

**Water security development-Gaza Central Desalination Program -Associated Works-Phase 1**

**Terms of Reference for Associated Works – Phase 1  
Reconfiguration of the Water Distribution System in  
Southern and Middle Governorates  
Project Implementation Consultant**

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**List of Acronyms**

AW	Associated Works
AWSNI	Additional Water Supply Network Improvement
CMWU	Coastal Municipalities Water Utility
COGAT	Coordinator of Government Activities in the Territories
EIB	European Investment Bank
EU	European Union
GCDP	Gaza Central Desalinization Plant
IBRD	International Bank for Reconstruction and Development
KFAED	Kuwait Funds for Arab Economic Development
KFW	Kreditanstalt für Wiederaufbau (Reconstruction Credit Institute)
MDTF	Multi Donor Trust Fund
NRW	Non-revenue Water
PIC	Project implementation Consultant
PCU	Project Coordination Unit
PMU	Projects Management Unit
PWA	Palestinian Water Authority
STLV	Short Term Low Volume Desalination
TFGWB	Trust Fund for Gaza and West Bank
USAID	United States Agency for International Development
WDS	Water Distribution Systems
WHO	World Health Organization

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## **1 INTRODUCTION**

### **1.1 Contract Specifics**

#### **1.1.1 Project Name**

Water security development-Gaza Central Desalination Program -Associated Works-Phase 1. Project (P168739)

#### **1.1.2 Beneficiary, Project Owner, Executing Agency, Contracting Authority**

The beneficiary country is Palestine.

The Project Owner and Executing Agency is the Palestinian Water Authority (PWA) (hereinafter also called “Client”)

The funding agency is the World Bank through the International Development Association (IDA).

#### **1.1.3 Source of Funds**

The proposed Grant is from Trust Fund for Gaza and West Bank (TFGWB) with Co-financing from the Partnership for Infrastructure Multi Donor Trust Funds (MDTF) TF-B2334.

### **1.2 Background of the Assignment**

#### **1.2.1 General**

The supply of potable water to the population of approximately 2 million in Gaza, at the present time, relies almost totally on the underlying groundwater. That sustained groundwater production affected negatively the water level which declined in quality as a result of imbalance between the total groundwater aquifer renewable, of about 50-55 MCM/y, and the total groundwater abstraction of about 200 MCM/y (for both water supply and agriculture).

The worsening water quality is a serious threat to the population health as well as for the coastal aquifer. The aquifer has been exploited three times over its natural recharge capacity for several years, leading to sea water intrusion. More than 97% of the water wells in Gaza does not comply with WHO drinking water standards due to high chloride concentration and/or due to high nitrate from human and agricultural pollution or. The 2.0 million people living in the Gaza Strip are therefore exposed to an unacceptably high health risk. The aquifer is showing clear signs of imminent failure or collapse.

As part of the overall Gaza central desalination program (GCDP) developed in accordance to PWA strategy, a significant investment plan has been envisaged to execute large scale projects aimed at addressing the water crisis in Gaza. As part of the strategic program, one of the main components is represented by the Associated Works to Gaza Desalination Plant.

The overall objective of the associated works to the GCDP in the Gaza Strip is to improve the water supply situation through efficient use of desalinated water, of water imported from Israel and precious groundwater while ensuring technical as well as financial sustainability of its operation.

Funding for the GCDP-AWP-phase1 (US\$117 Million), which forms part of the overall GCDP, is through a combination of parallel co-financing (from PA donated by the Kuwaiti Fund for Arab Economic Development (KFAED) (US\$60 million), and joint co-financing from the partnership for Infrastructure Development Multi Donor Trust Fund (PID-MDTF), and WBTF (US\$57 Million). The duration of GCDP-AWP-Phase1 project is 5 years, closing in December 31, 2024, and it includes three main components as follows:

- a) Improved Supply of Bulk Water to the southern and middle governorates of Gaza (91.0 million US\$);
- b) Capacity Building and Performance Improvement of Selected Institutions (9.5 million US\$); and
- c) Project Management and Implementation Support (US\$16.5 Million).

As aforementioned, KFAED committed US\$60 million as parallel grant financing for two works packages under Component (a) of the GCDP-AWP-Phase1 project and their related supervision costs. The Construction of One of the two packages titled “The Additional Water Supply Network Improvements AWSNI Works (AWSNI) - Middle & Khan Younis governorates” was completed in Nov, 2021.

