June 17, 2026

INDUSTRIAL DEVELOPMENT ORGANIZATION OF THE UNITED NATIONS

TERMS OF REFERENCE

FOR

THE DEVELOPMENT OF FEASIBILITY STUDIES IN THE INDUSTRIAL PARKS OF PAITA AND TACNA, PERU

SAP PROJECT 220186

1. PROJECT CONTEXT

The new Global Eco-Industrial Park Programme (GEIPP) is geared to scale up RECP to the level of eco-industrial parks seeking to integrate support at the enterprise and park scales and address critical policy issues. Key benefits for Eco-Industrial Parks include reducing an industrial park's environmental footprint; promoting efficiency gains; enabling community cohesion; providing better access to finance and technical support; and enhancing business competitiveness. Good international industry practice demonstrates a wide range of economic, environmental, and social benefits from Eco-Industrial Parks (EIPs).

2. AIM OF THE PROJECT

The project aims to improve the environmental, economic and social performance of industries in Peru through the implementation of the EIP concept in selected pilot industrial parks and resident companies; as well as to develop an enabling policy framework for EIP development.

The EIP performance of IPs is assessed against the International Framework for EIPs v2, developed by UNIDO, World Bank and GIZ (https://openknowledge.worldbank.org/entities/publication/ff91fafb-d404-5ba6-82d8-595566675cca). Targeted IPs have already been assessed against the International Framework, and improvement opportunities have been identified.

The Project delivered the expected results via two outcomes and their related outputs, as presented below:

Outcome 1: EIPs incentivized and mainstreamed in relevant policies and regulations

- Output 1.1: Integration of EIP approaches into circular economy-related and industrial policies,
- Output 1.2: Fostering national EIP recognition schemes including certification, awards and supporting capacity building,
- Output 1.3: Supporting EIP replication and EIP investments,

Outcome 2: EIP opportunities implementation, with economic, environmental, and social benefits achieved by industrial parks and their enterprises confirmed

- Output 2.1: Consolidation of cooperation with GEIPP-I priority parks – Peru country level intervention,
- Output 2.2: Up-scaling of EIP opportunities implementation in new priority parks prioritized in GEIPP-II,
- Output 2.3: Country-wide facilitation of EIP implementation and establishment of self-sustaining EIP capacities,

3. SCOPE OF THE PROPOSED CONTRACTED SERVICES

Under the supervision of the UNIDO Project Manager (PM), the UNIDO Senior Lead Expert (SLE), in close coordination with the National Project Coordinator (CNP) and the National RECP Expert, the contractor* will be responsible for carrying out the economic, technical, environmental and legal/regulatory feasibility studies of a set of six (6) RECP opportunities at the company level identified by the GEIPP in Peru.

**The contractor will conduct the necessary field visits (at least one visit per selected company) to collect all relevant quantitative and qualitative data.*

The contractor should carry out the following activities:

a) **Inception meeting and Work Plan**

The contractor should prepare an online inception meeting to present the work plan, including the approach to complete the tasks described in these ToR to the GEIPP Peru team. All contractor team members and the GEIPP Peru team should participate in the inception meeting. The contractor should present at least the following topics:

- A detailed approach, activities and milestones to implement the work packages described in the TOR.
- A description of the distribution of responsibilities among the contractor's team members.
- Reporting dates and contents.

After the online inception meeting, the contractor will prepare and submit an inception meeting report, including (i) an approved work plan, (ii) an updated contract activity approach, (iii) milestones, and (iv) agreed recommendations and conclusions.

b) Feasibility studies and impacts quantification

The contractor should carry out economic, technical, environmental, and legal/regulatory feasibility analysis for improvement opportunities at the company level and one opportunity at the park level. Company management and park management will share with the contractor the required detailed information to carry out the feasibility studies. The contractor, in coordination with company management, and park management, in coordination with the GEIPP-Peru team, should collect additional information if required.

