



**GEF/UNDP/ASEAN PROJECT ON REDUCING POLLUTION AND PRESERVING ENVIRONMENTAL FLOWS
IN THE EAST ASIAN SEAS THROUGH THE IMPLEMENTATION OF INTEGRATED RIVER BASIN
MANAGEMENT (IRBM) IN ASEAN COUNTRIES**

**TERMS OF REFERENCE
TECHNOLOGY NEEDS ASSESSMENT FOR FOOD AND BIODEGRADABLE WASTE MANAGEMENT
IN PASAC-GUAGUA WATERSHED, PAMPANGA PROVINCE**

VA/PHILIPPINES-IRBM/2026-007

TITLE:	CONSULTANCY SERVICES FOR THE TECHNOLOGY NEEDS ASSESSMENT FOR FOOD AND BIODEGRADABLE WASTE MANAGEMENT IN PASAC-GUAGUA WATERSHED, PAMPANGA PROVINCE
TYPE:	National and river basin levels
DURATION:	June – September 2026
CLOSING DATE:	May 31, 2026
**The consultancy is open for Philippines' nationals or entities only.	

BACKGROUND

The GEF/UNDP/ASEAN Project on Reducing Pollution and Preserving Environmental Flows in the East Asian Seas through the Implementation of Integrated River Basin Management (IRBM) in the ASEAN Countries is a 5-year project (2023-2027) with the goal of establishing functional IRBM mechanisms in priority river basins/sub-basins in the six ASEAN Member States (AMS), i.e., Cambodia, Indonesia, Lao PDR, Malaysia, Philippines and Viet Nam, to reduce pollution, sustain freshwater environmental flows and adapt to climate change vulnerabilities.

The Project is designed to improve governance and management arrangements in IRBM and accelerate the required changes in the six AMS in support of national priorities, objectives and commitments to global sustainable development targets using the Source to Sea (S2S) framework. Component 2 of the project supports the development and demonstration of sustainable and replicable solutions within the project’s timeframe and budget at appropriate scales and locations, covering key issues identified in each participating AMS.

In the Philippines, Pasac-Guagua Watershed (PGW) located in the province of Pampanga is one of the priority river basins. Major issues identified during consultations included solid wastes, particularly food and biodegradable wastes. Biodegradable wastes account for about 49 percent of the province’s total waste generation and ranging from 29 – 55 percent in the PGW municipalities, namely: Bacolor, Floridablanca, Guagua, Lubao, Macabebe, Masantol, Minalin, Porac, Santa Rita and Sasmuan (Pampanga Provincial Solid Waste Management Plan 2022-2031). Addressing food and biodegradable wastes supports the implementation of the province’s 10-year Solid Waste Management (SWM) Plan (2022-2031) that was approved in December 2025 by the National Solid Waste Management Commission (Resolution No. 1754, Series of 2025). The Provincial SWM Plan identifies waste diversion as a primary and strategic



approach to reducing residual waste volumes, minimizing disposal costs, and improving overall waste management efficiency. As biodegradable wastes comprise a significant portion of the waste stream in the PGW, their effective management is critical to achieving the Plan’s diversion targets and ensuring compliance with Republic Act No. 9003.

This Terms of Reference requires a Consultant to conduct a technology needs assessment (TNA) for food and biodegradable waste management in PGW, and recommend suitable technology options and potential technology providers for consideration by the IRBM Project, the Department of Environment and Natural Resources Region 3 and the Provincial Government of Pampanga.

SCOPE OF WORK AND RESPONSIBILITIES

Under the direct supervision and guidance of the IRBM Regional Project Manager and in close coordination with the Pampanga Provincial Government Environment and Natural Resources Office (PG-ENRO) and DENR Region 3, DENR EMB Region 3, DENR PENRO, the Consultant will:

- 1) Develop a concept note detailing the methodology, work plan and budget for the conduct of technology needs assessment (TNA) for addressing food and biodegradable wastes in the ten municipalities covered by the Pasac-Guagua Watershed;
- 2) Prepare the necessary TNA materials for the conduct of the assessment in PGW that will cover, but not limited to, the following:
 - a) Assess current food and biodegradable waste generation rates, composition, existing disposal methods, waste management practices and behaviors;
 - b) Evaluate available technologies and identify suitable technology options with highest potential based on PGW’s waste characteristics and scale, including the anticipated environmental benefits; acceptability; alignment with the local government priorities on waste management, and the necessary enabling environment to facilitate the adoption of the recommended technology options; and
 - c) Develop a Provider Profile Sheet for the recommended technology options with the following details:
 - i. provider identity and contact information;
 - ii. description of the technology and its proven application in the Philippines;
 - iii. estimated cost range for capital and O&M;
 - iv. capacity for technical and after-sales support, and
 - v. references from at least two comparable local governments deployments, as applicable.
- 3) Prepare a comprehensive TNA report incorporating the results of items 2a-c with a comparative analysis of technology options and recommended solutions for PGW.
- 4) In coordination with the Regional Project Management Unit, Pampanga PG-ENRO and DENR Region 3, DENR EMB Region 3, DENR PENRO, present the results and recommendations from the TNA to relevant stakeholders in PGW, including national agencies, provincial and municipal local government units, academe, and NGOs/POs; and
- 5) Finalize the TNA report, incorporating the feedback from the consultation meeting(s) and recommendations on the next steps for implementing the technology in PGW.



EXPECTED OUTPUTS AND DELIVERABLES

- Concept note detailing the methodology, work plan and budget for the conduct of TNA in PGW
- Draft Technology Needs Assessment Report
- Final TNA report incorporating recommendations on suitable technology options; potential technology providers; feedback from the stakeholders' consultations, institutional and implementation framework, and next steps in implementing the recommended technology options in PGW.

Duration of Work

The expected duration of the work is from June to September 2026.

Duty Station

The Consultants/Consulting Firm will be home-based with regular coordination with the RPMU and Pampanga Provincial Government Environment and Natural Resources Office (PG-ENRO) and DENR Region 3, DENR EMB Region 3, and DENR PENRO.

Travel Plan

In the event that the Consultants/Consulting Firm are required to travel to render services, as required under the TOR, associated travel costs will be covered by the RPMU.

Financial Proposal

Bidders/applicants should detail the budget plan based on expected outputs, clearly showing logical framework or activity plan to achieve the outputs.

Submission of Tender/Application

Applicants are requested to submit:

1. Duly accomplished **Letter of Confirmation of Interest and Availability**;
2. **Detailed Curriculum Vitae**, indicating all past experience from similar projects, as well as the contact details (email and telephone number) of the team leader and members.
3. **Brief description** of why the organization/consultant is considered as the most suitable for the assignment.
4. A description of the **methodology**, on how they will approach and complete the assignment.
5. **Financial Proposal** that indicates the all-inclusive fixed total contract price, supported by a breakdown of costs.

Applicants are requested to submit the tender and requirements via email to recruitment@pemsea.org. Kindly indicate the vacancy reference number and title of requirement when applying (in the subject line) by email.
