

## Annex I - Terms of Reference

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**National or International consultant:** National

**Description of the assignment (Title of consultancy):** Industrial Engineer

**Project Title:** Lebanon Environmental Pollution Abatement Project

**Period of assignment/services:** 60 working days

**Is this a LTA (yes/no):** Yes

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### 1. Background / Project Description

In order to ensure a smooth transition for Lebanon towards environmental sustainability, the Government of Lebanon, through the Ministry of Environment (MoE) has requested the support of the World Bank (WB) and the Italian Government to establish the Lebanon Environmental Pollution Abatement Project (LEPAP) as a national initiative to respond to the challenges for promoting the financial and environmental sustainability of the industrial sector in Lebanon.

The LEPAP was initiated by the MoE in 2014 and consists of two main components: (A) Technical Assistance Component funded by the Italian Agency for Development Cooperation (AICS), and (B) Investment Component funded by the WB. LEPAP is being implemented by the United Nations Development Program (UNDP) in close partnership with the Ministry of Finance (MoF) and Banque du Liban (BDL). The LEPAP aims at reducing industrial pollution in targeted industrial enterprises and will contribute to strengthening the monitoring and enforcement capabilities of the MoE.

Under the technical assistance component, the AICS has approved the allocation of a financial contribution to UNDP to provide technical assistance to the project's beneficiaries mainly the MoE and the concerned industries and to support in the overall management of the project's activities. These ToRs relate to the technical assistance component of the project.

To improve the pollution abatement management capabilities of the Project Management Unit (PMU), an Industrial Engineer (referred to as "Individual Consultant (IC)") will be recruited to support the LEPAP and to respond to the various technical requirements related to the viability and the cost of industrial pollution abatement interventions.

### 2. Scope of work, responsibilities and description of the proposed analytical work

The Consultant shall perform all the services/work as necessary to fulfill the objectives of the consultancy contract.

The Consultant will be expected to carry out tasks such as:

- Review relevant literature related to the LEPAP project with particular focus on applicable national standards (if available), the Environmental and Social Assessment of the LEPAP, Operational Policy and Bank Procedure 4.01 on “Environmental Assessment”, the Project Appraisal Document and any other relevant documents as provided by the PMU;
- Review relevant literature related to the potential LEPAP sub-projects or industrial facilities, as needed;
- Conduct field visits to the project sites as needed and conduct necessary assessment of the concerned facilities on behalf of UNDP;
- Design pollution abatement treatment systems or mechanisms for LEPAP sub-projects as needed and/or advise on potential treatment approaches;
- Design industrial processes for specific recycling (in the plastics or solid waste sector) as needed;
- Prepare and review tender documents for industrial pollution abatement interventions for LEPAP subprojects or other UNDP projects;
- Seek or review offers and/or any other available documentations in view of assessing the technical and financial feasibility of the proposed sub-projects and prepare evaluation reports accordingly;
- Ensure that the proposed sub-projects follow the applicable environmental and social requirements set out in the Environmental and Social Assessment of the LEPAP and/or national environmental legislation;
- Submit a technical report in line with the project’s requirements including but not limited to:
  - o Industrial process flow charts as needed;
  - o A quantitative assessment of estimated pollution reduction achieved through the financed pollution abatement intervention, once fully operational;
  - o Validation of sub-projects’ financial feasibility and technical viability of proposed solution
- Provide technical support to the LEPAP or other UNDP project in the collection, evaluation and processing of relevant technical information as needed

### **3. Expected Outputs and deliverables**

The consultant is expected to submit one report for each assigned task. The following deliverables requirements will apply to this agreement:

- Provision period of required services will be defined in coordination with the project team;
- Deliverables and related man-days will be agreed upon in writing with the Monitoring and Evaluation (M&E) Officer prior to the initiation of each task.

All deliverables should be handed out in two hard copies as well as one soft copy (Word format and Excel format for tables) and a PDF format for web publishing. If relevant, copies of high-resolution maps, research material and graphics should also be handed out to the project management team.

### **4. Institutional arrangements**

The Consultant will work under the direct supervision of the LEPAP M&E Officer (or the UNDP Programme Manager). During the fulfillment of the tasks under this agreement, the Consultant will ensure regular

communication with the project team and will ensure a timely delivery of the expected outputs and will regularly inform the project team of the progress as well as any obstacles that might occur.

## **5. Duration of work**

The contract will be on a long-term agreement basis with an expected duration until **31 December 2021** from date of contract signature with up to **60 working days**.

## **6. Duty station**

The assignment requires deskwork, research, meetings, fieldwork as well as coordination between the different concerned entities. The consultant is expected to consider that he/she will perform the needed work in his/her own premises, using his/her own property and technology, and hold direct responsibility for the quality of delivered outputs.

The consultant shall make his own arrangements for all transportation required to perform the required tasks including site visits to industries. When possible, the project will provide support service and/or logistical support (excluding transportation to the office and communication costs) during this assignment.

## **7. Requirements for experience and qualifications**

### I. Academic Qualifications:

Master's Degree in industrial engineering, mechanical engineering, sustainable and clean production or other related fields.

### II. Years of experience:

Minimum 10 years of relevant experience.

### III. Technical experience:

- Proven experience in industrial processes and operation of manufacturing plants including but not limited to mechanical and electrical works;
- Proven experience in the design and execution of cleaner production, resources efficiency and pollution abatement projects in industrial sectors including waste management, recycling and reuse (including plastics);
- Good experience in conducting technical and financial assessments of industrial and/or environmental investments;
- Good knowledge of industrial sector's environmental compliance requirements;
- Knowledge of the WB social and environmental safeguards policies is an asset;
- Sound previous experience in similar projects in the required domains.

### IV. Competencies:

- Proficiency in English; Knowledge of Arabic and/or French is an asset;
- Demonstrable analytical skills and report-writing skills;
- Excellent, proven management and communication skills.

## **8. Scope of Price Proposal and Schedule of Payments**

Payment will be made against each deliverable/output (or a package of deliverables/outputs) on pre-agreed workday basis - an IC Time Sheet must be submitted by the Consultant, and duly approved by the M&E Officer; this shall serve as the basis for the payment of fees, in addition to the PO raised for each assignment (s).

The UNDP shall effect payments to the Consultant after acceptance by UNDP of the deliverables submitted by the Consultant, and submission of a certificate of payments including the time-sheets. The payment currency of the Contract is **USD**.