Base Camp (EBC) trekking trail, from Lukla airstrip, passing through Phakding and ending at Gorakshep which is the final settlement near Everest Base Camp (EBC). These settlements are situated at altitudes ranging from 2,800 to 5,000 meters above sea level (masl).



3. Objective

The main objective of the assessment is to analyze trends in e-waste generation, composition and understand management practices in Khumbu pasang Rural Municipality (Ward 2, 3, 4, 5) of Khumbu region.

Specific objectives:

- Map e-waste types, volumes, generation patterns over the last 10 years
- Assess knowledge, attitude and practices (KAP) among households, lodges, tourism operators and local officials
- Identify barriers to e-waste management including institutional, logistical and behavioral challenges
- Provide recommendations for sustainable e-waste management

4. Scope of Work

- i. Literature Review/Desktop Analysis: The consultant will review national and local legal and policy frameworks including environment policies, waste management regulations and relevant research articles to understand the contextual issues of e-waste management and identify key gaps in relation to policy implementation.
- ii. Research Design and Methodology: The consultant will develop a robust design to guide the assessment defining clear research objectives key research questions.
 - a. The consultant will develop and present a detailed methodology with data collection methods for household survey, key informant interview (KII), focus group discussions (FGD). The consultant will develop a sampling framework to determine statistically viable sample size and categorize stakeholder groups. For this, the consultant shall categorize the sampling groups by household, government officials, trekking guides, lodge operators, waste management authorities and other relevant stakeholders.
 - b. The consultant will develop a questionnaire checklist (household survey, KII, FGD) for the study addressing key aspects: types, composition, generation patterns, disposal practices and KAP. The consultant will carry out field data collection in line with the sampling framework and questionnaire checklist developed.
 - c. The consultant will analyze the results from the data collected using appropriate statistical tools for both qualitative and quantitative data. Data triangulation is necessary to validate the data collected from the field.
- iii. Recommendations: The consultant will also identify the global-best practices for e-waste management from comparable mountain regions. Drawing on the field observations, the

consultant will list practical and evidence-based recommendations for sustainable e-waste management in Khumbu Region.

5. Proposed timeline

The consultancy period is tentatively 50 days from March 2026 till May 2026 inclusive of allocated days for the field trips to carry out data collection.

SN	Activity	March				April				May				
		1	2	3	4	1	2	3	4	1	2	3	4	5
1	Literature review and desktop analysis													
2	Research design and tool finalization													
3	Field data collection													
4	Data analysis													
5	Draft Report Submission													
6	Review and feedback													
7	Final Report													

6. Team Composition and Qualification

Interested VAT registered organization can propose a team to undertake the assignment that comprises of a maximum of 2 qualified professionals. The team members should possess at least a Bachelor's degree in Environmental Science, Environmental Engineering, Natural Resource Management, Social Sciences or any other relevant field.

The team leader should have a minimum of 5 years of demonstrated professional experience in research, preferably in the field of waste management and have proven experience in designing and conducting field-based assessments, including work that involves community engagement, stakeholder consultation and participatory research approaches. The proposed team shall collectively demonstrate strong expertise in both qualitative and quantitative data analysis and research design. Prior experience of working in mountain regions will be considered an added advantage. The proposal will clearly outline the roles, responsibilities and relevant experience of each proposed team member.

7. Environmental and Social Safeguards Framework (ESSF)

WWF Network is committed to implement an Environmental and Social Safeguard Framework (ESSF) to be applied across Network's project portfolios in places where WWF's work may directly impact the livelihood, security and the rights of local communities and Indigenous Peoples. The assignment must adhere to this framework and make sure any activities planned or implemented do not impact on the environmental and social safeguards in the country and project sites.

8. Copyright

All copyrights of the information should be credited to © WWF Nepal. For photographs, copyrights should be: © WWF Nepal.

9. Coordination and reporting

The consultant will work closely with the field team of WWF Nepal.

10. Mode of payment

The payment will be made based on the existing norms of WWF Nepal.

11. Deliverables

- i. Inception report including detailed methodology to carry out the overall research work along with the field plan (after one week of signing contract agreement)
- ii. E-waste assessment report with clearly defined methodology, tools for data collection, and recommendations based on findings
- iii. Raw data and processed data of the results from the field data collection.

12. Proposal submission

Interested VAT registered organizations in Nepal are requested to submit technical and financial proposal electronically to **proposals-climate@wwfnepal.org** by **19 March 2026**. Please mention “**E-Waste Assessment in Khumbu Region**” as the subject of the email. The proposal must include following documents* submitted in the same email:

- Technical proposal including detailed research design with methodology and field data collection plan
- Financial Proposal (kindly refer Annex 1. for template)
- Organization registration certificate
- VAT registration certificate
- Tax Clearance Certificate for FY81- 82
- CV(s) of personnel(s) involved

**Additional documents may be requested from selected organizations for awarding the contract.*

Annex 1: Budget template

S.N.	Description	Unit	Qty.	Rate	Amount (NPR)
1	Fee (1.1+....VAT)				XXXX
1.1	Team Lead-Name	Days			XXXX
1.2	Research Assistant - Name	Days			XXXX
	VAT 13% on Fee				XXXX
2	Other Expense (2.1+2.2+VAT)				XXXX
2.1	Field Expenses				XXXX
2.1.1	Transportation				XXXX
2.1.2	Food & Accommodation				XXXX
2.1.3	Airfare....				XXXX
2.2	Other Costs				XXXX
2.2.1	Communication	Lumpsum			XXXX
2.2.2	Consultation Meetings (Tea and Snacks)	No			XXXX
2.2.3	Stationaries	Lumpsum			XXXX
	VAT 13% on Other Expense				XXXX
	GRAND TOTAL (1+2)				XXXXXX

**Note: please add/edit rows as required*