Green, Agri-Food Transformation and Economic Recovery – GATE
TERMS OF REFERENCE
Civil Engineer – Water infrastructure – Green Plan
(Proc. Ref.: G-GP-CS-INDV6)

I. Project Background

The Republic of Lebanon (the Borrower) represented by the Council for Development and Reconstruction (CDR), has received a Loan from the International Bank for Reconstruction and Development (IBRD) in the amount of US$ 200,000,000 toward the cost of the Green, Agri-food Transformation for Economic Recovery Project (Gate).

(GATE) project aims to improve the resilience of farmers and Small and Medium Enterprises (SMEs) in the Lebanese agri-food sector. The project is designed to facilitate access to finance, support climate-smart investments, and restore critical infrastructure services to sustain and enhance the agricultural value chain. Through targeted interventions, it seeks to increase agricultural productivity, strengthen food security, and promote sustainable economic growth. The project is structured into key components focusing on value chain investments, infrastructure development, enabling regulatory improvements, and knowledge management.

The Project is structured into five main components, each designed to strengthen the resilience of Lebanon's agri-food sector and support farmers and SMEs:

- Component 1: Climate Smart Investments in Agri-food Value Chains.

- Component 2: Climate-Smart Infrastructure and Services for Agri-Food Sector Development.

- Component 3: Improving the Enabling Environment and Restoring Support Services for Agri-food Sector Development.

- Component 4: Project and Knowledge Management.

- Component 5: Contingency Emergency Response Component.

The Green Plan has been delegated by the CDR to implement and manage Subcomponent 2.1. This sub-component – *Improving rural community infrastructure for agriculture (US$28 million)* – involves investments in climate-smart infrastructure and services. It will work closely with municipalities and stakeholders to develop and prioritize projects such as hill lakes, road rehabilitation, and irrigation improvements. The Green Plan will establish a dedicated Project Management Unit (PMU) to oversee implementation and ensure proper coordination.

II. Objectives of the Assignment

The objective of this assignment is to provide a technical assessment on hill lakes designs and day-to-day construction supervision for the implementation of hill lakes and irrigation networks. The engineer will ensure that all works are executed in accordance with approved designs, contractual requirements, applicable national regulations, and World Bank acceptable standards.

To achieve this, the Green Plan requires the services of a *Civil Engineer – Water infrastructure*

III. Duties and Responsibilities

1. Technical Assessment, Planning, and Preparation

- Conduct field visits to the proposed sites and collaborate with project and Green Plan engineers to submit technical assessments regarding the suitability and potential of sites for hill lake construction.
- Identify potential technical constraints and risks affecting site feasibility and construction.
- Provide technical recommendations and conclusions on the appropriateness and readiness of each proposed site.
- Review and approve hill lakes designs prepared by consultants.
- Lead the review and validation of hydraulic and hydrological designs for hill lakes and irrigation systems.
- Conduct water balance and hydrological analyses to assess storage capacity, inflows, and sustainability of proposed sites.
- Provide technical guidance on efficient water use and irrigation system design.

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2. Technical Supervision and Quality Control

- Conduct regular site inspections to monitor progress, workmanship, and quality of construction of hill lakes, irrigation networks, and pumping systems**,** including all related and supporting works.
- Ensure all construction activities are executed in full compliance with approved designs, shop drawings, technical specifications, Bills of Quantities (BoQs) and applicable national and international standards.
- Review, verify, and approve shop drawings, contractors' submissions (including As-Builts drawings), engineering designs, proposed design modifications and provide technical assessment of any variation order.
- Supervise materials testing, inspection, and quality verification to ensure conformity with approved specifications.
- Oversee commissioning and functional verification of all systems, including but not limited to pumps and transmission lines, before provisional and final handover.
- Monitor and verify contractors' and consultants' works and executed quantities for interim and final payments, ensuring adherence to approved contract values, in coordination with the PMU Finance Unit.
- Coordinate, supervise and monitor site engineers of both contractors and consultants, ensuring compliance with technical specifications, approved schedules -and quality standards.

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3. Contract and Procurement Management

- Ensure contractors' and consultants' compliance with contractual obligations, including scope of services, deliverables, timelines, and technical requirements, in accordance with approved contract terms and conditions.

- Provide technical support during the preparation and review of tender documents, including technical specifications, Terms of Reference (ToRs) and Bills of Quantities (BoQs) in compliance with World Bank procurement procedures.
- Participate in bid evaluation committees by providing technical assessments of submitted proposals.
- Review and assess variation orders and claims to ensure technical necessity, compliance, cost-effectiveness, and alignment with the approved project budget.
- Review, validate, and approve deliverables submitted by consultants in accordance with their contracts, including the agreed scope of services, timelines, and contract amounts.

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4. Coordination, Monitoring and Reporting

- Lead and document coordination meetings with project team, contractors, consultants, municipalities and other stakeholders to address technical challenges related to works and deliverables.
- Prepare periodic technical progress reports summarizing the status of works implementation, compliance with approved designs and schedules, key issues encountered, risks, and proposed corrective actions and technical recommendations.
- Maintain accurate and up-to-date technical documentation and records including approved drawings, test results, correspondence and As-Built documentation**.**
- Monitor and coordinate the execution of contractors' and consultants' work and contract deliverables to ensure timely and technically compliant implementation.
- Review, consolidate and endorse final As-Built drawings and technical records prior to issuance of works completion certificates.
- Assess technical sustainability of water infrastructure related to executed works and provide recommendations to improve efficiency and sustainability of irrigation and water management systems.
- Prepare technical completion reports highlighting achievements, delivered outputs and lessons learned.
- Participate in supervision missions and/or meetings with the WB team as required and conduct site visits.

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5. Support to World Bank Environmental and Social Framework Implementation

- Coordinate with the project's environmental and social specialists, consultants, and contractors to support the implementation of World Bank Environmental and Social Framework (ESF).
- Timely reporting of incidents or non-compliance to the PMU in a timely manner.

IV. Qualifications and Experience

- **Education**

- A Master's degree or equivalent (Bac+5) in Civil Engineering with specialization in Hydraulic Engineering, Water Resources, or a closely related field is mandatory. Diplomas in Irrigation Engineering without a foundational degree in Hydraulic Engineering or a related discipline shall not be considered.

- **Professional Experience**

- At minimum of seven (7) years of professional experience in infrastructure projects implementation.

- At least five (5) years of experience in the planning, design, and supervision of water infrastructure works – including hill lakes, reservoirs, dams, large-scale irrigation networks, or similar hydraulic structures – with demonstrated skills in technical site assessments and preparation of Bills of Quantities (BoQs).

- At least three (3) years of experience working with international donors. Working with the World Bank including familiarity with their policies will be considered an asset.

- Experience with the public sector is preferable.

- **Professional Competencies**

- Demonstrated ability to identify technical and site-related issues and propose or implement appropriate corrective actions in a timely manner.

- Demonstrated ability to communicate effectively with consultants, contractors and site engineers, and to prepare clear, accurate, and timely reports on site progress, technical issues, and implementation challenges.

- **Computer Skills:**

- Proficiency in AutoCAD, WaterCAD, ArcGIS, MS Project and other similar softwares.

- Proficient in Arabic and English (written and oral).

V. Reporting Line

- The *Civil Engineer – Water infrastructure* will report directly to the Head of Executive Committee of Green Plan and the Project Manager of the Project Management Unit (PMU) and will collaborate closely with the Irrigation and Water Management Specialist, project and GP engineers, and relevant stakeholders.

- She / He shall submit the following deliverables: i) a monthly activity report summarizing key activities, outputs, and progress and ii) a monthly timesheet indicating the number of days/hours worked.

VI. Duration of Assignment

The initial contract duration is one year and is renewable based on performance and project requirements.

VII. Location

The position will be based at the Green Plan Offices. Regular field visits to rural areas are required.