Feasibility analysis of improvement opportunities should at least include the following:

- **Technical analysis:** The technical assessment of a feasibility study should help companies determine the effectiveness of the proposed opportunities, as assessed by the GEIPP project team. Its objective is to describe the elements necessary to implement the option, examine potential barriers to implementing technology transfer that could hinder cost-effectiveness. The technical analysis should include, among other things, identifying the best available technology (BAT) to implement the identified opportunity under the given conditions. Based on the analysis of available technologies, the potential for implementation, and the specific conditions of the company or park, the contractor should identify BAT. In addition, the contractor should analyze the technical conditions required to implement the identified BAT in the given company or park. The report should include the analyzed BAT options and the proposed BAT, as well as the definition and description of the BAT's technical specifications and potential suppliers. The technical analysis should include a basic engineering description of the selected BAT.
- **Environmental analysis**: The environmental feasibility analysis should provide recommendations on the environmental viability of the project. This exercise should also enable a reduction in the environmental footprint, providing input to the design of the technical requirements. The contractor should analyze the relevant environmental indicators, according to the EIP model, for the proposed technology and compare it with the current environmental performance, demonstrating the expected environmental improvement by applying the selected technology option.

- **Legal/regulatory analysis**: the contractor should identify the regulatory framework for complying with the improvement opportunity. Barriers must be detected as well as regulatory incentives.
- **Financial analysis**: The financial analysis should determine the economic viability of the proposed technologies. Its objective is to determine whether the proposed technology change is a cost-effective project. It should identify technology costs, financial projections, and cash flows, and determine the return on investment. The financial analysis should include the profitability of the proposed technology upgrade by analyzing financial variables, financial scenarios, revenues and costs (CAPEX and OPEX), and the payback period.

Visits should be carried out to the companies involved.

The contractor shall conduct regular coordination and follow-up meetings as part of the assignment. Monthly virtual follow-up meetings shall be held with each participating company to review progress, validate assumptions, clarify pending information, and support the timely development of feasibility studies. Each meeting shall be formally documented through meeting minutes, which shall be shared with the company and UNIDO.
In addition, the contractor shall hold regular virtual coordination meetings with UNIDO to ensure technical alignment, quality control, and adequate progress monitoring. These meetings shall be conducted once a week (1) or every two (2) weeks, as determined by UNIDO, throughout the duration of the assignment. Minutes or brief follow-up notes shall be prepared and shared after each meeting.

Projects to be studied at a feasibility level under WP2 are:

1. **Implementation of a boiler to replace the use of burners in one (1) company in ZOFRATACNA**: The study should include, at a minimum, the evaluation of thermal demand, boiler efficiency, appropriate technology, and water quality, considering the devices required for the proper operation of the boiler. It should also address operational safety and maintenance, analyse investment and costs, energy and economic savings, the payback period, and environmental impacts, including the reduction of CO_2 emissions.
2. **Optimization of forklift usage under a warehouse management system approach in one (1) company in ZOFRATACNA:** The study should include, at a minimum, an analysis of production and logistics, types of products, operating schedules, forklift capacities and technology, energy or fuel consumption, warehouse layout and areas, and historical data. It should also evaluate the technical feasibility of the warehouse management system supported by software and/or artificial intelligence, investment, costs, operational savings, environmental impacts, emission reductions, and an implementation and training plan to ensure project success.
3. **Utilization of waste (chamota) to produce construction materials (paving blocks) in one (1) company in ZOFRATACNA.**The study should include, at a minimum, the characterisation and quantity of available chamota, the technology for paving block production, and the capacity of the new production line. It should assess the investment, costs, volume of waste valorised, and the payback period, as well as environmental and circular economy benefits, including waste reduction and CO_2 emission reductions.
4. **Implementation of a capacitor bank for one (1) company in ZED Paita:** The study should include, at a minimum, an analysis of the electrical load profile, the current power factor, maximum demand, and power quality, as well as proper sizing and selection of the capacitor bank. It should also assess the investment, installation and maintenance costs, economic savings from reduced penalties, the payback period, and environmental impacts associated with improved energy efficiency. Finally, it should consider regulatory compliance, electrical safety, and an implementation plan to ensure reliable and sustainable operation.

