



## Terms of References

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### Country: Jordan

<b>Post Title:</b>	National consultant to undertake the mitigation analysis in the energy, industry, and waste sectors of Jordan
<b>Starting Date:</b>	October 1, 2021
<b>Duration:</b>	30 working days over 4 Months
<b>Location:</b>	Jordan- Ministry of Environment

### Introduction

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The UNDP Environment, Climate Change and DRR Portfolio's support for environmental management and nationally owned sustainable development pathways in Jordan including the mainstreaming of environmental management into the national and local development processes, undertaking actions to mitigate climate change and adapt to its impacts.

UNDP has been providing support to Jordan to deliver global environmental benefits related to climate change through deepening the understanding of GHG emissions, sinks and its potential impacts, this is expected to contribute strengthening the linkage of the national environmental management system with the global environment and enhance the national capacities to address and report on climate change effects. In this regard, the GEF-funded,

UNDP- supported, Ministry of Environment-implemented “Fourth National Communication Report & Second Biennial Update Report to UNFCCC” project was commenced in 2019.

## **Contextual Background**

### **1. The National Context**

Jordan is adversely impacted by climate change, climate models of the Third National Communication of Jordan on climate change indicate that warmer summers relative to other seasons are extremely likely to occur including, decrease of precipitation, heat waves, the maximum number of dry days is likely to increase per year, and consecutive dry days. An increase in the water deficit up to 30% during over the 20 years is predicted as highly likely.

Jordan is signatory to UNFCCC, the government has ratified, *inter alia*, the Convention in 1993, Kyoto Protocol in 2004, and the Paris Agreement in 2016. Moreover, Jordan has joined the Climate & Clean Air Coalition in 2012 and produced several policies, legislations and national reports in response to the obligations of the global collective collaboration frameworks. Jordan submitted the Initial, Second and Third National Communication Reports to UNFCCC in 1998, 2009 and 2014 respectively.

At the national level, several steps have been taken in response to the global environment obligations, the most important with GEF support can be summarized as follows:

- Preparation of the Initial National Communication, prepared by the General Corporation for Environment Protection (GCEP) (which later became the Ministry of Environment), 1996-1997.
- Vulnerability and adaptation to climate change, prepared by MoEnv in 2000 to complete the Initial National Communication.
- Establishing a pilot biogas facility at Russifa domestic landfill site, implemented by the Greater Amman Municipality and commissioned in 2000.
- Technology needs assessment (TNA) and technology transfer (TT), prepared by MoEnv, 2004-2005.
- National Capacity Self-Assessment for Global Environmental Management (NCSA), implemented by MoEnv in 2005 to assess the capacity constraints and potentials for

implementing the three international environmental conventions on biodiversity, climate change, and desertification.

- Enabling Activities for the Preparation of Jordan's Second National Communication to the UNFCCC, implemented by MoEnv, 2006-2009.
- National Environmental, Economic, and Development Study (NEEDS) for Climate Change, prepared by the Ministry of Environment, 2010.
- Developing Policy-relevant Capacities for the Implementation of Global Environmental Conventions, implemented by the Ministry of Environment in cooperation with UNDP and with support from GEF, 2010.
- Enabling Activities for the Preparation of Jordan's Third National Communication to the UNFCCC, implemented by MoEnv in cooperation with UNDP and with support from GEF 2012-2015.
- Jordan Climate Change Policy, supported by UNDP/GEF, 2013.
- Enabling Activities for the Preparation of Jordan's First Biennial Update Report to the UNFCCC, implemented by MoEnv, 2015-2017.
- Mainstreaming Rio Convention into National Sectoral Policies in Jordan Project, 2015-2019.

Moreover, Jordan has submitted its first Intended Nationally Determined Contributions (INDC) in Nov 2016 with the support of The German International Cooperation Agency (GIZ) and it is expected that Jordan will submit its Second NDC in 2020.

Jordan nationally determines to reduce its greenhouse gas emissions by a bulk of 14 % until 2030. This contribution of GHGs reduction will be unconditionally fulfilled at, maximally, 1.5 % by the Country's own means compared to a business as usual scenario level. However, Jordan, conditionally and subject to availability of international financial aid and support to means of implementation, commits to reduce its GHGs emissions by additional, at least, 12.5% by 2030.

The national GHG emissions were estimated for the years 2016 according to 2006 IPCC Guidelines and the 2019 Refinement<sup>1</sup> to the 2006 IPCC Guidelines. The estimation of the

overall national inventory was carried out using the IPCC Inventory Software for Parties not included in Annex I of the UNFCCC (ver. 2.691, released on 23 January 2020).

## **2. 4NC & 2<sup>nd</sup> BUR Project**

The Fourth National Communication Report & Second Biennial Update Report to UNFCCC project seeks to assist Jordan in the efforts of integrating climate change consideration into the national and development policies, continue to build on the institutional and technical capacity strengthening process in the areas of Climate Change and National Communications reporting. The project will help as well to identify and develop national projects related to GHG mitigation, which may be eligible for funding or co-funding, by international, multilateral, or bilateral donor organizations.

