

Terms of Reference (TOR) for Procurement of a firm for the Preparation of Plastic Waste Inventory of Nepal

A. BACKGROUND

Plastic free Rivers and Seas for South Asia (PLEASE) project implemented by the South Asia Co-operative Environment Programme (SACEP) and funded by the World Bank facilitates the region's transition toward a more circular plastic economy through the improvement of regional and national strategies, policies, action plans and standards based on better analytics and through public-private sector engagement, dialogue and collaboration. PLEASE project supports national and regional plastic pollution mitigation strategies and action plans, policies, and industry standards; and provides technical and other support to relevant institutions to identify, prioritize, collect, and analyze lifecycle data and identify data issues and gaps.

This Technical Assistance (TA) request prepared by the Ministry of Forests and Environment and the Department of Environment (DOE) of Nepal focuses on creating a detailed plastic waste inventory for Nepal. The detailed inventory will inform evidence-based solutions for plastic waste management which will help protect Nepal's land and water resources from pollution. The project will estimate the amount and types of plastic waste generated and evaluate the existing management practices in the country. This TA aims to fill this gap and provide a solid foundation for plastic waste management in Nepal.

B. THE PROPOSAL

According to a study conducted by the Asian Development Bank (ADB)¹ in 2013, approximately 3.5 million tons of solid waste are generated annually in Nepal, of which plastic accounts for 600,000 tons. Most of this plastic waste is dumped into the Bagmati River, ultimately finding its way into the Bay of Bengal. In Nepal's urban areas, plastic makes up 16% of the total waste, resulting in a daily generation of 2.7 tons of plastic waste². As shown in Figure 1, PET accounts for the highest percentage at 86% of plastic waste, followed by LDPE at 64.6% and HDPE at 55.8%.

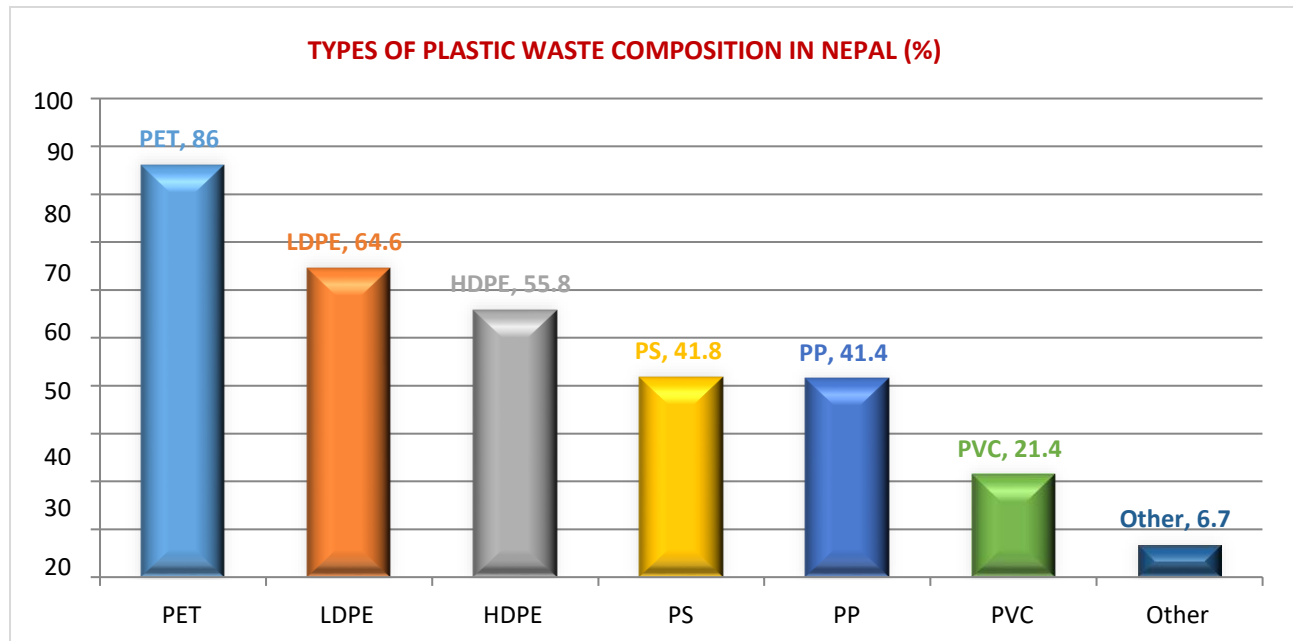
At present, there exists a significant gap in the precise quantity of plastic waste generated in various regions of Nepal. The existing studies on plastic waste are not sufficiently comprehensive. Therefore, it is important to develop a comprehensive plastic waste inventory covering all provinces in the country to fill the knowledge gap and guide policy and action to a plastic-free environment in Nepal. By conducting a comprehensive study encompassing the production, import, use, and life cycle of all seven polymer types of plastic, as well as identifying various plastic waste categories and exploring the key plastic pollutant sources affecting water quality, this project aims to create a sustainable, circular approach to plastic waste management in Nepal. To ensure the quality and completeness of the inventory, it is essential to use standardized methods and approaches for data collection that can produce accurate and reliable information for plastic waste management. This knowledge will not only facilitate evidence-based decision-making but also make the way for the implementation of effective plastic waste management strategies, ultimately leading to a cleaner environment. Once this inventory is in place, it can serve as the basis for the development and implementation of national, provincial, and local-level plastic waste management in Nepal. The goal is to create a circular economy that eliminates plastic waste from rivers, presenting opportunities for employment generation, particularly emphasizing women's empowerment.