5. **Implementation of variable frequency drives on high-consumption motors in one (1) company in ZED Paita:** The study should include, at a minimum, an analysis of the load profile and operation of high-consumption motors, their power, operating hours, and potential savings through variable frequency drives. It should also consider proper sizing and technology selection, required investment, installation and maintenance costs, energy and cost savings, and the payback period. Finally, it should evaluate environmental benefits associated with reduced electricity consumption and CO_2 emissions, regulatory compliance, and an implementation plan to ensure efficient and reliable operation.
6. **Implementation of a boiler economiser in one (1) company in ZED Paita: The study should include, at a minimum, an analysis of the boiler's fuel consumption, flue gas conditions, and the potential for heat recovery using an economiser**. It should also assess the technology and sizing, investment, costs, energy and cost savings, the payback period, and environmental benefits, including CO_2 emission reductions, as well as a basic plan for safe and efficient implementation.

c) Feasibility reports

The contractor must submit a final report and presentation, per the feasibility study (6), and a summary report (1)to UNIDO and the beneficiary companies, containing the results of the RECP assessments. The report should detail the results of the feasibility studies and their impacts. It should also include all required databases and diagrams used for calculations and information analysis. An executive summary in both English and Spanish is required (previously approved by UNIDO).

4. GENERAL TIME SCHEDULE

Bidders must inform UNIDO of the estimated timeline. The provision of services within the shortest possible timeframe will be one of the evaluation criteria.

Payments will be made upon submission and acceptance of the corresponding reports. All reports shall be submitted through the UNIDO Project Manager for final review, approval, and acceptance.

Submission Date	Milestones	Reports
7 days after the contract's effective date.	Inception meeting report and approved work plan.	Work plan Inception meeting report
60 days after the contract effective date.	Visits and progress report.	1st Progress report
120 days after the contract effective date.	Final report approved by the participating companies and the UNIDO team, with the feasibility study of each opportunity.	Final report Feasibility and impact assessments studies

5. CURRENCY OF THE OFFER

Total price, i.e., total sum of unit prices as per cost breakdown required should be in US dollars (USD).

6. QUALIFICATIONS REQUIREMENTS

Certificate of Incorporation: The Bidder must be registered as a legal entity authorized to enter into contracts for the provision of services and goods. As proof, the Bidder shall provide a certified copy of the Articles of Incorporation or other documents establishing the legal basis of the company.

Consortium or Group (if applicable): If the Bidder is a consortium or group, relevant documentation shall be disclosed to which consortium or group it belongs, if applicable.

Years in Business: The Bidder shall demonstrate experience in the technical proposal by submitting at least three (3) project references on:

- Feasibility design of wastewater treatment plants for manufacturing companies or industrial parks.
- Industrial wastewater reuse and quantification of environmental impacts.
- Resource Efficiency and Cleaner Production (RECP) assessments.
- Renewable energy analysis, industrial by-products and waste valorization, energy efficiency and optimization of industrial processes, software and/or AI for process optimization, efficient water use, and reduction of industrial environmental impacts.
- Formulation of engineering projects and feasibility analysis of environmental projects.

Projects related to WWTP design in an industrial park will be an asset. References should be provided, including full contact information.

Financial Statement: A certified copy of financial statements for the last three (3) years (or the period of time the Bidder has been in Business if not yet three (3) years).

7. REQUIREMENTS FOR KEY PERSONNEL

The contractor shall submit the CVs of key experts specified in this section as part of the technical proposal and indicate the workload and scheduling of experts for the various inputs. At least the following key personnel will be provided:

Lead Technical Expert

- Advanced university degree in process, chemical, mechanical or civil engineering or other related disciplines **is required.**
- A minimum of five (5) years of practical experience in providing technical advice to industrial parks or companies, and in the execution of engineering projects focused on Resource Efficiency and Cleaner Production **is required.**
- Lead role on at least three (3) projects providing technical services to companies **is required.**
- At least three (3) years of proven experience in managing multidisciplinary and multicultural teams and delivering quality reports within a specified time frame **is required.**
- A minimum of three (3) years of experience in the development of measurable and achievable indicators and in the development and implementation of monitoring systems **is required.**
- Knowledge of economic analysis or business management is an asset.
- Good communication skills, both in English and Spanish **is required.**

Technical Experts (At least two (2) experts*)

- University degree in process, chemical, environmental, sanitary, civil engineering or related disciplines **is required.**
- A minimum of five (5) years of practical experience in the development of engineering projects focused on cleaner production and the reduction of environmental impacts of industry **is required.**
- At least three (3) years of proven ability to work in multidisciplinary and multicultural teams and deliver quality reports within a specified time frame **is required.**
- Good communication and writing skills in Spanish **is required.**

* Please note that between the two experts, the technical requirements of the feasibility studies must be covered.