The other package under KFAED funding titled “CP1 - Southern Main Carrier System (Rafah, Khan Younis Governorates)” has been conceptually split in two sub-packages, as listed as follows:

- i. Package CP1a - Southern main carrier system-Pipelines and related ancillary works
- ii. Package CP1b - Southern main carrier system- Pumping stations and reservoirs sites

Both Packages for (CP1a&CP1b) were awarded to the winning bidders and the contracts signing is expected by Dec,2022.

The contract packages CP3 - **W01- Reconfiguration of the water distribution system in the Southern Gaza Governorates**

and CP4a - **W02-Reconfiguration of water distribution system in Middle Gaza Governorate** will be funded by the WB under the GCDP-AWP-Phase1 and are the object of the present Terms of References.

### **1.2.2 Project Description**

The present section describes the features, concept and objectives of the proposed project related to the Associated Works – Phase 1.

#### **Contract Package CP3: W01- Reconfiguration of the water distribution system in the Southern Gaza Governorates**

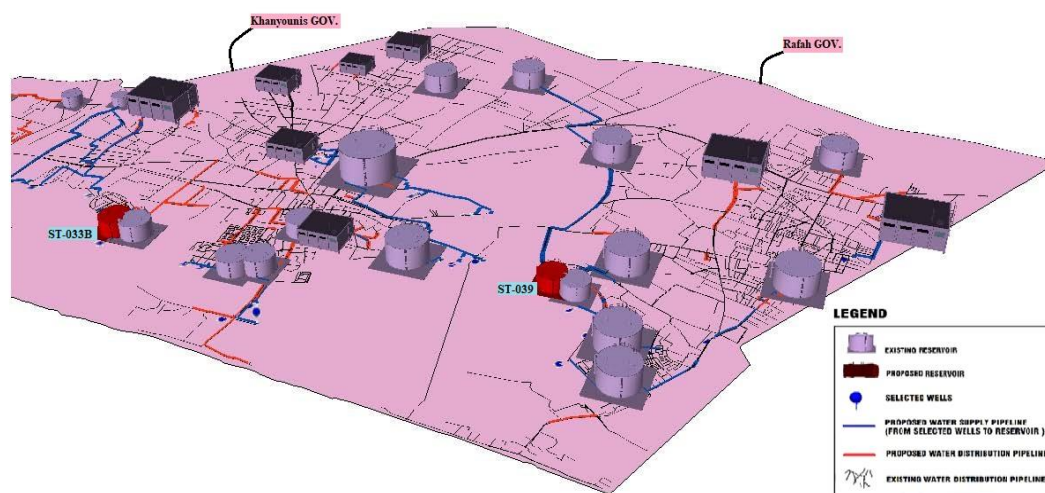
The implementation of this Contract Package will enable PWA to increase water storage capacity in the of Rafah and Khan Younis Governorates and will enhance the efficiency of the water

distribution system to absorb the additional quantities of drinking water by connecting the new bulk water supply system to the existing internal distribution networks. This package will create clear separation of the bulk water system from the municipal distribution systems; all DMAs will be entirely fed from distribution reservoirs which will improve the management of the network operations. The implementation contract of CP3 has been signed with winning bidder (Joint Venture of Masoud & Ali & Partners Contracting Co. (MACC) and Saqqa & Khoudary Company Ltd. (SAK) for total amount of MUS\$22,421,130.23. the commencement date is expected by end of Dec,2022 and the implementation period for 24 months.

The main project components are summarized here as follows:

- the rehabilitation of 16 existing concrete reservoirs, including among the other components the installation of mixers, to receive and blend water from multiple sources (Mekorot, STLV's, Water wells) and supply related water distribution systems;
- the reconfiguration of the existing downstream water distribution systems by installing around 67 km of different diameter ductile iron and HDPE pipes;
- the rehabilitation of the existing production water wells (52 wells) including the electromechanical equipment;
- the reconfiguration of upstream connections between selected production water wells and existing /new concrete reservoirs by installing around 30 km of different diameter HDPE pipes to enable the blending at reservoirs sites and to make a clear separation between bulk water and downstream system.
- Reinstatement Works- southern Governorate.
- Telemetry and SCADA Communication system

### Contract Package 3



### **Contract Package CP4a: W02-Reconfiguration of water distribution system in Middle Gaza Governorate**

The implementation of this Contract Package will enable the existing water supply distribution system in the Municipalities of Dier Al-Balah, Al Maghazi, Al Nuseirat, Al Bureij and Al Zawayda to receive the water supplied by the different sources (STLVs, Mekorot, and water production wells) and will enhance the efficiency of the related water distribution system to absorb the additional quantities of drinking water by connecting the new bulk water supply system to the existing internal distribution networks.

