

## Annex I - Terms of Reference

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**National or International consultant:** National consultant

**Description of the assignment (Title of consultancy):** Wastewater expert – Short-term consultancy for the preparation of the greenhouse gas inventory and mitigation options and actions for wastewater treatment and discharge in Lebanon.

**Project Title:** Lebanon's Third Biennial Update Report and Fourth National Communication

**Period of assignment/services:** 30 work-days spread over a maximum of 4 calendar months

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

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### 1. Background / Project Description

The project aims to enable Lebanon to prepare, produce and disseminate its Third Biennial Update Report (BUR) and Fourth National Communication to the UN Framework Convention on Climate Change (UNFCCC) in order to fulfill Lebanon's commitments as a Non-Annex 1 Party to the Convention. The reports present the country's GHG inventory, implemented sectoral mitigation actions that are contributing in reducing Greenhouse Gas (GHG) emissions, vulnerability and adaptation to climate change, in addition to the main barriers for fulfilling Lebanon's reporting requirements.

In 2019, Lebanon's 3BUR<sup>1</sup> was submitted to UNFCCC, reporting the national Greenhouse gas emissions from the period 1994-2015. The inventory was prepared using for the first time the 2006 IPCC guidelines<sup>2</sup>, which included changes in some emission factors and parameters. The 3BUR also updated the wastewater mitigation actions implemented in Lebanon, the support received and needed as well as the main gaps and constraints for capacity building needs. Lebanon is currently preparing its Fourth National Communication (4NC) to be submitted in October 2021.

The purpose of this consultancy is to 1) review and update the GHG inventory for the wastewater sector for the years 2016-2019 taking into consideration the methodological changes of the IPCC guidelines and the new activity data available; 2) update the list of mitigation actions and plans for the wastewater sector for the period 2016-2019 and 3) develop/update emission reduction scenarios for 2030 and 2050, in line with Lebanon's Nationally Determined Contribution (NDC).

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

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<sup>1</sup> [https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/258964017\\_Lebanon-BUR3-1-LEBANON-%20Third%20Biennial%20Update%20Report%202019.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/258964017_Lebanon-BUR3-1-LEBANON-%20Third%20Biennial%20Update%20Report%202019.pdf)

<sup>2</sup> 2006 IPCC Guidelines for National Greenhouse Gas Inventories  
<https://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html>

### **General tasks**

The tasks mentioned below shall be performed in close cooperation with the UNDP climate change team and the Ministry of Environment. The Consultant should perform the below-mentioned tasks:

#### **Task 1:** Preparation of the GHG emission inventory for wastewater treatment and discharge (period 2016-2019)

- 1.1. Review the GHG inventory for wastewater<sup>3</sup> for the period 1994-2015 including activity data, emission factors and assumptions
- 1.2. Calculate and report GHG emissions for the years 2016-2019 for wastewater treatment and discharge using 2006 IPCC guidelines<sup>4</sup> through collecting newly available activity data and emissions factors;
- 1.3. Complete a trend analysis for GHG emissions the period 1994-2019 for the wastewater treatment and discharge, including an interpretation of the results with the identification of main drivers and underlying factors driving the trend;
- 1.4. Document all data, assumptions, QA/QC, improvements made and recommended in the documentation sheets.

#### **Task 2:** Compilation of information related to mitigation action from wastewater treatment (period 2016-2019)

- 2.1 Identify all projects, activities, policies and initiatives undertaken by the government, private sector and non-state actors to reduce emissions from wastewater collection and treatment for the period 2016-2019;
- 2.2 Report these mitigation actions in a tabular format (annex I) including source of funding, budget, achievements, GHG emission reduction potential, etc.

#### **Task 3:** Preparation of the mitigation options analysis for wastewater treatment and discharge

- 3.1 Review and update the NDC baseline scenario to project GHG emissions from wastewater treatment and discharge for 2030 and 2050 under business-as-usual conditions;
- 3.2 Develop at least 2 mitigation scenarios to reduce emissions from wastewater, calculate the related emission reduction potential for 2030 and 2050 and recommend a roadmap for their implementation;
- 3.3 Draft the wastewater mitigation options report, circulate the report for comments and incorporate received recommendations from stakeholders in the final report.

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<sup>3</sup> [https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/258964017\\_Lebanon-BUR3-1-LEBANON-%20Third%20Biennial%20Update%20Report%202019.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/258964017_Lebanon-BUR3-1-LEBANON-%20Third%20Biennial%20Update%20Report%202019.pdf)

<sup>4</sup> <https://www.ipcc-nggip.iges.or.jp/public/2006gl/vol5.html>

### **Methodology of Work**

Direct consultations and validation with key stakeholders from the Ministry of Environment and the Ministry Energy and Water, the Council for Development and Reconstruction, the Ministry of Interior and Municipalities in addition to international organizations and active NGOs are required. The work is expected to be carried out by one nationally recruited consultant with expertise in wastewater management and climate change and with an established network of experts in related national institutions.

