



TERMS OF REFERENCE (ToR)

Consultant (Lead Researcher)

Conduct Comprehensive Research on Waste Generation by Trekkers, Climbers, and tourism-related Businesses in the Everest Region

1. Background and Context

Sagarmatha National Park (SNP), a UNESCO World Heritage Site and home to Mount Everest, is globally renowned for its outstanding natural beauty, rich biodiversity, vibrant indigenous Sherpa culture, and unique socio-ecological systems. Over the past decades, the park has experienced a sharp increase in tourism, with annual visitor numbers more than doubling from 20,014 in 1998 to 55,767 in 2024. While tourism has significantly contributed to local livelihoods and socio-economic development in the Khumbu region, it has also placed growing pressure on the park's fragile alpine environment.

To meet the rising demand from trekkers and climbers, tourism-related businesses—including lodges, restaurants and shops —have expanded rapidly along major settlements and trekking trails. This growth, combined with limited waste management infrastructure and logistical challenges in a high-altitude, remote setting, has resulted in increasing volumes of solid waste and growing challenges in effective waste management.

The Sagarmatha Pollution Control Committee (SPCC) is a community-based non-governmental organization established in 1991 by the local Sherpa community of Khumbu. SPCC has been entrusted with waste management responsibilities in the region, including waste collection, segregation, temporary storage, and transportation from settlements, trekking routes, and base camps—including Everest Base Camp. Over the years, SPCC has played a leading role in

developing waste management infrastructure, implementing integrated sustainable waste management approaches, strengthening community participation, raising public awareness, and promoting waste reduction, reuse, and recycling practices.

In partnership with WWF Nepal, SPCC is implementing the project **“Sustainable Waste Management for Clean Himalaya (Swachya Sagarmatha)”**, funded by the Thomas L. Kempner, Jr., Foundation. The project aims to promote sustainable waste management practices, including responsible handling of electronic and hazardous waste, in support of a cleaner and healthier environment in the Khumbu region.

As part of this initiative, SPCC intends to undertake a comprehensive research study on waste generation by trekkers, climbers, and tourism-related businesses in the Everest region. The study will generate robust, evidence-based data on waste types, quantities, sources, seasonal variations, and existing management practices. The findings will be critical for informing long-term waste management infrastructure development, improving operational strategies, and supporting policy advocacy and sustainable tourism planning in the Everest region.

2. Objectives of the Assignment

Overall Objective

To generate comprehensive and reliable data on waste generation, composition, sources, and management practices associated with trekking, mountaineering, and tourism-related businesses in the Everest region.

Specific Objectives

- To quantify the types and volumes of waste generated by trekkers, climbers, and tourism-related businesses across key locations in the Everest region.
- To assess seasonal variations in waste generation, with particular focus on the spring climbing season.
- To analyze current waste handling, segregation, storage, transportation, recycling, and disposal practices.
- To provide practical, evidence-based recommendations for improving waste management infrastructure, policies, and practices in the long term.

3. Scope of Work

The Consultant will lead and be responsible for the overall research process in close coordination with the SPCC team. The scope of work includes, but is not limited to, the following tasks:

3.1 Research Design and Preparation

- Conduct a comprehensive literature and desk review of existing studies, reports, policies, and data related to waste management in SNP and the Khumbu region.
- Design a detailed research methodology, including sampling strategy, data collection tools, and analysis framework.
- Develop survey instruments (questionnaires, checklists, FGD and interview guides) tailored to trekkers, climbers, business operators, and relevant stakeholders.
- Refine research tools in consultation with SPCC and WWF Nepal.

3.2 Data Collection

- Guide, train, and supervise research assistants engaged in field data collection.
- Conduct primary data collection through:
 - Structured and semi-structured surveys
 - Focus Group Discussions (FGDs)
 - Key Informant Interviews (KIIs)
 - Field observations and site visits
- Cover major settlements (e.g., Lukla, Namche Bazaar, Khumjung, Pangboche, Dingboche, Lobuche, Gorakshep), trekking trails, waste management sites, and Everest Base Camp.
- Ensure data collection during the spring season to capture peak trekking and climbing activities.

3.3 Data Analysis and Interpretation

- Clean, organize, and analyze quantitative and qualitative data using appropriate analytical tools and methods.
- Assess waste generation patterns by source, type, location, and season.
- Compare findings across different user groups (trekkers, climbers, businesses) and geographic areas.

3.4 Reporting and Knowledge Sharing

- Prepare a comprehensive, high-quality research report presenting methodology, findings, analysis, conclusions, and recommendations.
- Incorporate feedback from SPCC and WWF Nepal into the final report.
- Present key findings to SPCC and relevant stakeholders, if requested.

4. Deliverables

The Consultant shall submit the following deliverables:

1. Inception Report / Research Proposal, including:
 - Clear research objectives and questions
 - Detailed methodology and work plan
 - Sampling framework
 - Survey instruments and data collection tools
 - Desk review summary
2. Draft Research Report, including preliminary findings and analysis.
3. Final Research Report, incorporating comments from SPCC and WWF Nepal, including:
 - Executive summary
 - Background and context
 - Methodology
 - Key findings and analysis
 - Conclusions and actionable recommendations
 - Annexes (tools, data tables, list of consultations, etc.)

5. Duration and Level of Effort

The assignment will be carried out over a total of 30 working days, spread between January 2026 and June 2026, with expected field visits in April/May. The detailed distribution of days across desk review, fieldwork, analysis, and reporting will be mutually agreed between SPCC and the Consultant.

6. Reporting and Coordination

- The Consultant will work under the overall guidance of SPCC.
- Regular coordination and progress updates will be maintained with the designated SPCC focal person.

- WWF Nepal may be consulted at key milestones as required.

7. Required Qualifications and Experience

- Advanced degree in environmental science, waste management, natural resource management, social sciences, or a related field.
- Proven experience in conducting environmental or waste management research, preferably in mountain or protected area contexts.
- Strong expertise in both quantitative and qualitative research methodologies.
- Familiarity with the Everest/Khumbu region or similar high-altitude environments is highly desirable.
- Excellent analytical, report writing, and communication skills in English.

8. Application Process

Interested individuals should submit a letter of interest and CV to SPCC including a suggested timeline and budget for the work to be undertaken (breakdown of personnel fees, travel, logistics and others).

Sagarmatha Pollution Control Committee (SPCC) reserves the right to accept or reject any application without assigning any reason.