The main project components are summarized here as follows:

- Reconfiguration of downstream water systems: Supply and installation of 16 km of HDPE pipes.
- Upstream supply lines from wells to blending reservoirs: Supply and installation 16 km of HDPE pipes.
- Rehabilitation of seven existing reservoirs, including the installation of mixers, to receive and blend water from multiple sources (Mekorot, STLVs, water wells)
- Rehabilitating 25 existing water production wells, including electro-mechanical equipment, and close the unused wells.
- Reinstatement Works- Middle Governorate;
- Telemetry and SCADA Communication system.
- On 10th February 2022, PWA awarded the implementation contract package CP4a “W02-Reconfiguration of Water Distribution Systems in Gaza-Middle Area” to the winning bidder (SAK) for a total amount of MUS\$5,285,066.00 and the contract became effective 18th May 2022 for an implementation period of 12months. the following activities were completed /ongoing:
  - Mobilization
  - Site survey and water wells pump verifications
  - preparation of the shop drawings and material submittals
  - Supply and installation of 80% of HDPE pipelines with different sizes
  - Carrying out the Hydraulic tests and Interlocked tiles reinstatement works
  - The contractor will start the electromechanical works for upgrading the wells and reservoir as soon as delivery of the required equipment from abroad.

Elapsed Time as of Nov 30, 2022 [%]: 52 %

Actual Percentage of Completed works as of Nov 30, 2022 [%]: 30 %

### 1.2.3 The objectives of the assignment

**The objectives of the assignment are to supervise the construction of CP3 described here above including the D.L.P for both CP3&CP4a (18&12 months respectively).**

## 2 SCOPE OF WORK

- The PIC shall be responsible for performing overall construction supervision for Works under CP3.
- The PIC shall provide quality control for construction supervision and project administration, following conclusion of contracts and monitor the execution of these contracts.
- This stage ends with the submission of the project completion report (maximum 1 month after completion of the project)

The duties of the consultant will be:

- Take over the role of the Engineer and carry out all tasks of the Engineer in accordance with the Contract Package CP3.
- Take over the role of the project Manager (PM) during the defect liability period and carry out all tasks of the PM in accordance with the Contract Package CP4a.
- Review, comment, and approve detailed design and costs of the Project prepared and submitted by the contractor,
- Collect baseline data and information for benefit monitoring during implementation and after project completion as required in the project documents;
- Procurement and Construction Supervision Activities
- Administer of contract (including management of performance securities, return of bid bonds, advance payments);
- Monitor materials and equipment delivery program and schedules;
- Inspect goods, materials, equipment, and machinery upon delivery to ensure compliance with specifications and issue immediate notices of any deficiencies found or non-compliance and certify completeness;
- At all stages, ensure compliance of WB Procurement Guidelines for procurement of works, materials, and services by the contractor. Also ensure that the national regulations, specifications, relevant international engineering standards are fully followed as applicable;
- Review, recommend, and approve all equipment, material, goods needed for implementation.
- Review and approve unit rates were required to implement the works at the required quality control standards;
- Review the contractor's quality control program;
- Supervise contractor's manpower, plant and equipment availability schedule;
- Monitor timely delivery of materials at the site, as scheduled;