¹ ADB (2013). Retrieved from <https://www.adb.org/sites/default/files/publication/30366/solid-waste-management-nepal.pdf>

² ICIMOD (2018). <https://www.icimod.org/article/a-plastic-world/>

Source: UNDP Accelerator Lab

C. PROJECT SCOPE AND OBJECTIVES



The project aims to prepare a comprehensive study on the production, import, use, and life cycle analysis of all seven types of plastics (HDPE, LDPE, PP, PVC, PS, PET, PC). There should also be data on microplastics, single-use plastics, and composite plastics. Additionally, it seeks to prepare an inventory of plastic waste generation and composition across the country. The project will be implemented across all seven provinces, including regions identified as major hubs of plastic pollution. Also, the study should include institutional, legal framework analysis and development of policy recommendations. Moreover, stakeholder consultation should be conducted to enhance the accuracy of the study.

Project scope includes the following tasks:

- ✓ To conduct a comprehensive study on the production, import, utilization and life cycle of all seven types of plastic across Nepal (validated via stakeholder consultations);

- ✓ To locate key plastic pollutant sources/hotspots, to identify different types of plastic waste and develop comprehensive plastic waste statistics including generation, composition, and treatment/disposal method (per item and polymer type) (based on field surveys in each of seven provinces and validated via stakeholder consultations).

D. EXPECTED DELIVERABLES

The project should prepare the following deliverables:

1. Report on Plastic Waste Statistics with existing baseline data on types of plastic waste, detailed data on the production, import, use, and life cycle of all seven types of polymer types in Nepal.
2. Report on Plastic Pollutant Source Identification with key plastic pollutant sources and locations, focusing on plastics that impact the quality of water streams

(a) Report on Plastic Waste Statistics.

Under this deliverable, the consultants are expected to generate details of the production, import, use, and life cycle of all seven types of plastic polymers (HDPE, LDPE, PP, PVC, PS, PET, PC), plastic waste generation, and management aspects from all metropolitan city, sub-metropolitan city, and major hub of the country. Apart from the specific seven types of plastics, there should also be data on microplastics, single-use plastics, and composite plastics. Therefore, the consultant has to qualitatively and quantitatively identify, review, and document the current status of plastic starting from resin production till disposal. There should be a report containing the results of identifying various types of plastic waste and generating comprehensive waste statistics. This report will offer a clear picture of the types and quantities of plastic waste generated in different regions of Nepal. Additionally, the consultant needs to forecast potential changes in baseline data.

(b). Report on Plastic Pollutant Source Identification

This report should mention key plastic pollutant sources and locations, focusing on plastics that impact the quality of water streams. In addition to the seven types of plastics, the report

should categorize and describe various types of plastic pollutants, encompassing macro plastics, microplastics, and specific plastic materials. Visual aids such as maps should be included to visually show the geographic distribution of plastic pollutant sources.

Furthermore, the report should explore the environmental and ecological consequences resulting from the identified plastic pollutant sources, with a particular focus on their impact on water bodies and aquatic ecosystems. It should identify and analyze the entities, industries, or sectors that have played a substantial role in contributing to plastic.

E. TIME SCHEDULE DURATION

The project aims for more comprehensive studies and aims to cover metropolitan cities, sub-metropolitan cities, and major hubs of plastic pollution in the country, and estimate plastic waste generation. The time needed for this program is 7 months from the date of signing the contract.

Submission of required deliverables/outputs will be monitored and evaluated as follows:

Tasks	Deliverable	Total time allocation
01	Inception report on the scope of the work under the TOR and methodology on the activities to be carried out and time frame deliverable and the agreed Program for all activities with mobilisation plan.	4 weeks of the commencement of the Contract
02	Plastic Waste Statistics Report <i>(Field survey, data collection and analysis, draft report, and final Plastic waste Report)</i>	20 weeks
03	Report on Plastic Pollutant Source Identification	3 weeks
04	Final dissemination workshop	1 weeks
Total		28 weeks

The reports should satisfy the quality required by SACEP and DOE.

F. BENEFICIARIES AND STAKEHOLDERS

Stakeholders		Role
Direct		
01	Ministry of Forests and Environment	Monitoring and supervision
02	Department of Environment	Coordinating and implementing agency
Indirect		
03	Ministry of Industry, Commerce and Supply	Beneficiary
04	Ministry of Urban Development	Beneficiary
05	Ministry of Federal Affairs and General Administration	Beneficiary
06	Ministry of Health and Population	Beneficiary
07	Local Governments (Metropolitan city, Sub-metropolitan city, Municipalities, Rural municipalities), Relevant Provincial Ministries	Beneficiary
08	Department of Industry	Beneficiary
09	Department of Commerce, Supplies and Consumer Protection	Beneficiary

G. ESTIMATED BUDGET

	Cost Component	Cost USD/Thousands	Comment
	(Payments tag for each deliverable under E above has to be quoted by the consultant and will be negotiated at the contract signing stage)		
01	Consultancy fees for conducting the study, data collection, field visits, and stakeholder consultations	240	To be managed by SACEP
02	Infographics, inventory, and publication of reports and dissemination workshop	50	To be managed by SACEP
	Total cost for the project	290	

H. PROJECT IMPLEMENTATION

This proposal will be coordinated by SACEP, through hiring a consulting firm, through SACEP under the PLEASE project with close cooperation with the Ministry of Forests and Environment of Nepal and the Department of Environment.

A consulting firm will be selected by the SACEP and DOE through a calling for Request for Quotation process of the World Bank on a CQS basis. The consultant will be selected according to the requirements of the ToR prepared by SACEP based on the TA request submitted by the Ministry of Forests and Environment of Nepal and the Department of Environment. After signing the agreement between the consultant and SACEP, the SACEP and DOE will supervise the outsourced party to get the desired output. The deliverables should be submitted as planned in the time schedule to SACEP and DOE on a **lump sum contract basis**.

The selected consulting agency should have the following experts:

<i>Team</i>	<i>Area of Expertise</i>	<i>Team Role</i>	<i>Experience and qualifications</i>
Team leader	Environmental management	Management and coordination among team members	Having minimum of Master degree in related subject area, PhD preferred and minimum 15 years of working experience related to project management.
Member	Environmental/Civil Engineer	Providing expert inputs to assess the implications of plastic pollution to the respective area	Having minimum of Master degree in related subject area and minimum 07 years of working experience in project consultancy in relevant speciality

Economist	Providing expert inputs to assess the implications of plastic pollution to the respective area, analyse the economic perspective of plastic waste management	Having minimum of Master degree in related subject area and minimum 07 years of working experience in project consultancy in relevant speciality
Social scientist/Sociologist	Providing expert inputs to assess the implications of plastic pollution to the respective area	Having minimum of Master degree in related subject area and minimum 07 years of working experience in project consultancy in relevant speciality
Polymer Science expert	Providing expert inputs to assess the implications of plastic pollution to the respective area	Having minimum of Master degree in related subject area and minimum 07 years of working experience in project consultancy in relevant speciality and capable of identifying different types of plastic polymers
Plastic/Solid waste management expert	Providing expert inputs to assess the implications of plastic pollution to the respective area and suggest the ways to manage plastic waste	Having minimum of Master degree in related subject area and minimum 07 years of working experience in project consultancy in relevant speciality

Communication/awareness expert	Providing expert inputs to assess the implications of plastic pollution to the respective area and suggest the ICT materials required for effective plastic waste management and suggest the effective way of awareness raising	Having minimum of Master degree in related subject area and minimum 07 years of working experience in project consultancy in relevant speciality
Chemist	Providing expert inputs to assess the implications of plastic pollution to the respective area, characterize the types of plastic polymer and analytical inputs	Having minimum of Master degree in related subject area and minimum 07 years of working experience in project consultancy in relevant speciality
GIS expert	Providing expert inputs to assess the implications of plastic pollution to the respective area and develop interactive GIS mapping of plastic pollution zone	Having minimum of Master degree in related subject area and minimum 07 years of working experience in project consultancy in relevant speciality
Legal and policy expert	Providing expert inputs to assess the implications of plastic pollution to	Having minimum of Master degree in related subject area and minimum 07 years of working experience in

	the respective area	project consultancy in relevant speciality
Soil Scientist	Providing expert inputs to assess the implications of plastic pollution to the respective area	Having minimum of Master degree in related subject area and minimum 07 years of working experience in project consultancy in relevant speciality
Statistical officer	Providing expert inputs to analyse the data obtained as well as interpolation and extrapolation of the data and assess the nature volume and implications of plastic pollution to the respective area in 2050	Having minimum of B.Sc. degree in a relevant subject area and minimum 03 years of working experience in project consultancy in the relevant speciality
Field level officers <i>Note:</i> <i>7 officers for field visits in each Province</i>	Collecting the data required for inventory process from the assigned area	Having minimum of B.Sc. degree in a relevant subject area and minimum 03 years of working experience in project environment