Financial Expert

- Advanced university degree in finance, financial engineering, business administration, economics, finance or related disciplines **is required.**
- A minimum of five (5) years of practical experience in providing financial advice and analysis on engineering projects **is required.**
- Proven experience in at least three (3) projects on the financial formulation of environmental projects **is required.**
- At least three (3) years of proven ability to work with multidisciplinary and multicultural teams and deliver quality reports within a specified time frame **is required.**

8. LANGUAGES REQUIREMENTS

The main working language of the assignment is Spanish. If the experts proposed by the bidder do not speak and write Spanish fluently, an interpreter should accompany them on the expenses of the bidder. The working language and reporting language of the project is Spanish and English. Written reports must be submitted in Spanish, with executive summaries in English.

9. DELIVERABLES

Article	**Week 1**	**Week 8**	**Week 20**
Work plan Inception meeting report	X		
1st Progress report		X	
Final report			X

10. SUPERVISION, PROJECT MANAGEMENT, AND REPORTING ARRANGEMENTS

The contractor shall submit written reports to the UNIDO Project Manager. All meetings, workshops, and company visits carried out by the contractor shall be coordinated with the National Project Coordinator (NPC) and the National RECP Expert.
All documents shall be submitted electronically to UNIDO in the following formats: PDF, original

working files (Word, PowerPoint, Excel, etc.), and original photographs and any other final deliverables. The electronic copy may be sent via email if the nature and size of the files permit. Otherwise, the GEIPP project team will provide access to a shared file-sharing platform.

Reports shall be prepared in Spanish, including an executive summary in both English and Spanish. All deliverables and related documents shall be reviewed and approved by the UNIDO Project Manager and, where necessary, revised to incorporate the required changes and improvements.

11. EVALUATION CRITERIA

The total costs should be indicated in USD P to fulfil all requirements indicated in the Terms of Reference

The following technical evaluation criteria shall be applied to bids received

Table 1: Technical qualification criteria		**Documents to establish compliance with the criteria**
1	**Quality of the proposal:**	
1.1	Understanding of the technical requirements and compliance with the terms of reference (i.e., have the important aspects of the task been addressed in sufficient detail? Are the different groups of activities adequately addressed?)	*Technical offer: description of the approach and methodology, work plan*
1.2	Description of the contractor's approach and methodology for meeting or exceeding the requirements of the terms of reference	
1.3	Time-programming: scheduling of tasks to achieve the results according to the scope required in the Terms of Reference.	
2	**Capacity, qualification, and experience of the contractor:**	
2.1	Feasibility design of wastewater treatment plants for manufacturing companies or industrial parks.	*Technical offer: description of the organization(s), experience, and reference of similar projects*
2.2	Industrial wastewater reuse and quantification of environmental impacts.	
2.3	Resource Efficiency and Cleaner Production (RECP) assessments.	
2.4	Renewable energy analysis, industrial by-products and waste valorization, energy efficiency and optimization of industrial processes, software and/or AI for process optimization, efficient water use, and reduction of industrial environmental impacts.	
2.5	Formulation of engineering projects and feasibility analysis of environmental projects.	
3	**Compliance by key personnel with term of reference requirements**	
3.1	Lead Technical Expert	

	• Advanced university degree in process, chemical, mechanical or civil engineering or other related disciplines **is required.** • A minimum of five (5) years of practical experience in providing technical advice to industrial parks or companies, and in the execution of engineering projects focused on Resource Efficiency and Cleaner Production **is required.** • Lead role on at least three (3) projects providing technical services to companies **is required.** • At least three (3) years of proven experience in managing multidisciplinary and multicultural teams and delivering quality reports within a specified time frame **is required.** • A minimum of three (3) years of experience in the development of measurable and achievable indicators and in the development and implementation of monitoring systems **is required.** • Knowledge of economic analysis or business management is an asset. • Good communication skills, both in English and Spanish **is required.**	*Technical offer: KEY PERSONNEL CV*
3.2	Technical experts	
	• University degree in process, chemical, environmental, sanitary, civil engineering or related disciplines **is required.** • A minimum of five (5) years of practical experience in the development of engineering projects focused on cleaner production and the reduction of environmental impacts of industry **is required.** • At least three (3) years of proven ability to work in multidisciplinary and multicultural teams and deliver quality reports within a specified time frame **is required.** • Good communication and writing skills in Spanish **is required.**	
3.3	Financial Expert	
	• Advanced university degree in finance, financial engineering, business administration, economics, finance or related disciplines **is required.** • A minimum of five (5) years of practical experience in providing financial advice and analysis on engineering projects **is required.** • Proven experience in at least three (3) projects on the financial formulation of environmental projects **is required.** • At least three (3) years of proven ability to work with multidisciplinary and multicultural teams and deliver quality	