- Ensure supply of spare parts, equipment warranties and supply of user's manuals by the suppliers/manufacturers;
- Advise necessary changes in the plans or specifications;
- review and justify extra work and time extension claims of the contractor and submit with recommendations and documentation;
- scrutinize withdrawal applications of the contractor and recommend to provisional payments;
- Coordination and Liaison with the client, World Bank, the contractors and other relevant bodies;
- a) Organisation of regular site-meetings with the Contractor(s), the Employer's representatives and other key-stakeholders concerned;
- b) Preparation and circulation of minutes of meetings;
  - Examine and approve all planning and programming details proposed by the Contractors;
  - Provide to PWA in dealing with the settlement of all disputes or differences that may arise between PWA and the Contractors;
  - Give all necessary instructions to the Contractors, providing that the Consultant shall not, without the prior approval of PWA, give any instructions which are likely to increase contract amounts, prices or change the conditions of contract;
  - If it is necessary for the Consultant to issue urgent instructions without such approval in the case where, in his opinion, lives, property or the works itself are in danger, or where further delay would result in additional cost. The Consultant shall inform PWA of his action as soon as possible;
  - Perform any services which may be required to be carried out under the contract for execution of the works, including, where appropriate, witnessing of tests and commissioning of the works;
  - carry out the inspection, including witnessing of tests, during manufacturing and prior to the shipment of various materials to be supplied in accordance with the contracts and, if so, required by PWA, obtain tenders for such inspection from qualified agents and make such recommendations thereon as may be appropriate;
  - Verify the Contractor's invoices and issue interim and final certificates for payment and submit these to the PWA;
  - Study and issuing variation orders.
  - Supervise commissioning of the executed works;
  - Carry out the necessary inspections, shortly before the end of the construction period, determine the remaining works to be completed and, when these are satisfactorily completed, issue the Certificate of Substantial Completion and/or Certificate of Final Completion to PWA;
  - Establish records and submit certified as-built drawings (based on Contractor's drawings) as hard copies and data files.
  - Supervise of the Contractor's compliance with all contractual ESHS standards in accordance with the Project's requirements. In addition, the Consultant shall ensure proper implementation of social safeguards procedures in full compliance with the World Bank OP 4.12. See the "ESHS related Tasks" below.

- **ESHS related tasks**

1. Inform the Contractor that relevant sub-works shall not commence prior to the Consultant's approval and satisfaction of appropriate measures in place to address ESHS risks and impacts;
2. Approve after due revision Contractor's Environmental and Social Management Plan (C-ESMP) and, during the execution of the works, instruct the Contractor to update the C-ESMP if it becomes necessary. The revised version shall highlight the new elements incorporated in the document;
3. Coordinate the interface between social and environmental requirements and construction works.
4. Supervise the Contractor's implementation of the C-ESMP and report quarterly on compliance of the Contractor with the ESMP and ESHS Works Requirements; This includes health and safety performance and conformance with labour and working condition standards in case of severe ESHS violations (and in particular OHS risks to life), the Consultant shall suspend (sub-)works until the Contractor has rectified the situation;
5. The consultant shall provide Environmental and Social-related training sessions to all the employees of both the Supervision Consultant Team and Contractor. The trainings to be provided shall cover OHS Specific hazards relevant to the project, Safety protective measures, First Aid training, and the project-related Environmental and Social risks and their mitigation measures.
6. Revise and approve the contractor's detailed work plans of the implementation of the C-ESMP and any other management tools defined in the project ESMP. Accordingly, the consultant shall prepare his own detailed monitoring tools/work plans to monitor the implementation of the C-ESMP and E&S performance.
7. Preparing detailed work plans to supervise/monitor the implementation of the C-ESMP and any other management tools defined in the project ESMP. The plans to be discussed with the ES safeguard team in PMU and agreed upon prior the finalization.
8. Document Contractor's non-conformances. Review and approve the Contractor's proposals for remedial action/s and their timeframe for implementation. If necessary, the consultant shall propose all necessary remedies/actions, to be reviewed and approved by the E&S safeguard team in PMU. Follow-up on correction/remediation;
9. As part of monitoring and reporting requirements, the consultant is required to report to the PMU promptly in case any incident occurs in the projects' sites, and take the corrective actions, in collaboration with the E&S safeguard team of the PEA, deemed necessary to restore and recover.
10. Follow up on the results of any inspections or audits by labour, health and safety or environmental regulatory authorities;
11. Check if the Contractor provides instructions and trainings to workers, Subcontractors and Suppliers (in particular those for major supply items) to assure that they understand their respective ESHS requirements and that the Contractor complies with the Code of Conduct;