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

In consultation with UNDP, the Consultant will:

1. Produce a GHG inventory report for the period 2016-2019
2. Produce mitigation action tables for wastewater management for the period 2016-2019
3. Produce a mitigation scenarios report for wastewater management for 2030 and 2050

<b>Deliverables/ Outputs</b>	<b>Estimated Duration to Complete</b>	<b>Target Due Dates</b>	<b>Review and Approvals Required</b> <i>(Indicate designation of person who will review output and confirm acceptance)</i>
<b>GHG inventory report</b>	10 work-days	1 months after contract signature	Project Manager
<b>Mitigation action reports and tables</b>	10 work-days	2 months after contract signature	Project Manager
<b>Mitigation scenarios report</b>	10 work-days	4 months after contract signature	Project manager

### **4. Institutional arrangements**

- a) The Consultant will be accountable to UNDP Fourth National Communication Project Manager, for all matters relating to the preparation of the deliverables, as well as abiding by the set deadlines. During this process, the Consultant will brief UNDP Project Manager about the progress at least every two weeks. The supervision will include approvals/acceptance of the outputs as identified in the previous section.
- b) In the event of delay, the Consultant will inform UNDP promptly so that decisions and remedial action may be taken accordingly.
- c) Should the UNDP Country Office deem it necessary, it reserves the right to commission additional inputs, reviews or revisions (including omissions), as needed to ensure the quality and relevance of the final Report.
- d) Any public speaking (including social media usage) about the activity (whether with the target groups or indirect) should be coordinated with UNDP.

### **5. Duration of work**

The consultancy is for 30 work-days and is expected to last for 4 calendar months from the signature of the contract.

## 6. Duty station

The consultant's work will be home based with several meetings to be held with the project team and stakeholders.

## 7. Requirements for experience and qualifications

The Consultant should possess the following minimum qualifications:

### I- Academic Qualifications:

- a. University degree (at the Masters level) in environment or civil, industrial engineering or closely related fields. PhD will be considered as an asset.

### II- Experience:

- a. Local relevant experience of not less than 10 years;
- b. Extensive knowledge of and experience in wastewater management in Lebanon and national related policies
- c. Previous experience in preparation of studies, reviews, sectoral recommendations
- d. Knowledge of IPCC GHG calculations model and guidelines is a plus

### III- Competencies:

- a. High proficiency in Arabic and English languages;
- b. Demonstrable analytical skills, such as an extensive list of publications, etc.;
- c. Excellent interpersonal and communication skills as well as ability to establish and maintain good relationship with stakeholders;
- d. Excellent facilitation skills; and
- e. Ability to meet deadlines and prioritize multiple tasks.

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

Payments will be made upon submission and approval of deliverables and upon submission of the certificate of payment.

The schedule of payment is detailed below:

Deliverables/ Outputs	Estimated Duration to Complete	Target Due Dates	Payment Terms
GHG inventory report	10 work-days	1 months after contract signature	30%
Mitigation action reports and tables	10 work-days	2 months after contract signature	35%
Mitigation scenarios report	10 work-days	4 months after contract signature	35%

## 9. Criteria for selection of the best offers

- a) Combined Scoring method – where the qualifications and methodology will be weighted a max. of 70%, and combined with the price offer which will be weighted a max of 30%; using the following evaluation criteria.

<b>Criteria</b>	<b>Weight</b>	<b>Max. Point</b>
<u>Technical Competence</u>	70%	100
<b>Academic qualifications:</b> <i>Bachelors degree in environmental or civil, mechanical, industrial or closely related fields = 3 points</i> <i>Masters degree in environment or civil/ mechanical/ industrial/ engineering or closely related fields = 7 points</i> <i>Relevant PhD =10 points</i>		10
<b>Years of relevant experience:</b> <i>Less than 10 years = 0 points</i> <i>10-15 years = 10 points</i> <i>Above 15 years = 20 points</i>		20
<b>Technical experience:</b> <ul style="list-style-type: none"> <li>- Extensive knowledge of and experience in wastewater in Lebanon and related national policies (20 points)</li> <li>- Previous experience in preparation of similar studies, reviews, sectoral recommendations (10 points)</li> <li>- Knowledge of IPCC GHG calculation model and guidelines (10 points)</li> </ul>		40
<b>Methodology</b> <ul style="list-style-type: none"> <li>- Understanding of the task and addressing important aspects in sufficient detail (15 points)</li> <li>- A well-designed approach meeting/exceeding the requirements (15 points)</li> </ul>		30
	30%	100
	<b>Technical Score * 0.7 + Financial Score * 0.3</b>	

## Annex I

Name of mitigation action/project/plan/strategy				
General description of action and overall objective				
Type of support	Financial/ technical assistance / technology transfer/capacity building			
Source of support	Government	Private sector	Donor (specify)	NGO (specify)
Budget allocated				
Implementing agency				
Geographic Coverage				
Timeframe				
Goals of the mitigation action	(quantitative if possible)			
Progress indicators	(quantitative if possible)			
Main achievements and results				
GHG emissions avoided (Gg CO <sub>2</sub> eq. per year)				
Cumulative GHG emissions avoided for the project (Gg CO <sub>2</sub> eq.)				
Potential GHG emissions avoided for the whole period of project (Gg CO <sub>2</sub> eq.)				
Progress of implementation				
Steps envisaged to be taken to achieve that action				
Methodology and assumptions for emission reduction calculation				
Needs to improve reporting of mitigation action	Financial needs: Technical needs: Capacity building needs:			