Annex I - Terms of Reference

National or International consultant: National consultant

Description of the assignment (Title of consultancy): Transport Expert – Short-term consultancy for the preparation of the greenhouse gas inventory and mitigation options and actions for the transport sector in Lebanon

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

Period of assignment/services: 40 work-days spread over a maximum of 4 calendar months

Is this a LTA (yes/no): No

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[1] 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[2], which included changes in some emission factors and parameters. The 3BUR also updated the transport 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 and precursors for the transport sector for the years 2016-2019 taking into consideration the methodological changes of the IPCC guidelines and the new activity data available; 2) update Lebanon's Technology Needs Assessment[3] for the transport sector, 3) update the list of mitigation actions and plans for the transport sector for the period 2016-2019 and 4) 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

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

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

[3] http://climatechange.moe.gov.lb/viewfile.aspx?id=150

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 report to the UNDP BUR3/National Communication Project Manager.

Task 1: (10 days) Preparation of the GHG emission inventory for the transport sector (period 2016-2019)

1.1. Update and report GHG emissions for the years 2016-2019 by using newly available activity data (provided by the climate change team) and/or emissions factors;

1.2. Calculate precursors and indirect emissions from the transport sector (NOx, CO, SO_2, NMVOC, etc.) for the years 2016-2019 as per the EMEP/CORINAIR emission inventory guidebook, recommended by 2006 IPCC Guidelines[4] ;

1.3. Complete a trend analysis for GHG and indirect emissions the period 1994-2019 for the transport sector, including an interpretation of the results with the identification of main drivers and underlying factors driving the trend;

1.4. Document all data, assumptions, quality assurance/quality control (QA/QC), improvements made and recommended in the documentation sheets.

Task 2: (10 days) Compilation of information related to mitigation actions in the transport sector (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 the transport sector 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: (10 days) Update Lebanon's Technology Needs Assessment[5] for the Transport sector

3.1. Provide a sector's technological overview including national policies related to convention technology transfer and technological innovation and status of current transport technologies/innovation in Lebanon;

3.2. Assess the progress and effectiveness of the implementation of previously prioritized technologies in Lebanon's TNA[5] and update the list with with new available technologies in transport with their main mitigation and co-benefits;

3.3. Prioritize at least 3 technologies based on a multi-criteria decision analysis and in close coordination with relevant stakeholders;

3.4. Update barriers, enabling framework and technology action plans as identified Lebanon's TNA[5] for the deployment of the prioritized technologies.

4 https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/1_Volume1/V1_7_Ch7_Precursors_Indirect.pdf
5 http://climatechange.moe.gov.lb/viewfile.aspx?id=150

Task 4: (10 days) Preparation of the mitigation options analysis for the transport sector

4.1. Review and update the NDC baseline scenario to project GHG emissions from the transport sector for 2030 and 2050 under business-as-usual conditions;

4.2. Develop at least 2 mitigation scenarios to reduce emissions from the sector, calculate the related emission reduction potential for 2030 and 2050 and recommend a roadmap for their implementation;

4.3. Draft the transport mitigation options report, circulate the report for comments and incorporate received recommendations from stakeholders in the final report.

Methodology of Work

- Literature review and analysis of international best practices.
- Direct consultations and validation with key stakeholders from the Ministry of Environment and the Ministry of Public Works and Transport, Railway and Public Transport Authority (RPTA), the Council for Development and Reconstruction, the World bank and active NGOs and regular meetings with the UNDP climate change team is required.
- Analysis of data provided and as well as those collected from the field or the literature .

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 the transport sector for the period 2016-2019
3. Produce a Technology Needs Assessment report for the Transport sector
4. Produce a mitigation scenarios report for the transport sector for 2030 and 2050

Deliverables/ Outputs	Estimated Duration to Complete	Target Due Dates	Review and Approvals Required
GHG inventory report	10 work-days	2 months after contract signature	Project manager
Mitigation action reports and tables	10 work-days	3 months after contract signature	Project Manager
Technology Needs Assessment report	10 work-days	4 months after contract signature	Project manager
Mitigation scenarios report	10 work-days	4 months after contract signature	Project manager

4. Institutional arrangements:

The Consultant will be accountable to the 3BUR/4NC 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 the 3BUR/4NC 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.

5. Duration of work

The consultancy is for 40 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. The consultant shall make his/her own arrangements for all transportation required to perform the required tasks. 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

The Consultant should possess the following minimum qualifications:

I- <u>Academic Qualifications</u>:

- **a.** University degree (at the Masters level) in environmental science or engineering or transport studies or engineering or closely related fields. PhD will be considered as an asset.

II- <u>Experience</u>:

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

III- <u>Competencies</u>:

- **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	Target Due Dates	Payment terms [6]
GHG inventory	2 months after	25 percent

[6] Payments will be processed once UNDP approves the deliverables

report	contract signature	
Mitigation action reports and tables	3 months after contract signature	25 percent
Technology Needs Assessment report	4 months after contract signature	25 percent
Technology Needs Assessment report and Mitigation scenarios report	4 months after contract signature	25 percent

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_2eq. per year)				
Cumulative GHG emissions avoided for the project (Gg CO_2 eq.)				
Potential GHG emissions avoided for the whole period of project (Gg CO_2eq.)				
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:			