The overall objective is the development of the second Biennial Update Report and Fourth National Communication Report. The project is expected to produce and update the following outcomes:

1. Development of national circumstances, institutional arrangements, gaps and constraints, cross cutting issues and other information relevant for the preparation of the national communications and BURs;
2. Preparation of national GHG inventories for 2016 and 2017;
3. Preparation of Mitigation actions analysis and domestic MRV;
4. Climate change detailed vulnerability assessment and adaptation (V&A);
5. The Fourth NC and Second BUR submitted to UNFCCC and disseminated at the national level, Monitoring and Evaluation.

The project's theory of change includes the following elements:

- Addressing the refugee crisis' impacts on the progress towards the achievement of Jordan sustainability goals especially at the northern host communities;
- Emphasizing on the climate change impacts and adaptive capacities at the most predicted vulnerable areas;
- Ensure decision makers engagement through the emphasis on validations for mitigation and adaptation options at two levels, technical and political groups;

- Mainstreaming gender participation in all related project steps (e.g. assessment, monitoring, reporting, validation, and decision making, setting mitigation and adaptation options, community target, etc) to ensure equal opportunities;
- Merging and updating predetermined NDCs with implemented and achieved measures that were not included in the INDCs list;
- Ensure training- capacity building based on national planning needs (e.g. LEAP training, IPCC 2006, Downscaling training, Vulnerability assessment, Training for on-job emission, Negotiation Skills / Paris Rule Book based on COP 24, etc);
- Provide awareness and knowledge on climate change related issues in the country as well as capacity building and exchange of knowledge among governmental, non-governmental, academic, private sectors and all relevant stakeholders.

### **Scope & Objective**

This assignment is integral component of the Fourth National Communication Report, it contributes to GHG mitigation assessment. The main purpose is to support the Ministry of Environment, the project partners and team of consultants to identifying and assessing potential economic, social and policy measures and human interventions that can be implemented in Jordan to reduce anthropogenic emissions of GHGs in different sectors at the national level to limit the magnitude and/or rate of long-term induced global warming. The specific objectives of this consultancy are:

1. to provide the primary source of technical information related to the GHGs mitigations in Jordan for energy, Industrial Processes and Product Use (IPPU), and waste sectors needed for the 4NC preparation process
2. Update the national circumstances for Energy, Transport, Industrial, and Waste Sectors profiles.
3. Revise and if necessary, update the baseline scenario of the First BUR and Second BUR for the related sectors.
4. Assess and update the mitigation scenario projects in Primary Energy, Renewable Energy, Energy Efficiency, Transport, Waste, and Industrial Sectors.

5. Identify and propose new Emission Reduction Mitigation Projects in above mentioned sectors based on national needs and GHGs inventory results.
6. Perform mitigation analysis based on trends, plans and policies prevailing in the Jordanian context using appropriate models (e.g. LEAP).

In order to build on the lessons learned and introduce the international good practices on national communication, it is anticipated to obtain the benefits – to the maximum extent- of the Third National Communication (TNC), the IPCC AR5 Mitigation of Climate Change (2014), IPCC AR6 The physical Science Basis of Climate Change, 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, AR5 Mitigation of Climate Change (2014), Sectoral Economic Costs and Benefits of GHG Mitigation (2000), and others. The consultant shall consider that all the climate change mitigation assessment national communication be gender responsive and performed through a rigorous methodology under the direct supervision of the Projects Coordination Specialist at the Environment, Climate Change & DRR Portfolio/UNDP, the Director of Climate Change Directorate at the Ministry of Environment, and in close cooperation, coordination and communication with the climate change reporting specialist and other project partners and consultants.

## **Tasks and Responsibilities**

The consultant is expected to undertake the following activities and responsibilities:

### **1) Multi-disciplinary team assemble & Consultancy Workplan**

- The preparation of national communication reports requires a multidisciplinary team and diverse expertise; accordingly, this assignment is expected to be performed in full coordination and synergy with other thematic assignments under the 4NC preparation process, coordination is expected to be performed through different means including the periodic virtual and physical coordination meetings.
- Review with the other team of consultants all guidelines developed by IPCC regarding the research and methodologies for developing mitigation sections in National Communications.

- Consult with project management team, the climate change reporting specialist, the approach and methodology, activities, inputs, assumptions, risks, and the timeframe of the process to carry out the assigned tasks and the preparation of 4NC.
- Facilitate and submit the final implementation work plan to perform the assigned tasks.

## **2) Mitigation Analysis**

Although the GHGs inventory is not within the scope of this consultancy services, the consultant is expected to rely for the purpose of the mitigation analysis on; the GHG Inventory of emissions by sources and removals by sinks for direct and indirect GHGs for the years 2016 and 2017 that were prepared using IPCC 2006 guidelines by the 2nd Biennial Update Report (BUR), the updates and assessments of the baseline scenarios of the targeted sectors that were prepared during the 1st BUR, and any afterward sectoral growth.

The mitigation analysis should comprise the following:

- Revision and updates of the baseline scenario for all direct and indirect energy related sectors and subsectors (including energy, Industrial Processes and Product Use, Waste Generation, Composition, and Management).
- Mitigation scenarios to model possible reduction scenarios at all energy related sectors and subsectors up to 2066 according to the development scenarios (Business as usual scenarios; and mitigation scenario),
- Progress of policies and mitigation actions of GHG, status of implementation of the National Measurement, Reporting and Verification system (MRV),
- Set of proposed policy, programme, and projects as mitigation measures with cost-benefit analyses (emission reduction rate and mitigation cost).

**3) Data Compilation and Preparing the 4th National Communication**

The consultant is expected to draft the mitigation section related to energy related sectors in the 4NC report. Moreover, the consultant is expected to contribute to the roadmap of the 4th National Communication operationalization, particularly those related to energy. Industry and waste related sectors. The roadmap is expected to provide guiding principles and instruments to take the 4NC from theory to practice. However, it is expected to focus on the enabling environment of the targeted sectors and the role of -but not limited to- the followings means: climate change governance and institutional setups, technical knowledge and capacities, education, public awareness and social learning, technology transfer, scientific research, innovation, knowledge management, financial resources, gender equality, mainstreaming climate change action in the development strategies, programs and plans at national and local level.

**4) Stakeholders Consultation, Knowledge Management and Capacity Building**

The consultant shall ensure close consultation and discussions with climate change concerned stakeholders including -but not limited to- the concerned ministries, especially the Ministry of energy and mineral resources, Ministry of Environment, Ministry of Water, ministry of industry and trade, and Ministry of Agriculture, NGOs, academia, research centers, media, civil society, local community representatives. Consultations may be performed through different means such as: meetings, mini workshops, focus groups, validation workshops, semi-structured interviews...etc. The consultant shall ensure effective learning process and dissemination of knowledge among the concerned technical staff of the related line ministries, it is important that all lessoned learned are captured and internalized in the concerned national institutions.

**Expected Outputs & Deliverables Timeframe**

The expected duration of this consultancy services is **Four months (4)**, during which, the consultant is expected to submit the following deliverables.

	Deliverable	Duration/Deadline
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1	Synthesis report that details the findings of the desktop review, consultation meetings, and the proposed methodology of the mitigation analysis in the targeted sectors	10 days from signing contract
2	Brief report detailing the national circumstances regarding the Energy, Transport, Industrial, and Waste Sectors profiles.	One (1) month from the commencement
3	Validated technical report on the baseline and mitigation scenarios updates.	Two (2) months from the commencement
4	Validated technical report on mitigation scenario projects and proposed new projects in Primary Energy, Renewable Energy, Energy Efficiency, Transport, Waste, and Industrial Sectors, Progress of policies and mitigation actions of GHG, status of implementation of the National Measurement, Reporting and Verification system (MRV).	Four (4) months from the commencement

### Required Qualifications and Skills

- Education: Advanced University degree in the fields of climate change mitigation, energy, environmental management, or relevant related fields.
- Experience: Minimum of 10 years of total experience of which at least five years relevant experience to the assignment.
- Language requirement: Proficient in both written and oral English and Arabic.
- Computer skills: Demonstrable skills in office computer use - word processing, spread sheets, etc.

### Skills and Competencies

- Excellent technical and analytical writing skills.
- Excellent in GIS modelling and remote sensing techniques
- Strong facilitation and moderation, communication and inter-personal skills

- Excellent networking and partnering competencies and negotiating skills.
- Ability to use information technology as a tool and resource.

### **Compensation and special conditions**

All payments are subject to deliverable approval by UNDP. Payments are transferred in the following manner:

- The 1<sup>st</sup> payment (15% of the total) is cleared upon submission and approval of the Synthesis Report (Deliverable 1).
- The 2<sup>nd</sup> payment (25 % of total) after delivery and approval of Deliverable 2.
- The 3<sup>d</sup> payment (25% of total) after delivery and approval of Deliverable 3.
- The 4<sup>th</sup> payment (35%) after delivery and approval of Deliverable 4.

### **Evaluation & Selection Criteria**

Consultants will be evaluated based on the following methodologies:

#### Cumulative analysis

When using this weighted scoring method, the award of the contract should be made to the individual consultant whose offer has been evaluated and determined as:

- a) responsive/compliant/acceptable, and
- b) Having received the highest score out of a pre-determined set of weighted technical and financial criteria.

Technical Criteria weight; 70%

Financial Criteria weight; 30%

Only candidates obtaining a minimum of 50 point would be considered for the Financial Evaluation

<b><i>Criteria</i></b>	<b><i>Weight</i></b>	<b><i>Max. Point</i></b>
<u><i>Technical</i></u>	70%	
Education		20

Experience in similar tasks		40
Technical approach and methodology and work plan demonstrating a clear understanding of the job to be done		10
<u>Financial</u>	30%	30

UNDP Signature	IC Signature
<i>Majida Alsaaf</i>	