	reports within a specified time frame **is required.**	
	TOTAL	

12. COMMERCIAL EVALUATION CRITERIA

1. Total costs to fulfil all requirements indicated in the Terms of Reference
2. Acceptance of UNIDO model contract and related Annexes including UNIDO General Conditions of contract.

Annex 1 STATEMENT OF CONFIRMATION

SECTION 1

On behalf of ____(hereafter referred to as "Declarant"[1]), I hereby represent and warrant that Declarant:

Possesses the legal status and capacity to enter into legally binding contracts with UNIDO for the supply of equipment, supplies, services, or work.

Has not been involved in any situation that may appear as an actual or a potential conflict of interest, including, but not limited to, any of the following situations:

i. None of Declarant's key personnel is associated - financial, family, or employment wise - with concerned UNIDO personnel, including UNIDO experts/consultants recruited under the relevant project or with UNIDO's counterpart;

ii. No fees, gratuities, rebates, gifts, commissions, offers of employment, or any other payments, other than those shown in the offer, have been, directly or indirectly, given, received or promised in connection with the subject procurement process;

iii. Declarant has not participated in the preparation of the concerned procurement process, its design or its bidding documents, including, but not limited to, the technical specifications, terms of reference, and/or scope of works, being subsequently used by UNIDO;

iv. Declarant does not, directly or indirectly, control, is not controlled by or is not under common control with another bidder;

v. Declarant does not receive or has not received any direct or indirect subsidy from another bidder;

vi. Declarant does not have the same legal representative as another bidder;

vii. Declarant does not have a relationship with another bidder, directly or indirectly (except declared sub-contractors), that puts it in a position to influence the bid of another bidder, or influence the decisions of UNIDO regarding this procurement process;

viii. Declarant has not submitted more than one bid in the procurement process, for example, on its own and separately as a joint venture partner (except as declared sub-contractor) with another bidder (a bidder's submission of more than one bid will result in the disqualification of all bids in which such bidder is involved); or

ix. Declarant finds itself involved in any other situation that may appear as an actual or a potential conflict of interest, understood by UNIDO to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations, and that such conflict of interest may contribute to or constitute a fraud and corruption under UNIDO's Procurement Manual.

Accepts to abide by the terms of the UNIDO Policy on Exclusion from Funding (DGB/2021/15), available at https://www.unido.org/sites/default/files/files/2021-12/DGB_UNIDO_Policy_on_Exclusion_from_Funding_0.pdf (hereinafter referred to as the "Policy", as may be amended from time to time) and represents and warrants that Declarant is not and has not been the subject of any of the exclusion criteria stated in the Policy. Further, Declarant covenants and agrees to notify UNIDO promptly in the event that Declarant becomes subject to any of the exclusion criteria stated in the Policy during the term of this procurement process and eventually, if applicable, during the term of the Declarant's contract or agreement with UNIDO.

SECTION 2

[Please note that this section is to be completed only in case one or more of the statements under Section 1 above cannot be confirmed or attested to. After consideration of the information and documentation provided under this Section 2, UNIDO reserves the right to disqualify the bidder from any further participation in the procurement process and take any other pertinent action pursuant to the UNIDO Policy on Exclusion from Funding and to the specific procedures set out in UNIDO's Procurement Manual.]

On behalf of Declarant, I hereby represent and warrant that Declarant:
[Indicate here below the statement that cannot be confirmed or attested to and provide the reasons and all detailed related information, e.g., date of conviction of a criminal offence, court, jurisdiction, etc., together with all related documentation. Moreover, if relevant, also indicate any mitigating measure(s) taken to remedy the statement that cannot be confirmed or attested to]

Name (print): Signature:

Title/Position:

Place (City and Country): Date: