

**REQUEST FOR EXPRESSIONS OF INTEREST
(CONSULTING SERVICES - FIRMS SELECTION)**

HASHEMITE KINGDOM OF JORDAN

JORDAN WATER SECTOR EFFICIENCY PROGRAM

IBRD Loan No. [9560-JO](#), CFF TF No. [TF0C1892](#), AFD No. [CJO 1141 01P](#)

Assignment Title: [Ajloun Integrated Water Supply Improvements, including Transmission Pipeline and Distribution Network Restructuring](#)

Reference No: [JO-YWC-011-CS-QCBS](#)

The Ministry of Water and Irrigation has received financing from the International Bank for Reconstruction and Development (World Bank), the Agence Française de Développement (AFD) and Global Concessional Financing Facility (GCFF) in the amount of US\$300,000,000 to be managed by the World Bank, toward the cost of the Jordan Water Sector Efficiency Project, and it intends to apply part of the proceeds to payments for consulting services to be procured under this project.

The consulting services (“the Services”) is provide professional technical services to support activities that will pave the way for the Ministry of Water and Irrigation (MWI)& Yarmouk Water Company (YWC) to effectively plan and manage water networks, as public resources, and enable provision of better-quality services alongside them, including better management and maintenance of water network. The aim of the assignment is to: to facilitate the smooth execution of a project by meticulously preparing engineering studies and tender documents, supervising works contracts, and ensuring compliance with approved designs and technical standards. The objective encompasses overseeing provisional taking-over and defects liability periods, including inspections, certifications, and reporting. Emphasizing adherence to schedules, budgets, and environmental standards, the project also prioritizes gender equality by actively promoting the inclusion of women in the workforce and fostering a safe, inclusive workplace environment.

The TOR full version can be found on Yarmouk Water Company (YWC) website at the following link
<http://www.yw.com.jo/Tenders.aspx>

The Yarmouk Water Company (YWC) now invites eligible consulting firms (“Consultants”) to indicate their interest in providing the Services. Interested Consultants should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services. Consultant Brochures may also be included in the EOI. The shortlisting criteria are:

- 1. Description of similar assignments, and in similar conditions.**
- 2. The firm’s core business and general experience years in business and overall competence in relevance to this assignment.**
- 3. The firm financial capability.**

It is preferable to limit the Eoi to a maximum of 50 pages.

Please note that at this shortlisting stage: Technical and financial proposals are not requested. Key Experts, if proposed for the assignment, will not be evaluated. Request for clarifications on the EOI shall not be replied to

The shortlist will contain 6 to 8 firms.

The attention of interested Consultants is drawn to Section III, paragraphs, 3.14, 3.16, and 3.17 of the World Bank's "Procurement Regulations for IPF Borrowers" November 2020 ("Procurement Regulations"), setting forth the World Bank's policy on conflict of interest.

Consultants may associate with other firms to enhance their qualifications, but should indicate clearly whether the association is in the form of a joint venture and/or a sub-consultancy. In the case of a joint venture, all the partners in the joint venture shall be jointly and severally liable for the entire contract, if selected.

The Applicant's attention is drawn to the following:

- a. National consulting engineering firms shall satisfy the requirements as defined in this request for Expression of Interest and the attached ToR and classified as 1st grade –A in water and sewage and 1st grade A in the field of environment by government tender department.
- b. International consulting firms shall satisfy the requirements as defined in this request for Expression of Interest and the attached ToR. If awarded, the international consultant shall abide by the Country's tax laws as applicable;
- c. A Joint Venture of national and international consulting firms or an international consulting firm with a local Sub-Consultant, all shall satisfy to the requirements under points a and b. The national consulting firm, regardless of whether JV member or Sub-Consultant, shall also meet of the requirements mentioned under a) as applicable.

Shortlisted Consultants will be invited to submit their proposals, upon which a Consultant will be selected in accordance with the (QCBS) described in the "World Bank Procurement Regulations for IPF Borrowers", dated November 2020" and to be specifically set out in the Request for Proposals.

Further information can be obtained in writing through the email address below at the address below during office hours (8:00 am to 4:00 pm Jordan Time).

Expressions of interest must be delivered in a hard copy and Editable Soft copy to the address below and/or by below email(s) by **OCT (01), 2025**, 12 pm Jordan time.

Recipient(s):

To Bassam Jarboo, Procurement Manager

Email: bassam_jarboo@yw.com.jo

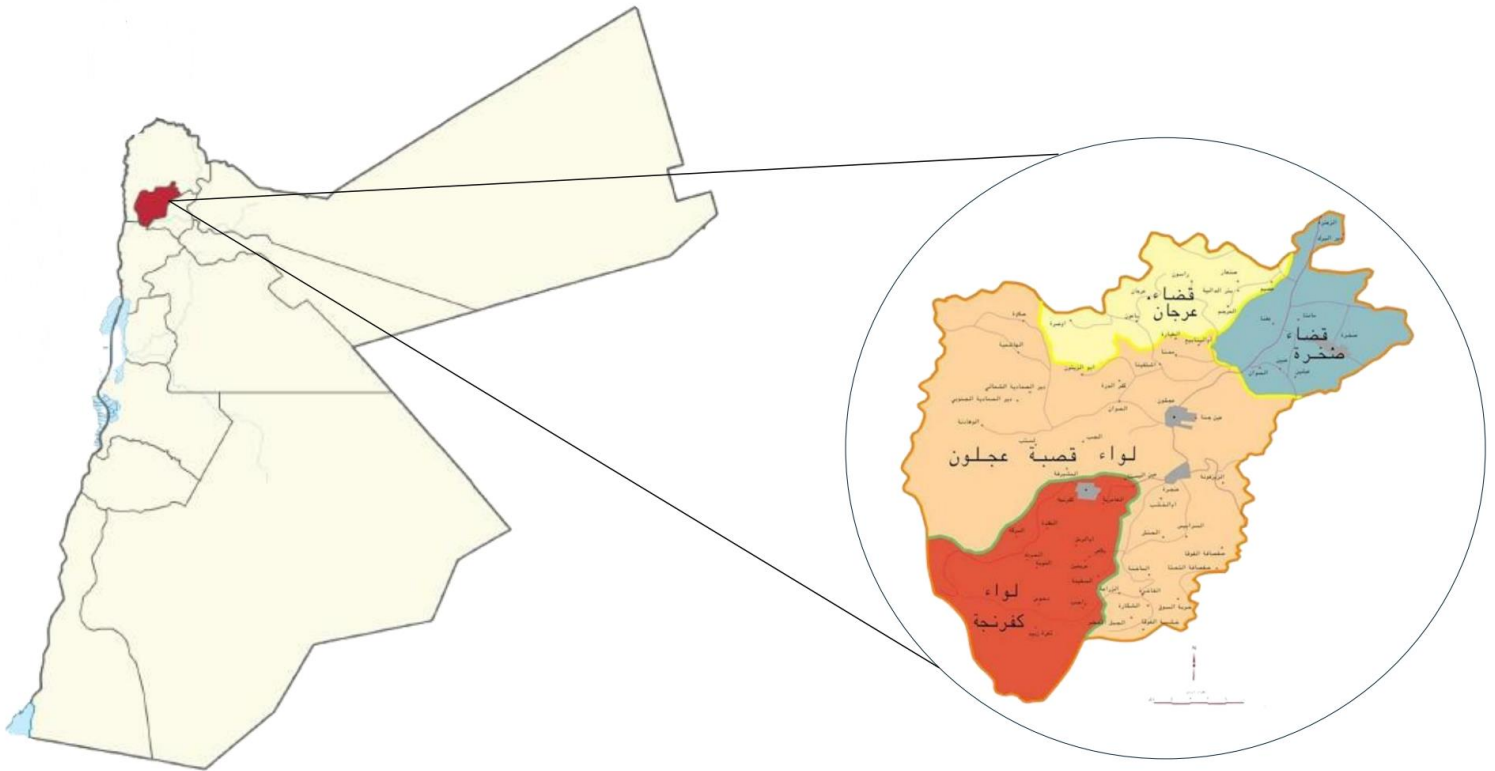
with a copy (cc) to Abdelhadi Bataineh, Procurement Officer

Email: abdelhadi_bataineh@yw.com.jo

Address: **Tenders and Procurements Department EOI Title – Bidder Name**
Yarmouk Water Company Irbid, Baghdad St. P.O. Box 3798 Irbid 21110 Jordan

HASHEMITE KINGDOM OF JORDAN
Ministry of Water and Irrigation
WATER AUTHORITY OF Jordan
Yarmouk Water Company (YWC)

JORDAN WATER SECTOR EFFICIENCY PROGRAM
Loan No. 9560-JO



JO-YWC-011-CS-QCBS
Terms of reference
CONSULTANCY SERVICES

FOR THE PREPARATION OF DETAILED DESIGN AND CONSTRUCTION SUPERVISION

**Ajloun Integrated Water Supply Improvements, including Transmission Pipeline and
Distribution Network Restructuring**

JORDAN- AJLOUN
September 2025

A. BACKGROUND

The Ministry of Water and Irrigation has received financing from the International Bank for Reconstruction and Development (World Bank), the Agence Française de Développement (AFD) and Global Concessional Financing Facility (GCFF) in the amount of US\$300,000,000 to be managed by the World Bank, toward the cost of the Jordan Water Sector Efficiency Project, and it intends to apply part of the proceeds to payments for consulting services to be procured under this project.

The World Bank funded project will have the following components:

- **Component 1: Sustainable Non-Revenue Water (NRW) Reduction**
- **Component 2:** Increased energy efficiency and reduced energy supply costs
- **Component 3:** Water security measures to underpin efficiency improvements
- **Component 4:** Institutional strengthening for water sector Efficiency
- **Component 5:** Contingency Emergency Response

- Component 1 of the project “Sustainable Non-Revenue Water (NRW) Reduction - Aims at (i) rehabilitation or replacement of the water supply network including reconfiguring the network into hydraulically isolated District Metered Areas (DMAs), replacement of household connections, installation of customer and bulk meters, regulation and maintenance of water pressure within the network, and systematic leakage identification and repairs, and (ii) support to preparatory studies and activities for NRW sub-projects.

- The works consist of the following parts:
 - a) Sustainable non-revenue water reduction
 - b) Modernized systems for sustaining NRW reduction
 - c.) Community engagement to improve financial sustainability, collections efficiency, and demand control

A Project Management Unit (PMU) is established at the (Jordanian water companies / YWC) over the implementation period of five years. The PMU shall be responsible for the management of project activities including fiduciary operations, contract management and the administration of the projects funds as well as implementation and monitoring of the environmental and social requirements and instruments.

The current Terms of Reference (ToR) are proposed under Component 1 of the project –NRW and will describe the assignment’s requirements and objectives.

B. PROJECT LOCATION AND DESCRIPTION

The project will be implemented in Ajloun Governorate, Jordan, covering the transmission route from Ein Al Tanour to Eshatafena Pumping Station via Ba'oon, as well as the water distribution networks supplied from Ras Munif Reservoir (serving Anjarah, Al-Qai'da and Khellet Wardeh) and Ajloun Reservoir (serving Ajloun City and Kufranja areas). The project area features challenging mountainous terrain with elevation variations exceeding 300 meters that require specialized engineering solutions to address hydraulic challenges.

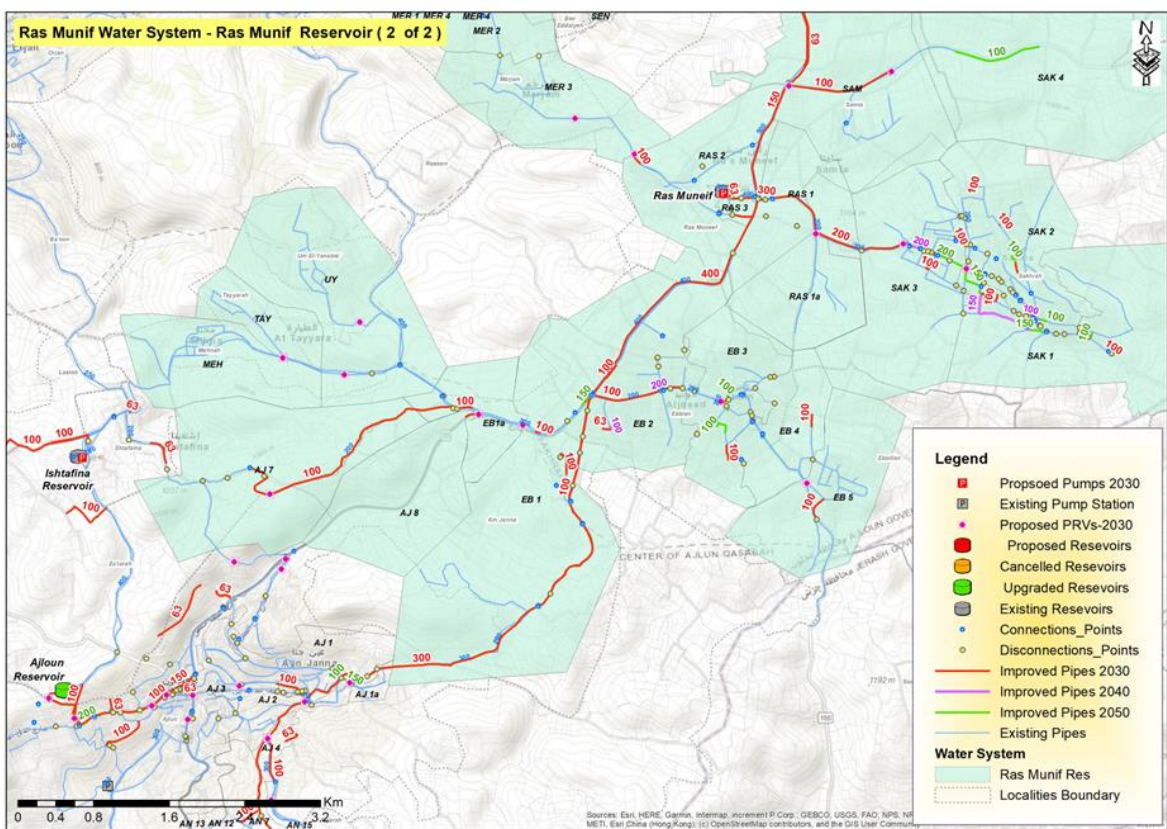
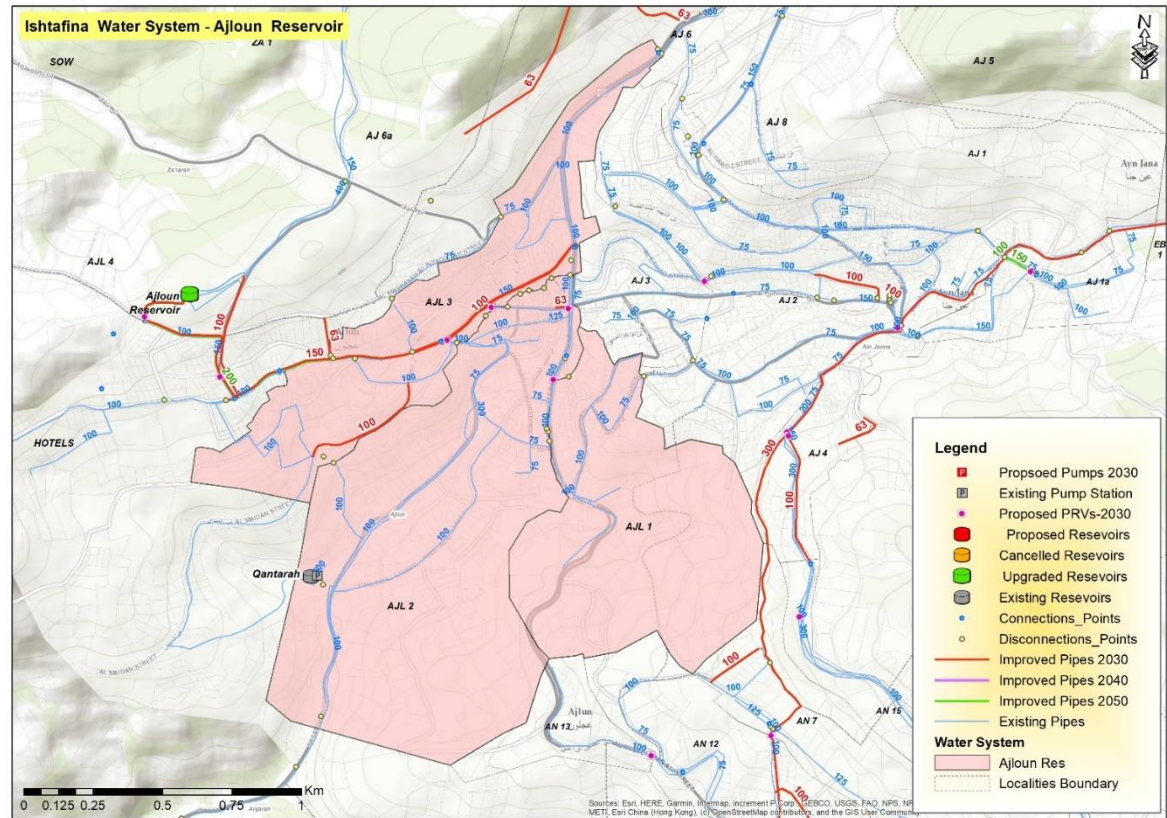
The existing water infrastructure suffers from multiple deficiencies including inefficient transmission between key pumping stations, undefined district metered areas (DMAs), high non-revenue water (NRW) levels estimated at 38%, poor pressure management, and aged/undersized distribution pipelines. These issues have resulted in unreliable water supply, operational inefficiencies, and excessive water losses across the service areas.

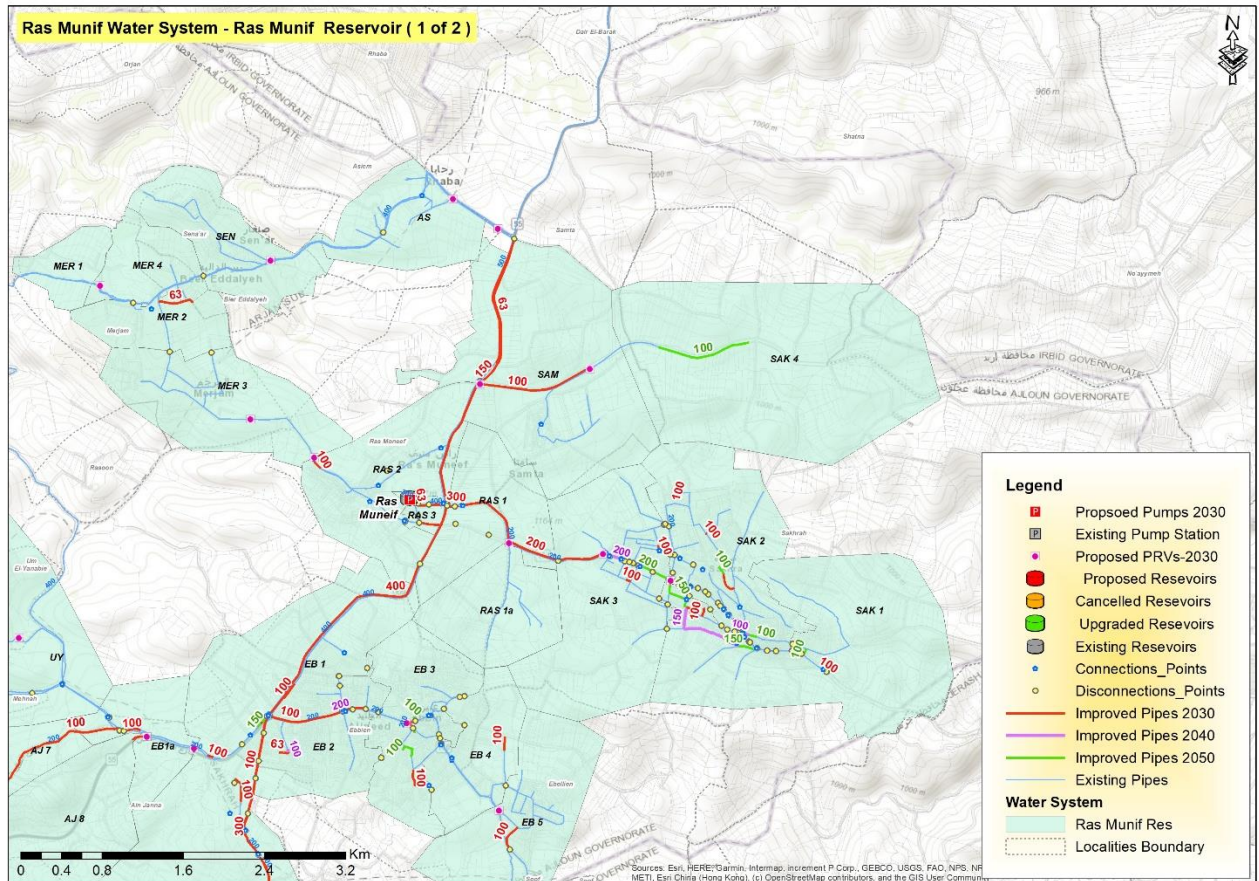
The project comprises three main components.

Task 1: Focuses on the transmission pipeline system, involving design review, preparation of tender documents, bidding assistance, and construction supervision for the Ein Al Tanour-Ba'oon-Eshatafena pipeline, including rehabilitation works at Eshatafena Pumping Station. This includes approval of detailed designs, preparation of complete tender specifications, and support during contractor selection, and oversight of pipeline installation, testing and system commissioning.

Task 2: Addresses distribution network restructuring through detailed engineering design for establishing 26 DMAs in the Ras Munif system and 3 DMAs in the Ajloun system, including associated infrastructure such as pressure reducing valves and feeder mains. The task covers preparation of tender documents for network upgrades, bidding assistance, and construction supervision of DMA implementation, pipeline replacements and pressure management installations.

B.1: - Project overview Layout:





C. OBJECTIVE OF CONSULTANCY SERVICES

The general scope of the consultancy includes, but is not limited to, the following items:

The primary objective of this consultancy assignment is to provide **comprehensive engineering and project management services** for the **design review, bidding document preparation and construction supervision** of transmission pipeline connecting Ein Al Tanour, Ba’oon and Eshatafena pumping station and the rehabilitation of the PS. In parallel the consultant will provide **comprehensive engineering and project management services** to the restructuring and enhancement of water distribution networks, including the establishment of District Metered Areas (DMAs), in Ajloun Governorate—specifically within the service zones of **Ras Munif, Ajloun, Kufranja, and surrounding areas**.

This assignment responds to critical water service challenges in the target areas, including high levels of Non-Revenue Water (NRW), inadequate hydraulic zoning, aged and undersized infrastructure, and inefficient pumping and storage facilities. The intervention is aligned with the National Water Strategy of Jordan (2023–2040) and will be implemented in coordination with the Yarmouk Water Company (YWC) and all relevant stakeholders.

The Consultant shall perform all necessary technical, administrative, and supervisory tasks to ensure successful planning, design, tender documentation, and implementation supervision for the following:

- **Task 1: Design review, environmental and social studies, preparation of ESMP to be used in the tender documents, preparation of tender documents, assistance with bidding, and supervise of works Transmission Pipeline Connecting Ein Al Tanour, Ba’oon and Eshatafena pumping station, including rehabilitation for Eshatafena pumping station.**
- **Task 2: detailed engineering design, environmental and social studies, preparation of ESMP to be used in the tender documents’ preparation of tender documents, assistance with bidding, and supervising works for Ras Mouneef and Ajloun water networks.**

It should be noted that, all activities shall be processed in Parallel, however Tasks 1 is considered a priority in the work plan of the Consultant.

The consultancy shall ensure that all designs and supervision activities are technically sound, economically justified, environmentally responsible, and in full compliance with national standards and World Bank requirements. The final outcome should contribute to enhanced service reliability, improved water conservation, and long-term operational sustainability in Ajloun Governorate.

D. SCOPE OF WORK

Task 1– Transmission Pipeline Connecting Ein Al Tanour, Ba’oon and Eshatafena:

Design review, preparation of tender documents, assistance with bidding, and supervise of works for transmission pipeline from Ein Al Tanour through Ba’oon to Eshatafena pumping station, including rehabilitation for Eshatafena pumping station.

1.1 Engineering Design Review Services

Review the detailed design for the proposed transmission pipeline including but not limited to ensure that, All the design elements are available and review the drawings the technical specifications to ensure that they are sufficient for construction phase.

1.2 Environmental and Social Safeguards Compliance

In compliance with the World Bank Environmental and Social Framework (ESF) and Jordanian national legislation:

- Conduct the required environmental and social assessments for the subproject, including but not limited to conducting and finalizing the subproject's ES screening form and preparing the necessary environmental and social instruments in accordance with the Project’s ESMF, RF, SEP, GRM LMP as well as the World Bank ESF, and national requirements.
- Coordinate and communicate with the Ministry of Environment to obtain the environmental permit for the subproject, as well as coordinate with other local authorities and different stakeholders to ensure smooth consultation and effective community engagement during the project design and throughout implementation.

- Conduct community consultations and ensure participatory design, especially in sensitive or vulnerable areas;
- Address land access, noise, dust, and disruption risks during construction;
- Ensure protection of natural and cultural resources, particularly in areas with historical or ecological value.

1.3 Stakeholder Coordination and Capacity Building

- Ensure ongoing coordination with:
 - ❖ Yarmouk Water Company (YWC)
 - ❖ Ministry of Water and Irrigation (MWI)
 - ❖ Local municipalities and Ajloun Governorate authorities.
 - ❖ Environmental regulators, social development departments, and community-based organizations.
- Facilitate **capacity building and knowledge transfer** to YWC staff, particularly in the areas of hydraulic modeling, NRW reduction strategies, and infrastructure asset management. Additionally, include Environmental and Social (E&S) training components such as ESIA/ESMP implementation and monitoring, Grievance Redress Mechanism (GRM) operation, Occupational Health and Safety (OHS), community engagement and inclusion practices, gender-sensitive planning, and Labor Management (ESS2) compliance.

1.4 Environmental and Social Assessment

- The subproject was initially screened against the Project Exclusion list and the available information (please see Annex 3 the initial environmental and social screening for the subproject), The Consultant shall conduct and finalize the initial environmental and social screening of the sub-project as per the ES screening template in the ESMF for client and Bank review and clearance. The screening will identify the E&S instruments per each Environmental and Social Standards (ESS) and the consultant will draft those required instruments in accordance with the ESS's and the national regulations.
- The consultant will submit the screening report for the ESSD and the Water Company for review, prior to submitting for the World Bank guidance. This process is further detailed here and in the ESMF:
 - a. For ESS1, based on the findings of the screening, the consultant shall prepare the more stringent requirement among the World Bank and the Ministry of Environment (MoEnv.) requirements (i.e. preliminary ESIA/ESMP full-fledged ESIA/ESMP, IEE/ESMP, detailed ESMP or ESMP checklist) , and identify the ES instruments in accordance with the ESF requirements; in accordance with ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8, and ESS10, assessing each standard while applying the ESF mitigation hierarchy. This process is described in detail in the ESMF (The instruments' outline should also include all World Bank requirements in addition to the national ones according to the MoEv.) and will be completed in close coordination with the ESSD, the water company and upon guidance from the World Bank.
 - b. The consultant will draft E&S instruments per each ESS and the national guidelines and procedures and submit them to the World Bank and where applicable to the Ministry of Environment for their clearances according to the ESMF.

- c. The IA with the support of the consultant shall submit to the MoEv the approval application regarding the project activities, by which the MoEv will classify the risks according to Environmental Classification and Licensing regulation and its amendments No. 69 of 2020 and define the required ES instrument for high risk: comprehensive ESIA is required, for substantial (medium) risk a preliminary ESIA is required. Then the consultant shall furnish the requirements for the Environmental License (MOEV Clearance) and Environmental Permit before project operation. Considering the ES instruments drafts will be reviewed by the World Bank, the feedback from the Bank should be incorporated prior submitting the draft for MoEnv approval.
- d. Upon the completion of the E&S screening report, the Consultant will identify what ES measures and plans that the contractor will prepare as part of its MSIP prior to commencing the works including but not limited to: Archaeological Chance Find Procedure (ACFP), Occupational, Health and Safety (OHS) Plan, Traffic management Plan (TMP) -Conceptual layouts, Waste Management Plan (WMP).
- e. The ESIA/ESMP or IEE/ESMP or ESMP draft will be submitted for the World Bank review and clearance. The final draft will be cleared upon the satisfaction of the World Bank and the Ministry of Environment (if applicable).
- f. The consultant is required to conduct stakeholder consultations as needed during the preparation of the different E&S instruments. The feedback received will be reflected in the different instruments before finalization.
- g. If a Resettlement Action Plan (RAP) or a Livelihood Restoration Plan (LRP) is required, it will be prepared closely with the ESSD and the Water Company, and in accordance with the requirements of the project's Resettlement Framework (RF). Necessary consultations with project affected people (PAPs) will be conducted as required.

1.5 Procurement Support and Bidding Documents

Prepare a complete and compliant set of bidding documents for the construction phase, including:

- Application of World Bank Standard Procurement Documents (SPDs) and national procurement regulations.
- Coordination with YWC and procurement entities for pre-bid meetings and clarification processes;
- Provision of support during tendering, including responding to bidder inquiries.

1.6 Construction Supervision and Contract Administration

Supervise the execution of construction works across the designated areas, ensuring:

- Strict compliance with approved designs, material specs, and workmanship standards;
- Implementation of Environmental and Social Management Plans (ESMPs);
- Daily site monitoring and verification of contractor performance;
- Management of schedule, progress reporting, and variation handling;
- Certification of interim and final payments;
- Preparation and validation of as-built drawings and commissioning documentation;

Monitoring of Defects Liability Period (DLP) and issuance of final completion certificates.

Task 2– Ajloun Governorate (Ras Munif and Ajloun Projects)

The Consultant’s services will encompass the following main phases but not limited to:

2.1 Engineering Design Services

Data Review and Collection

The Consultant shall begin by reviewing all relevant documentation provided by the Client (Yarmouk Water Company), including but not limited to:

- Existing GIS and hydraulic data for the Ajloun and Ras Munif supply zones;
- As-built drawings, operation and maintenance records, and asset inventories;
- Reports or outputs from previous related studies and projects.

This review will inform a comprehensive understanding of the current infrastructure conditions, particularly the water distribution networks, reservoir status, DMAs, pressure conditions, and household connections.

Field Investigations

To validate and enrich the existing data, the Consultant shall carry out field investigations covering both supply zones (Ajloun and Ras Munif), which shall include but not be limited to:

- **Topographic Surveys:** High-resolution topographic mapping for all project areas using appropriate surveying technology. The mapping shall be prepared at 1:2000 scale (horizontal) and 1:200 (vertical), including key elevation profiles and constraints related to the routing of pipelines, reservoirs, and valve installations.
- **Geophysical Investigations:** Application of non-invasive methods such as Ground Penetrating Radar (GPR) or equivalent techniques to identify underground utilities, existing pipeline alignments, and potential obstacles or areas of interference.
- **Visual Inspections and Reconnaissance:** Site visits to assess the physical condition of infrastructure such as reservoirs (Ajloun and Ras Munif), existing pumps (including assessment of VFD compatibility), pipelines, valve chambers, and customer connections.
- **Geotechnical Investigations:** Selective boreholes or soil testing at locations where structural works are expected (e.g., new reservoir at Kufranja Upper, pump station upgrades at Ras Munif, or significant pipeline replacement segments in unstable terrain).

Coordination and Compliance

- The Consultant shall ensure coordination with relevant national and local agencies, and align field investigations with any ongoing or planned projects within the same geographic area, avoiding duplication of efforts.
- All fieldwork shall be planned with consideration of environmental and social sensitivity—such as avoidance of natural reserves, agricultural lands, and cultural heritage sites—in accordance with the Environmental and Social Framework (ESF).

Output and Integration

All collected data shall be:

- Digitized, validated, and geo-referenced as appropriate;
- Integrated into the project's GIS database and used to update the hydraulic models;
- Utilized to refine the engineering designs and inform the feasibility analysis for both Ajloun and Ras Munif networks.

This task ensures that subsequent project phases—design, costing, and construction—are based on accurate, reliable, and field-verified data, ultimately contributing to improved water service delivery, better pressure control, and reduced Non-Revenue Water (NRW).

2.2 Detailed Engineering Design

Develop a detailed engineering design package for the proposed system upgrades according to Ajloun Master Plan submitted (attached) and the design to include the below:

- Restructuring the networks and creating DMAs.
- Layout and sizing of new and rehabilitated pipelines, tanks, reservoirs, PRVs, valves, meters, and house connections.
- Hydraulic modeling and zoning optimization for pressure control and leakage reduction.
- Design of electromechanical upgrades, including replacement of pumps with energy-efficient VFD systems.
- Integration of future demand projections up to 2050.
- Digital delivery of design files in GIS and CAD formats, compatible with YWC asset management systems.
- Provide plan-profiles and details for the chambers, pumping stations, and water tanks, etc.
- Prepare the technical specifications for all design elements.
- Prepare design reports.

2.3 Environmental and Social Assessment

- The subproject was initially screened against the Project Exclusion list and the available information (please see Annex 3 the initial environmental and social screening for the subproject), The Consultant shall conduct and finalize the initial environmental and social screening of the sub-project as per the ES screening template in the ESMF for client and Bank review and clearance. The screening will identify the E&S instruments per each Environmental and Social Standards (ESS) and the consultant will draft those required instruments in accordance with the ESS's and the national regulations.
- The consultant will submit the screening report for the ESSD and the Water Company for review, prior to submitting for the World Bank guidance. This process is further detailed here and in the ESMF:
 - h. For ESS1, based on the findings of the screening, the consultant shall prepare the more stringent requirement among the World Bank and the Ministry of Environment (MoEnv.) requirements (i.e. preliminary ESIA/ESMP full-fledged ESIA/ESMP, IEE/ESMP, detailed ESMP or ESMP checklist) , and identify the ES instruments in accordance with the ESF requirements; in accordance with ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8, and ESS10, assessing each standard while

applying the ESF mitigation hierarchy. This process is described in detail in the ESMF (The instruments' outline should also include all World Bank requirements in addition to the national ones according to the MoEv.) and will be completed in close coordination with the ESSD, the water company and upon guidance from the World Bank.

- i. The consultant will draft E&S instruments per each ESS and the national guidelines and procedures and submit them to the World Bank and where applicable to the Ministry of Environment for their clearances according to the ESMF.
- j. The IA with the support of the consultant shall submit to the MoEv the approval application regarding the project activities, by which the MoEv will classify the risks according to Environmental Classification and Licensing regulation and its amendments No. 69 of 2020 and define the required ES instrument for high risk: comprehensive ESIA is required, for substantial (medium) risk a preliminary ESIA is required. Then the consultant shall furnish the requirements for the Environmental License (MOEV Clearance) and Environmental Permit before project operation. Considering the ES instruments drafts will be reviewed by the World Bank, the feedback from the Bank should be incorporated prior submitting the draft for MoEnv approval.
- k. Upon the completion of the E&S screening report, the Consultant will identify what ES measures and plans that the contractor will prepare as part of its MSIP prior to commencing the works including but not limited to: Archaeological Chance Find Procedure (ACFP), Occupational, Health and Safety (OHS) Plan, Traffic management Plan (TMP) -Conceptual layouts, Waste Management Plan (WMP).
- l. The ESIA/ESMP or IEE/ESMP or ESMP draft will be submitted for the World Bank review and clearance. The final draft will be cleared upon the satisfaction of the World Bank and the Ministry of Environment (if applicable).
- m. The consultant is required to conduct stakeholder consultations as needed during the preparation of the different E&S instruments. The feedback received will be reflected in the different instruments before finalization.
- n. If a Resettlement Action Plan (RAP) or a Livelihood Restoration Plan (LRP) is required, it will be prepared closely with the ESSD and the Water Company, and in accordance with the requirements of the project's Resettlement Framework (RF). Necessary consultations with project affected people (PAPs) will be conducted as required.

2.4 Procurement Support and Bidding Documents

Prepare a complete and compliant set of bidding documents for the construction phase, including:

- Application of World Bank Standard Procurement Documents (SPDs) and national procurement regulations;
- Development of technical specifications, detailed BOQs, cost estimates, and design drawings;
- Coordination with YWC and procurement entities for pre-bid meetings and clarification processes;
- Provision of support during tendering, including responding to bidder inquiries.

2.5 Construction Supervision and Contract Administration

Supervise the execution of construction works across the designated areas, ensuring:

- Strict compliance with approved designs, material specs, and workmanship standards;
- Implementation of Environmental and Social Management Plans (ESMPs);
- Daily site monitoring and verification of contractor performance;
- Management of schedule, progress reporting, and variation handling;
- Certification of interim and final payments;
- Preparation and validation of as-built drawings and commissioning documentation;
- Monitoring of Defects Liability Period (DLP) and issuance of final completion certificates.

3. Preparation of Tender Documents (Task 1 and 2)

a- Final Engineering Report

The Consultant shall prepare a comprehensive Final Engineering Report that includes a detailed description of the project, outlining its scope and objectives. The report must present the results of the reconnaissance study, and all other relevant studies conducted during the project. It should provide a thorough summary of the design criteria that were adopted for the various components of the project, ensuring that all aspects of the design are clearly documented. Additionally, the report must include a detailed description of the recommended design, with specific technical details and justifications for the proposed solutions.

In addition to the general project description and design details, the Consultant will assist in integrating Environmental and Social Framework (ESF) requirements into the bidding documents. This involves drafting the ESF sections of the Standard Procurement Documents, ensuring that the Environmental and Social Management Plan (ESMP) is effectively incorporated, and integrating ESF requirements into the identified contracts under the Management and Supervision of Infrastructure Projects (MSIP). The Consultant will also identify with the necessary expertise and qualifications for ESF personnel to ensure compliance with all relevant standards and regulations.

The integration of ESF requirements into the bidding documents and project plans is crucial to maintaining adherence to environmental and social standards throughout the project lifecycle. The Consultant's role will include providing any additional support needed to ensure that these requirements are thoroughly addressed and incorporated into all stages of procurement and implementation.

b- Design Calculation Notes

All design calculation notes shall be compiled in a specific volume.

c- Quantities Calculation Notes

All quantities calculation notes of the various trades of the Project shall be compiled in a specific volume.

d- Confidential Fair Price Estimate

Fair price estimate shall be prepared and presented in a separate confidential document. In the preparation of the fair price estimate, the Consultant shall conduct a study of current unit prices of various work items from the contracts currently under construction and current market prices of materials and labor. The breakdown of the unit prices shall be presented on MS Excel spreadsheets,

e- Tender Documents

The Consultant shall prepare tender and contract documents for each section of the project according to WB's SBD. The documents shall include the following:

Volume 1: Conditions of contract

This document shall include:

- a. Invitations to Bid
- b. Instructions to Bidders
- c. Qualification and Evaluation Criteria
- c. Forms of Bid
- d. Forms of Bid Bond and Performance Bond

- e. Form of Advance Payment Guarantee
- f. Schedule of Day Work Rates
- g. Schedule of Basic Rates
- h. Form of Contract
- i. General and Special Conditions of Contract
- j. Environmental, Social, Health and Safety (ESHS)
- k. Identified Plans under the MSIP (Traffic Management plans typical details and layout using international standards, OHS plans, Archaeological findings, and other plans identified by ESS's
- L. ESMP

The consultant is required to prepare any further documents asked by the employer if needed. The Conditions of Contract shall be based on the World Bank Standard Bidding Document. At such time, the Consultant shall coordinate with the Employer to finalize the conditions of the contract.

Volume 2: Specifications

The Consultant shall prepare all specifications required as requested by the Employer,

Volume 3: Bill of Quantities

The bill of quantities shall be prepared as requested by the Employer. Clearly notifying the costs of implementing the E&S plans and measures shall be embedded in each unit cost as set out in the SPD.

Volume 4: Contract Drawings

The drawings shall comprise the following:

- Plans and profiles of the selected areas at 1/2,000 horizontal and 1/200 vertical scale. The drawings shall include all design data for the construction of the water lines and house connections.
 - Contract Drawings listed above shall be presented in this order:
 - **COVER SHEET**
 - LIST OF DRAWINGS & ABBREVIATIONS
 - **GENERAL DRAWINGS:**
 - GENERAL LOCATION PLAN
 - LAYOUT PLAN
 - TOPOGRAPHICAL
 - SURVEY PLAN
 - **HOUSE CONNECTIONS:**
 - HOUSE CONNECTION'S LOCATION PLANS
 - HOUSE CONNECTIONS DETAILS
- Structural details for rehabilitation of the internal networks where it is needed.

4. Pre-construction services (Task 1 and 2)

1) **Bids Review and Award:** Upon receipt of bids for the implementation of the works, the Consultant shall support the client throughout the bid evaluation process. This includes assisting with technical discussions during pre-bid meetings with bidders to clarify any aspects of the scope of the work. If the scope of the design requires any clarifications or amendments, the Consultant will prepare these details and ensure they are promptly communicated to the client. During the bid opening, the Consultant will be present to assist with the process and will document the proceedings by recording the minutes of the bid opening. After the bid opening, the Consultant will prepare a comprehensive bid evaluation report. This report will follow the format specified in the bidding documents and provide detailed information necessary to assess the responsiveness of the bids, including an evaluation and comparison of the submitted proposals.

5. Supervision of Works (Task 1 and 2)

The Consultant shall develop a comprehensive Project Management Plan to guide the project through the construction stage, and the defects liability period.

The services to be provided by the Consultant shall include, but shall not be limited to:

- **Initial Site Handover:** Prepare the initial site-handing over certificate in accordance with the contract provisions, while YWC will be responsible for issuing it.
- **Construction Supervision:** Supervising the construction work to ensure full compliance with the contract requirements. This involves confirming that the contractor executes project activities with the highest level of care. The consultant must ensure that the contractor's work plan includes the necessary machinery, materials, skilled labor, and measures to complete the project within the specified timeframe and standards
- **Cost and Schedule Management:** supervise, monitor, and maintain cost estimates and planning schedules throughout the project.
- **Daily Supervision and Compliance:** Conduct daily supervision of work activities to ensure adherence to Environmental and Social (E&S) measures outlined in the Environmental and Social Management Plan (ESMP), referencing the Environmental and Social Management Framework (ESMF) and Labor Management Procedures (LMP). Perform monthly on-site audits covering environmental, social, health, and safety aspects.
- **Labor and Working Conditions:** Supervise the contractor's daily performance with respect to labor practices and working conditions.
- **Reporting:** Prepare a monthly report on environmental, social, health, and safety performance. Monitor and report on progress, including compliance with social and environmental requirements as specified in the ESMPs. Report and monitor incidents as per the Environmental and Social Commitment Plan (ESCP) requirements.
- **Complaints Management:** Administer a complaint log to register all received complaints, report them to the project owner, and provide details on how each complaint was addressed.
- **Contractor Coordination:** Coordinate contractor activities and manage claims and variations in consultation with the Employer.
- **Payment Certification:** Certify contractors' monthly and progress payment certificates.
- **Documentation:** Ensure that as-built drawings are prepared, and operation and maintenance manuals are reviewed and updated.
- **Contract Administration:** Administer the construction contract effectively and supervise the rectification of defects during the defects liability period.
- **Final Certification:** Certify the final completion certificate in accordance with contract provisions.

5.1 PLANNING AND CO-ORDINATION

a- Preparation of Detailed Program

The Consultant shall review the contractor's submitted detailed work plan, including his methodology for ensuring the quality of the works, and computerized program of all activities and resources for the execution of the work included in this contract. The Consultant's plan and program shall include all activities that interface or otherwise relate to the work being done by the different contractors or other involved parties, including required dates of receipt of data and construction drawings, submittal dates for the various documents, appropriate periods for review etc.

The program shall be prepared using project management software such as “Primavera” or similar compatible software approved by the Consultant and shall be constantly updated throughout the period of the contract.

b- Progress Monitoring-During Construction

To fulfill the above objectives, the Consultant shall for all contracts, inter alia: At all times take necessary measures and provide appropriate advice to the Client to enable the construction contract to be completed in a timely and cost-effective manner, in conformity with contract conditions and specifications.

The Consultant shall monitor the Contractor’s works to determine progress on a monthly basis and ensure that the construction program is maintained and costs minimized by means of, but not limited to, the following activities:

- Review and, if in agreement, consent to the Contractor’s proposed program of work to meet key dates established in the various tasks;
- Prepare and maintain progress programs for use in monitoring and reporting progress;
- Prepare consolidated monthly reports on physical and financial status, site meetings and contractual matters with particular reference to variation orders and contractors claims. The monthly reports shall deal specifically with monitoring and follow-up of agreed environmental and social mitigation measures and with the contractor’s adherence to safety, health standards and anti-corruption measures as applicable under contract. Each monthly report should include recommendations if any, for action by the Client and the Contractor.
- Prepare control charts of the main activities and a project master schedule, indicating both past performance and forecasts for completion including time involved in each case.
- Analyze the variations of construction progress from the Contractor’s program; and advise client in a timely manner.
- If and when progress falls behind program, develop in consultation with the Contractor, for approval by the Employer, appropriate modifications to programs and/or work methods to recover the original program.
- Ensure that the Contractor’s reporting requirements identified in the management procedures developed by the Consultant are fulfilled.

c- Co-ordination

The Consultant shall organize co-ordination and site meetings with the Contractor and suppliers on a regular basis and as necessary. The Consultant shall conduct these meetings on behalf of the Client, take minutes and report to all concerned parties.

d- Identify and Protect Antiquities

The Consultant shall examine the “Archaeological and Historical Sites Survey” report prepared during the design phase to ascertain the probable location of antiquities which may be disturbed by construction of the works. If any antiquities are revealed during investigations of construction works he shall instruct the Contractor to take necessary measures to protect the antiquities and shall notify the Employer without delay.

e- Environmental and Social Management Plan.

Prior to the construction stage, the Consultant shall review, provide feedback on, and approve site-specific ES documents developed by the contractor, including the CESMP. The CESMP should include all necessary plans such as method statements, HSE plan, WMP, TMP, GRM and any other relevant plans as per the requirements of the ESF pertinent documents for the project. **During construction, the Consultant shall:**

- Perform monitoring on ES specific indicators with reference to the project ESMF, and the

metrics specified in the works bidding document.

- Conduct weekly site visits to monitor and evaluate the contractor's adherence to ES mitigation measures as outlined in the ESF documents, including but not limited to the ESMP, OHS plan, TMP, WMP, and ACF with reference to the ESMF and LMP. Upon identifying non-compliance, assess the associated risks and recommend corrective measures. Record these measures along with their implementation timeframe in the report. Follow up to ensure the implementation of corrective measures and report compliance.
- Ensure that the grievance mechanism of the project is implemented properly. This through ensuring if there is any complaint is submitted from any party and to whom is submitted and how it will be handled and closed. This is to be reflected in the monthly reports submitted to the employer (the WC/ESSD) and submit upon request to the World Bank.
- Assess any new impacts that emerge during the construction stage and propose mitigation measures based on the mitigation hierarchy in accordance with the ESSs. Provide feasible measures for their elimination, and if elimination is not feasible, propose mitigation measures to minimize risks and impacts, which should be implemented by the contractor.

5.2 COST CONTROL

a- Monitoring Contract Costs

The Consultant shall be responsible for monitoring of contract costs relative to budget. The consultant shall utilize a computerized Budget and Cost Forecast (BCF) system and shall prepare, with the Contractor, an estimate of the cost of the various contracts, and incorporate updated quantities, variation orders, day works, potential costs of claims, and projected expenditure from provisional sums. The estimated cash flow up to completion of the contracts shall be prepared, updated based on the revised contract costs, and submitted each month in line with the management procedures.

b- Claims Management and Variation Orders

The Consultant shall anticipate potential claims and shall take steps to mitigate their effect. The Consultant shall assess the need for variations to the Contract and any claims submitted by the Contractor, review their merit and, where appropriate, prepare variation approval requests and submit them to the Employer for approval prior to preparing variation orders and issuing them to the Contractor.

c- Certify Contractors' Monthly Statements

The Consultant shall process in a timely manner and, as appropriate, certify for payment the Contractor's monthly interim statements to ensure that such statements reflect work completed.

The statements shall be based on measurements on site. The measurements on site shall be made jointly by the Contractor and the Consultant. The consultant shall prepare and submit to the Client the final cost for the measured completed works.

5.3 RECORD KEEPING

a- Preparation of Reports

The Consultant shall prepare all necessary reports for progress and record purposes. The preparation of these reports should include, but not be limited to, the following activities:

- Prepare and agree with the Employer appropriate formats and review and approval of these formats, if required, as work proceeds.

- Collect and check daily and shift reports from the Contractor for labor (disaggregated by type of job, gender, location and nationality of worker) and equipment in anticipation of preparing weekly and monthly summary reports.
- Keep records of all measurements and agreements and incorporate measurement data in monthly progress reports and cost monitoring systems;
- Undertake the correct and timely distribution of all reports;
- Minutes of site and co-ordination meetings shall be distributed within the three days following the meeting;
- Monthly progress reports will be standardized as per the management procedure developed. The Consultant shall follow these standardized formats;
- The Consultant shall prepare and/or supervise the preparation of cost reports, progress reports, construction schedules, estimates of monthly cash requirements, Contractor's estimates for payments, and such other reports and data as may be desirable or as may be directed by the Employer. Monthly construction progress reporting will use the "Earned Value" technique requiring the provision of an activity completion report for each contract with an "S" curve, and a tabular cash flow report.

b- As-Built Drawings and Completion Report

The Consultant shall be responsible for ensuring that the Contractor maintains at the site a complete set of "as-built" drawings for the Contract as the work proceeds. To this end the Contractor shall:

- On a set of working drawings maintain a continuous reproducible "as-built" record of the actual alignments, levels, dimensions etc. to which the works have been constructed;
- On completion of the construction of each structure/section, transfer all recorded changes to a CAD file (original CAD files to be supplied by designer), or prepare new CAD drawings as required;
- Prepare completion reports for all major structures or elements of the contract works, incorporating as-built records and drawings, within 60 days of issue of any taking over certificate. Completion reports shall also include details of construction methodology, test results, O&M recommendations etc.
- The Consultant shall audit on a monthly basis, and maintain audit records for review by the Client, the Contractor's performance in producing as-built details and completion reports.

c- Operating and Maintenance Manuals

The Consultant shall review detailed Operation and Maintenance Manuals prepared by the Contractor, finalize as appropriate and submit to the Employer.

The O&M manual shall include at least:

- Reference to all relevant design and other reports, specifications etc. in order to provide a complete bibliography on the structures and plant such that the operation and maintenance staff can understand the basis of their functions;
- Details of any problems encountered during construction which may have a bearing on the future safe operation and decommissioning of the facilities;
- Full operating instructions for all systems; drawings, diagrams, charts, notices etc. to facilitate understanding of safe operation and maintenance;
- A maintenance schedule and consumables required to give reliable operation of the facilities.

5.4 SUPERVISION OF CONTRACT WORKS

a- Project Manager Function

The Conditions of Contract for the construction contracts are based on WB Conditions of Contract and special conditions. The Consultant will be required to obtain specific approval of the Employer before taking certain actions.

b- Construction Works and Materials Inspections and Approvals

The Consultant shall supervise and inspect the construction works including, but not limited to, the following activities:

- Supervising and inspecting the works of the contractors and suppliers for completion of the contracts in accordance with plans and specifications;
- Monitoring environmental, social, and health and safety requirements, whether specified or not, and ensuring that requirements are fulfilled;
- Taking photographs during construction and installation and keeping a daily diary of construction activities;
- Supervising and approve all tests to be carried out by the Contractor and suppliers;
- Supervising and approve final evaluation of all measurements made by the Contractor including the provision of all necessary measurement instruments;
- Supervising the assembly, installation, preliminary tests, initial operation and preparation for commissioning of all machinery and equipment on site;
- Supervising through qualified inspectors jointly with the Employer the execution of the acceptance tests prior to convening the taking over committee and issuing the Taking Over Certificate;
- Preparing and submitting to the Employer inspection and test reports and certificates of acceptance;
- Supervising the commissioning of all structures and plant. The Consultant shall assist in the involvement of concerned operating staff, co-ordinate testing and commissioning programs and prepare taking over certificates;
- Administer day works as required;
- Follow up on the manufacturing of all equipment to ensure compliance with the specifications, including monitoring of certificates of origin, and supervise their delivery to ensure compliance with contractual time schedules;
- Follow up on packing, transportation and delivery, as well as temporary storage, and supervise the storage at site of all equipment, materials and supplies, together with ensuring that Letters of Credit are opened by the Contractor where appropriate;
- Promote a good working environment and monitor labor relations, living and community relations to be able to identify potential problems and solve them promptly as set forth in the various contracts.
- Enforce the maintenance and protection of traffic procedures and schemes as detailed in the drawings
- Enforce the Contract's Safety, Health and Environmental Regulations.
- Ensure that the Contractor complies with the contract in respect of insurance.

5.5 DEFECTS LIABILITY PERIOD

The objective of the services during the defects liability period is to oversee the maintenance activities during one year, by drawing the attention of the contractor on any defect and by inspection the remedial works. For purposes of carrying out these services the Consultant shall assign his Resident Engineer to make two visits (one Man Month input for both visits) to carry out the following;

- Inspections of Outstanding works and Remedying Defects
- Prepare and recommend to Client the issuance of Defects Liability Certificate
- Review and certify Final Payment Certificate
- Prepare Final Completion Report

6. Reporting Requirements for Deliverables

The Consultant shall carry out all required inspections and studies for the successful implementation of the project and shall therefore submit a complete package of Plans, Specifications and Estimates (PS&E). The reporting language should be English.

The Consultant reporting requirements shall include but not limited to the following:

Engineering Studies and the preparation of Tender Documents:

- **Data collection, topographic survey and Geotechnical Radar:**
Preliminary Assessment Report
- **Engineering Design: Detailed designs of additional networks and house connections:**
The Consultant shall carry out all required studies and designs for the successful implementation of the assignment and shall therefore submit a complete package of plans, specifications and estimates (PS&E).
- **Environmental and Social Assessment:**
 - Detailed E&S Screening Report/Form
 - Environmental & Social Safeguard instruments including the following
 - ESIA/ESMP, or preliminary ESIA/ESMP, or site specific ESMP, or site specific ESMP checklist
 - Sub-project Stakeholder Consultation and Coordination Plan
 - Sub-project-level Grievance Procedure
 - Additional provisional E&S instruments, as identified in the detailed E&S Screening Report/Form
- **Preparation of Tender Documents:**
 - Final Engineering Report (4 copies)
 - Design Calculation Notes
 - Quantities Calculation Notes
 - Confidential Fair Price Estimate
 - Final Tender Documents (10 copies): using the World Bank Standard Procurement Regulations.
 - Volume 1: Conditions of Contract
 - Volume 2: Specifications
 - Volume 3: Bill of Quantities
 - Volume 4: Contract Drawings
 - All E&S instruments reports as defined under Task 1 (approved by the Client and cleared by the World Bank).

The Client shall first review and approve draft final documents submitted. Once these documents are approved, the Consultant shall submit the required number of copies of together with two soft copies on computer CD-ROM. The drawings shall be in AutoCAD version 2017 format or later and all text reports in MS Word and excel. Tender documents shall be submitted in editable format and in Adobe Acrobat PDF format.

Pre-construction services

After completion of the bid opening, the consultant shall prepare his bid evaluation report following the outline stated in the bidding document with sufficient details to determine the responsiveness of the bids and to evaluate and compare the financial bids of the responsive bids and provide price analysis of the lowest responsive bid. The consultant bid evaluation report shall be submitted in non-editable format and two (2) hard copies to the client.

Supervision of works.

Reporting for Construction Period Services

INCEPTION REPORT

The Consultant shall submit the Inception Report within six weeks of commencement of the works contract. This report shall include results of the review of the contractor's work program, contractors E&S submittals and any modifications thereto, status of the contractor's mobilization, advance payment, Bank guarantees and any matter requiring the Employer's attention and action. This report shall be also being submitted in 5 copies.

MONTHLY REPORTS

The Consultant shall prepare monthly progress reports for the duration of the contract. These are to be submitted in 5 copies and should reach the Client not later than 10 days after the end of the month being reported on. Another (1) copy of the monthly progress reports will be sent directly to the financier (WB).

The format of the monthly progress reports shall be agreed with the Client. The report will include but not be limited to the following:

- useful information regarding the implementation of the contract allowing a technical and financial follow up of the project;
- recording of any agreed changes on the original envisaged technical solutions;
- major changes of quantities compared to contractual Bill of Quantities;
- suggestions for resolution of any technical and other problems (a separate section will be given to cover issues, problems and solutions) which occur and those affecting the progress of the work such as variation orders and claims of the contractors;
- financial status of both the construction and the supervision of the civil works;
- progress charts including percentages of completion of individual main work items and overall project/contract;
- weather information and charts; and,
- Construction and supervision data.

Monitoring of E&S requirements which include, but are not limited to, assessment of the degree of compliance of the contractor to all Environmental and Social instruments but not limited to the Contractors' Environmental and Social Monitoring Plan (CESMP), Occupational Health and Safety (OHS), Traffic Management Plans (TMP), requirements of the archeological & Historical chance find procedure, The reporting shall cover the implementation status of mitigation measures, results of environmental and social monitoring and evaluation, and compliance with the environmental and social requirements, including Health and Safety measures, immediate reporting on any related incident/accidents. Corrective actions implemented, records of any archeological & Historical artifacts found during construction, etc. A section on the Consultant progressing of the activities, including schedule at the site to conduct monitoring and evaluating of the ES work, and the planned activities

QUARTERLY PROGRESS REPORTS

The Consultant shall prepare quarterly monthly progress reports for the duration of the contract following the same format of the monthly progress report and summarizing the past 3 monthly progress reports. These are to be submitted in 5 hard copies and 1 electronic editable version by email and should reach the Client not later than 10 days after the end of the month being reported on.

FINAL REPORT

The Final Report in five (5) copies to the Client and one (1) copy to the financier(s) shall be submitted no later than one month after the substantial completion of construction works. The report should enable the Client to know the type, quality and quantity of materials used and all the information which together with the as-built drawings (original and 6 copies) and specifications will help in the maintenance of the roads.

The report shall also include a summary of the principal difficulties encountered during construction and the means employed to overcome them, changes (if any) made in the original designs, modifications to specifications and conditions of contract, all variation orders, assessment of claims by the contractor, utilization of provisional and price variation and physical contingency sums, cumulative monthly payments to the Contractor, by date and number of payment certificate and break down into foreign and local currencies and including a similar payment schedule for supervision services. The details of the overall project costs (construction and supervision) with justification for any significant differences with the original shall be given in the final report.

Reporting for Defect Liability Period Services

Final Completion Report: Upon issuance of the defects liability and the final payment certificates, the Consultant shall prepare within 30 days the Project Final Completion Report in ten (5) copies to the Client and two (2) copies to the financiers (WB). The report shall include a separate section on proposed future maintenance activities and related arrangements for the road sections supervised.

E. TEAM COMPOSITION & QUALIFICATION REQUIREMENTS FOR KEY EXPERTS

The Consultant shall deploy qualified personnel sufficiently to fulfill all contract obligations. All key experts must be fluent in both written and spoken English and Arabic and proficient with relevant technical software.

Design and Tender Document Perpetrations

K-1: Project Manager – Water Supply and Network Rehabilitation

- **Qualifications:** B.Sc. in Civil Engineering or Water Resources Engineering (Master's preferred).
- **Experience:** Minimum 15 years of progressively responsible experience managing multidisciplinary water infrastructure projects, including at least 5 years in water network restructuring, pump upgrades, and reservoir expansions.
- **Responsibilities:** Overall project management, team coordination, client and stakeholder communication, reporting, and quality assurance.
- **Languages:** Fluent in English and Arabic.

K-2: Water Network Design Engineer

- **Qualifications:** B.Sc. in Civil or Water Engineering.
- **Experience:** Minimum 10 years designing urban and rural water distribution systems, including experience with DMA zoning, pressure management, pipe sizing, and rehabilitation.
- **Responsibilities:** Lead detailed design of water network restructuring, pipe replacement plans, pressure zoning, and control devices layout.
- **Languages:** Fluent in English and Arabic.

K-3: Hydraulic Modeling Specialist

- **Qualifications:** B.Sc. in Civil, Hydraulic, or Environmental Engineering.
- **Experience:** At least 12 years' experience in hydraulic modeling for water distribution systems using EPANET, WaterGEMS, or equivalent software, including pressure control and NRW reduction strategies.
- **Responsibilities:** Develop and calibrate hydraulic models, analyze system behavior, and support design optimization to improve network efficiency.
- **Languages:** Arabic required; English is an advantage.

K-4: Environmental Specialist

- **Qualifications:** B.Sc. in Environmental Engineering or Environmental Science.
- **Experience:** Minimum 7 years of experience in environmental and social impact assessments, ESMP preparation, and compliance monitoring for infrastructure projects, preferably with World Bank ESF experience.
- **Responsibilities:** Lead environmental safeguard preparation and monitoring, coordinate with stakeholders, and ensure compliance with environmental and social standards.
- **Languages:** Fluent in English and Arabic.

K-5: Social Specialist

- **Qualifications:** Master's degree in social sciences, Anthropology, or Sociology.
- **Experience:** Minimum 7 years conducting social assessments, community engagement, and managing social safeguards in infrastructure projects. Knowledge of and experience with the social and cultural context under the project area. The ability to identify and address risks and impacts on disadvantaged or vulnerable individuals or groups. Familiarity with environmental and social standards, such as those of the World Bank or similar institutions. Strong analytical skills to understand complex social issues and to develop appropriate mitigation measures..
- **Responsibilities:** Prepare social safeguard documents, conduct stakeholder consultations, and implement social risk mitigation activities.
- **Languages:** Fluent in English and Arabic.

K-6: Occupational Health and Safety (OHS) Specialist

- **Qualifications:** B.Sc. in Occupational Health, Safety Engineering, or related field; international certifications (NEBOSH, OSHA) mandatory.
- **Experience:** Minimum 10 years managing OHS programs in infrastructure projects with compliance to international safety standards.
- **Responsibilities:** Develop and implement health and safety protocols, monitor incident management, and ensure contractor compliance with OHS standards.
- **Languages:** Fluent in English and Arabic.

K-7: Procurement Specialist

- **Qualifications:** B.Sc. in Civil Engineering, Contract Law, or related discipline.
- **Experience:** Minimum 10 years managing procurement and contracts for water infrastructure projects, with experience in FIDIC and World Bank procurement rules.
- **Responsibilities:** Prepare tender and contract documents, manage procurement processes, provide contract advice, and support claims and dispute resolution.
- **Languages:** Fluent in English and Arabic.

K-8: Electromechanical Engineer (Non-Key Expert)

- **Qualifications:** B.Sc. in Electromechanical or Mechanical Engineering.
- **Experience:** Minimum 8 years designing and supervising electromechanical works for pumping stations and VFD system integration.
- **Responsibilities:** Provide design and technical oversight of pumping station upgrades and VFD installations.
- **Languages:** Fluent in English and Arabic.

Notes:

- **CVs of key experts K1, K2, K3, K4, K5, K6, and K7 will be subject to evaluation.**
- **Additional support staff or specialists may be proposed by the Consultant as needed to meet project requirements.**

Pre-construction services (Assistant during Tendering)

K-1: Team Leader (Project Manager)

- **Qualifications:** B.Sc. in Civil Engineering (master's preferred).
- **Experience:** Minimum 15 years of progressively responsible experience in infrastructure projects, with at least 5 years in a senior management role on comparable projects.
- **Responsibilities:** Overall leadership, client coordination, quality assurance, and management of all project components.
- **Languages:** Fluent in English and Arabic.

K-2: Senior Engineer (Infrastructure Design)

- **Qualifications:** B.Sc. in Civil Engineering or a related discipline.
- **Experience:** Minimum 10 years of increasingly responsible experience in infrastructure design, with at least 5 years in a similar position on comparable water and wastewater projects.
- **Responsibilities:** Responsible for detailed design, planning, and oversight of water infrastructure and pipeline systems.
- **Languages:** Fluent in English and Arabic.

K-3: Procurement Specialist

- **Qualifications:** B.Sc. in Civil Engineering, Contract Law, or related discipline.
- **Experience:** Minimum 10 years managing procurement and contracts for water infrastructure projects, with experience in FIDIC and World Bank procurement rules.
- **Responsibilities:** Prepare tender and contract documents, manage procurement processes, provide contract advice, and support claims and dispute resolution.
- **Languages:** Fluent in English and Arabic.

Construction Supervision Staff

The Consultant shall make his own assessment for the staff needed and their time participation for carrying out the work but this must comprise at least the minimum specified here. The Consultant shall also make his own assessment of the staff necessary to perform the supervision of the contractor during construction and the defects liability period. However, upon construction start-up the consultant shall seek client's approval on the Field staff in case of changes since proposal submission and their number.

No staff shall be mobilized until the Consultant has received formal written approval from the employer for each member of staff. Such approval shall be provisional. During the first three months of their duties, performance of each member of the Consultant's staff will be monitored. If the performance of a member of the Consultants' staff is deemed inadequate by the client, the Consultants shall provide a replacement.

An indicative list of Key (K) and Non-Key (NK) staff is presented below:

Position K-1 Resident Engineer (Team Leader)

B.Sc. in Civil Engineering with at least 15 years of experience in infrastructure supervision, including 5 years as a Resident Engineer in water projects. Leads the field team, manages contractor relations, monitors progress, ensures quality control, and coordinates with the Client.

Position K-2: Civil Engineer – Water Networks

B.Sc. in Civil Engineering with at least 10 years of experience in water network construction supervision. Monitors pipe installation, house connections, and civil works including manholes, chambers, and pressure testing.

Position K-3: Electromechanical Engineer

B.Sc. in Mechanical or Electrical Engineering with minimum 8 years of experience in electromechanical works related to water systems, including pumping stations, control panels, and SCADA systems. Oversees installation, testing, and commissioning.

Position K-4: Environmental Specialist

B.Sc. in Environmental or Social Sciences with minimum experience of at least 7 years in implementing and monitoring ESMP, SEP, and LMP. Ensures on-site compliance with environmental and social standards, supports stakeholder engagement, and manages grievance redress.

Position K-5: Social Specialist

Advanced degree in social sciences, anthropology, sociology, or a related field, with minimum experience of at least 7 years. Knowledge of and experience with the social and cultural context under the project area. The ability to identify and address risks and impacts on disadvantaged or vulnerable individuals or groups. Familiarity with environmental and social standards, such as those of the World Bank or similar institutions. Strong analytical skills to understand complex social issues and to develop appropriate mitigation measures. Excellent communication and stakeholder engagement skills to work effectively with a wide range of stakeholders, including local communities, government officials, and non-governmental organizations.

Position K-6 Health and Safety Engineer (OHS)

B.Sc. in Engineering or Occupational Safety with international certification (e.g., NEBOSH/OSHA) and minimum 8 years of relevant field experience. Ensures implementation of site-specific safety plans, performs audits, incident investigations, and risk assessments.

Position K-7: Quantity Surveyor / Contract Administrator

B.Sc. in Civil Engineering or Quantity Surveying with at least 10 years of experience. Responsible for measuring works, validating contractor payments, tracking variations, and maintaining contract records.

Position NK-1: Quality Control Engineer

B.Sc. in Civil or Materials Engineering with 8 years of experience in construction materials testing and quality assurance. Oversees sampling, test results, and compliance with technical specifications.

Position NK-2: Land Surveyor

Diploma or B.Sc. in Surveying or Civil Engineering with at least 5 years of construction surveying experience. Responsible for setting out works, verifying levels and alignments, and preparing as-built data.

Position NK-3: Site Inspectors (Civil / MEP)

Diploma degree in civil engineering or land surveying with minimum of (7) years experience of similar projects. The above staffing is an indication of the requirements, but the consulting firm has the ultimate responsibility to staff the supervision teams adequately to take full responsibility for quality of the works and timely implementation.

Document Controller / Site Administrator

Diploma in Administration or related field with at least 5 years of experience in document management. Maintains all correspondence, records, reports, and site logs.

Liaison Officer

- Qualifications: B.Sc. in Public Administration, Social Sciences, or related field.
- Experience: Minimum 5 years in stakeholder coordination and liaison roles on infrastructure projects, preferably donor funded.
- Responsibilities: Acts as a point of contact with local authorities and communities, facilitate permits and access, supports grievance redress, and ensures stakeholder communication.
- Languages: Fluent in Arabic and English.

The CVs of all the positions mentioned above shall be submitted for conformity with qualifications. Evaluations will be conducted for the CVs of positions K1, K2, K3, K4, K5 and K6 only.

For Construction Supervision (Office Backup Staff)

The Consultant shall employ such staff as may be necessary to fulfill his obligations under the agreement. An assessment of the minimum staff required is set out below. However, the Consultant shall make his own assessment of the staff necessary to fulfill his obligations. All such staff are to be fluent in the written and spoken use of the English Language and shall also be fully computer literate.

The Consultant's key personnel proposed shall include but not necessarily limited to:

Project Director / Technical Advisor

B.Sc. or M.Sc. in Civil Engineering with a minimum of 20 years of experience in managing large-scale infrastructure projects. Provides strategic guidance, oversees quality assurance, and supports resolving complex technical or contractual issues.

Hydraulic Modeling / Drainage Engineer

A minimum of B.Sc. degree in Civil Engineering or Hydraulic Engineering, or related field, with at least 12 years' drainage design experience in water and wastewater networks, road infrastructure design projects including hydrological analysis and experience in mitigation measures. Languages: Arabic, English is a plus.

Contracts and Claims Expert

B.Sc. in Civil Engineering, Construction Law, or related fields with at least 12 years of experience in FIDIC-based contracts and claims management. Supports review of contractor claims, variations, EOTs, and dispute resolution.

Senior Quantity Surveyor (Head Office)

B.Sc. in Civil Engineering or Quantity Surveying with 10+ years of experience. Supports cost verification, payment certificate validation, and contract compliance. Coordinates closely with field QS.

Traffic Safety Engineer

B.Sc. degree in Civil Engineering with 10 years of experience in similar works. The appointed Traffic Safety Specialist shall Review the traffic management plans and traffic diversions during construction and ensuring all temporary traffic diversions are maintained in a safe clean condition for the road users, monitor all temporary road networks on the construction site to ensure safe use, Including intersections, speed limits, visibility, signage, etc.

Drafting & GIS Specialist

B.Sc. in GIS, Civil Engineering, or Architecture with minimum 5 years of experience in preparing as-built drawings, GIS layers, and spatial data integration for water networks.

Administrative & Financial Controller

B.Sc. in Accounting, Finance, or Business Administration. Ensures proper invoice, financial reporting, and administrative compliance with the consultancy contract.

The CVs of all the positions mentioned above shall be submitted for conformity with qualifications. No Evaluations will be conducted.

WORKING HOURS

During site construction and installation work the Consultant shall ensure that his staff are on site at all times when the Contractor is working.

CONSULTANT FACILITIES

During the design phase Office accommodation of a reasonable standard and of approximately 10 square meters for each expert working on the contract and reasonably accessible by phone, fax and e-mail over the duration of the assignment is to be **provided by the Consultant**.

In principle, the costs of the facilities should be included in the **Consultant's experts fee rates**. The Consultant must ensure that experts are adequately supported and equipped. In particular, the Consultant must ensure that there is sufficient administrative, secretarial and interpreting provision to enable experts to concentrate on their primary responsibilities. It must also transfer funds as necessary to support their work under the contract and to ensure that its employees are paid regularly and in a timely fashion.

During the supervision stage, all logistics, including offices, stationery, and furniture, will be provided by the contractor upon the Client's request and in accordance with the special contract specifications