I. RECRUITMENT QUALIFICATIONS AND EXPERIENCE

The experience and expertise required for the consulting firm are listed below:

i In addition to the qualification requirements of the individual consultants indicated above in the TOR, the Consulting Firm shall have general consulting experience in carrying out high-quality analytical work, including qualitative and quantitative analysis of data relating to the amount and types of plastic waste generated and evaluate the existing

management practices in the country of a minimum of **4 years**. The firm has had an average consulting turnover of **NPR 40 Mn in the past 3 years**.

ii A consulting firm shall indicate a minimum of **2 reference** projects/contracts of the services carried out in the past 5 years that are similar to the activities included in the TOR or any plastic-related activities. The minimum value of each activity shall be not less than **NPR 10 Mn**.

iii PLEASE project reserves the right to contact the companies provided as references by bidders (proposed consultants).

iv References will be requested by PIU/SACEP to provide feedback on the following aspects of service delivery similar to services expected in the TOR on the reference 2 projects listed by the consultants: (i) Management capabilities of the firm to carry out the similar activity, (ii) Accuracy and quality assurance of the administrative processes and ensuring the output, (iii) Efficiency and cost-effectiveness in terms of delivery of services and meeting the timeliness, and (iv) responsiveness to the client services.

v The Consulting Firm shall provide a detailed approach and methodology for the **Preparation of the Plastic Waste Inventory of Nepal** to cover the proposed scope of work including task description and how such tasks will be performed on the given timeline in their submissions with recommendations.

J.EVALUATION CRITERIA OF THE SUBMISSION OF TECHNICAL PROPOSAL AT THE EXPRESSION OF INTEREST STAGE (EOI)

The request for submissions at the REOI stage will be evaluated in two stages: The first stage will evaluate functionality according to the criteria of;

Technical Proposal including

methodology/ approach **of the proposal – (40 points)** including detailed how the inventory will inform evidence-based solutions for plastic waste management which will help to protect the land and water resources of Nepal from pollution. The project will estimate the amount and types of plastic waste generated and evaluate the existing management practices in the country. Methods of Stakeholder consultation, Mapping, and analysis of data collected.

Past experience: The Consulting Firm shall have at least three (2) traceable references relating to project-related experiences undertaken in the past three years. Provide a brief description of the scope and scale of the work undertaken for each and indicate the value of each contract. Points will be awarded to affirmative compliance to the Experience and qualification requirements indicated in the Recruitment Qualifications and experience listed in the TOR. **(40 points)**

Team capacity: The Consulting Firm should demonstrate the capacity of the project team

recommended to be engaged and to be utilized in the execution of the contract. Their skills, qualifications, experience, etc. The CVs of staff should not be longer than 3 pages in total and should be structured as follows:- (i) Professional qualification/s, (ii) Brief description of individuals' experience of similar work in the last five years. (iii) Name of previous employer/s and position.(iv) Role in the services to be provided in this bid. **(20 Points)**

Technical Proposal Requirements

Firms are required to submit their REOI submissions with a strict page limit to a total of 50 (fifty) pages (there is no limit on annexes). Reviewers reserve the possibility to only consider and evaluate the 50-page proposal (excluding annexes). The Consultant shall provide a summary table of experience in the Technical Proposal and provide detailed citations for each project in an Annex of the proposal.

The RFP/EOI that fails to score a minimum of 70 out of a possible 100 points on this criterion on the technical requirements will not be eligible for further consideration. The **highest ranks** Consulting Firm scored on technical grounds of the REOI shall be called up to submit a financial bid along with the technical information for contract negotiation. The successful Consulting Firm will be requested to enter into a **Lump sum** Contract to compete for scope activities in the TOR.

Submissions: The closing date for submission of the REOI; is **10 July, 2024**, at 14 .00 Hours. The procurement of the consulting firm will be carried out on Based on Consultants' Qualification (CQS) therefore the Consulting firm **shall not submit** any financial bid submissions along with the requested technical submissions of REOI.

REOI submissions can be submitted by email or by dispatching the hard copies into the tender box located in the Project Implementation Unit of the PLEASE Project at 45, Rosemead Place, Colombo 7, Sri Lanka.

All email submissions of the technical bid shall be directed to Anjalie Devaraja <pleaseproject@sacep.org> and copy to <anjalie.please_project@sacep.org> (Project Director).

For more information on the technical clarification in the TOR, contact: Prakriti Kashyap prakriti.please_project@sacep.org.