12. Advise the Contractor on the ESHS risks and impacts of any design change proposals and the implications for compliance with ESIA, ESMP, consent/permits and other relevant project requirements;
13. The consultant's Environmental and Social representatives will be part of the process of approving and signing off on all payments to contractors. This is to make sure that the E&S risk management and the associated mitigations, under the items of the BOQ to be signed off, are complied with by the contractor.
14. Conduct a monthly progress meeting with the PWA's ES safeguard team and the contractor's ES representative, to review and discuss ES performance progress, the effectiveness of the mitigation measures, any ES non-compliance, and key issues, and agree with contractor on remedial actions. Draft minutes of meeting and circulate to all participants;
15. Ensure that the contractor keeps records and reports on E&S performance. Review the Contractor's monthly progress reports, and check if detected nonconformities are documented and analysed and are addressed by corrective actions; Documentation shall include a digital photograph and with captions to provide a visual illustration, explicitly indicating the location, date of inspection and the non-conformity in question;
16. Follow-up on the resolution of any complaints or grievances in relation to ESHS. The consultant shall follow up the implementation of grievance redress mechanism for the project workers and project affected people to ensure compliance with national and WB requirements.
17. Inform the PWA on any ESHS related situation that might arise which could jeopardize the successful completion of the Project. Reflect such situations in the periodic reporting;
18. Supervise those non-conformities are addressed through measures adapted to the severity of the situation and which include but are not limited to the suspension of (sub-) works and/or of payments in accordance with the contract;
19. Check supply chain regarding any shortcomings regarding ESHS standards.
20. The Consultant is to envisage the presence of impacts on Livelihood and Resettlement triggering safeguards according to the requirements of OP 4.12. The impacts are to be identified at an early stage during the project implementation.
21. **In case** an impact on livelihood and resettlement is identified during the project implementation, the consultant shall:
  - Assist the Contractor and PWA in reviewing the impact on each affected citizen and identifying solution for each case. Whenever, the impact is mandatory as a need to the technical and feasibility of the project, the Consultant is to assist the municipality in approaching the citizen and properly consulting them in coordination with PWA.
  - Identify and recommend the sort of action plan needed, if necessary, in coordination with PWA: abbreviated LALAP, simplified abbreviated LALAP, agreement or signed meeting minutes. For abbreviated LALAP, simplified abbreviated LALAP the Individual Consultant are to refer to the LALPF for outline, or to the sample forms for each other case.
  - The Consultant is to ensure, and report that the affected persons are aware of their rights, aware of the presence of GRM procedures, and willing to proceed with the agreement.
  - The Consultant is to discuss with the PWA, relevant municipality and the affected

persons the proper timing for implementing the agreement. The dates of implementation shall be reported to PWA and shall be in line with the project plan. Moreover, the Consultant is to monitor and report the implementation and the citizen's feedback.

22. Identify and liaise with all stakeholders involved in social related issues in the project; Coordinate and follow up to ensure the project is implemented in compliance with the SEP and ESMP.

- **The GRM System:**

- The Consultant should be aware that the construction materials and the dual use materials are not allowed to enter to Gaza and accordingly a new mechanism has been created for the approval for the entry of these materials to Gaza. This mechanism is known as the GRM system.
- Accordingly, the Consultant will be familiar to the GRM system, the system for the importation and coordination of the construction materials to Gaza.
- The Consultant should assist the PWA in review, comment and approve the submitted list of material by the contractor before the final approval of PWA prior proceeding with UNOPS for consideration and approval through our material access coordinator.
- The consultant should monitor timely delivery of materials at the site as scheduled, in addition to inspect goods and materials upon delivery to ensure compliance with specifications.
- The consultant should periodically report to PWA on materials received and used at site.
- The consultant shall be requested to attend any meeting with the Israeli side and providing any clarification regarding the coordinated materials concerning the specification, uses and quantities.
- The consultant shall appoint a specialized person familiar to the GRM system in to follow and use this mechanism when necessary.

- **Security situation and the pandemic (COVID-19) crisis:**

- The consultant must familiarize himself with local conditions, including the prevailing security situation in the Palestinian Territories, especially in Gaza Strip and the closure of the border crossing points for people, goods, supplies and material that could affect the progress rate of the work in the construction packages and could result in working site inaccessibility. Therefore, the consultant shall take into account all possible consequences due to these circumstances and shall in due sufficient time inform the client about the expatriate staffs' time schedule and their expected arrival in Gaza in order to implement the contract. PWA has confirmed that due to the political situation prevailed since last May 2020, which resulted in boycotting any contact with the Israeli authorities. Accordingly, PWA will not be able to submit for access permits, Donation requests and materials request coordination. The consultant should be aware that such situation will have implications on the construction works implementation on the working sites which might result to partially or fully suspension of all the construction and consultants' contracts financed under the project and under those suspensions the consultant should not be entitled for financial

claims, only time extension shall be granted. The consultant should arrange for the travel of his international staff and ensure the staying of the required period in the field.

- According to the Palestinian Government decree issued in 2020 in relation with the COVID situation in Palestine and their implications to the contract. PWA has confirmed that during the implementation, the consultant is not entitled for any financial compensation due to any delays resulting from the COVID situation, only time extension will be considered.

### **3 DELIVERABLES, REPORTING**

All reports shall be prepared in English language.

All reports shall be submitted to the PWA electronically in word and pdf formats, all drawings shall be submitted electronically in AutoCAD and pdf formats. In addition, 2 hard copies of all reports shall be submitted.

All reports shall be submitted in draft version. The PIC shall reserve up to 3 weeks for receiving comments on the draft reports from PWA and incorporate these comments into the final report. The PIC shall issue the final report 2 weeks after receiving the PWA comments.

#### **3.1 Reports**

##### **3.1.1 Monthly Summary Progress Reports**

The PIC shall prepare a concise and summarized monthly report (not exceeding 5 pages) to the Client within 5 days of the following month. The report shall include:

- Summary Progress of works with comparison of real progress compared to the approved work plan.
- Operational and Contractual problems encountered and how they have been dealt with by PIC
- Summary of Potential defects occurred and status of defects and remedial works (tracking sheets)
- Summary of issues related to ESMP and OSH and Mitigations taken
- Summary of works planned for the upcoming reporting period.
- Summary of material entered and consumed

The report shall include limited number of pictures and special findings and reports received or produced in this period shall be attached as separate files. In case the Client has comments or refuse acceptance of the report, The PIC is required to take into consideration these comments in the following monthly progress report.

### **3.1.2 Quarterly Progress Reports**

The PIC shall prepare quarterly reports to the Client within 20 days of the following month. The report shall include:

- Detailed Progress of works with comparison of real progress compared to the approved work plan.
- Detailed progress related to ESMP, OSH and mitigation taken. The ESHS quarterly progress section should outline the contractor's performance in compliance with the ESMP, including the project risks and impacts associated to the activities implemented during the reporting period, mitigation measures taken, the effectiveness of the mitigation measures and their compliance status. In addition, special focus should be made to the OHS measures implemented, ESHS non-compliance recorded during the reporting period. Besides, the contractor's ESHS related records (photos, testing results, etc...) should be annexed to the quarterly report.
- Summary of works planned for the upcoming reporting period.
- Operational and Contractual problems encountered with detailed approach and procedures adapted by PIC to overcome
- Potential defects occurred and status of defects and remedial works (with detailed tracking sheets and supporting documents)
- Detailing of works planned for the upcoming reporting period.

The report shall include pictures and special findings and reports received or produced in this period shall be attached as separate files. In case the Client has comments or refuse acceptance of the report, The PIC is required to take into consideration these comments and resubmit the report in case of not being accepted and in case only comments, the PIC shall take them in the following quarterly progress report.

Every Quarterly Progress Report shall be accompanied with an interim one single payment certificate for the past three-month period.

### **3.1.3 Annual Reports**

The PIC shall prepare Annual Progress Reports to the Client within one month of the following year. The report shall summarize in a consolidated form the progress of works during the last four quarters in relation to the work programme, difficulties and delays experienced, ESMP, OSH, mitigation measures taken and an update on measurement and financial activities. The report shall include pictures.

### **3.1.4 Commissioning Reports**

The PIC shall prepare a commissioning report, for all facilities completed, presenting in detail the results of the performance tests. It will also include a list of deficiencies (snag list) to be corrected by the contractor in a reasonable time period specified by the PIC.

### 3.1.5 Construction Completion Report

The PIC shall prepare this report 2 months before the end of the construction period of each works contract. The report shall describe the defects remedied by the contractor and recommendations in case of remaining defects, not rectified by the contractor in due time.

### 3.1.6 Final Report

The PIC will prepare a final report, for approval by the Client. This report should summarize the previous progress reports and main achievements under the assignment, indicating lessons learnt and the scope for any future work identified, during the project.

The draft Final Report shall be submitted 2 months before the end of the assignment. This report needs to be approved by the Client. Comments have to be incorporated into the Final Report to the satisfaction of the Client.

The final report shall be accompanied by the final invoice and by an expenditure verification report.

## 4 TIME AND PAYMENT SCHEDULES

The estimated time required to carry out supervision of construction works through issuance of the construction completion certificate and including commissioning report is 15 months for:

- i. Contract Package CP3: W01- Reconfiguration of the water distribution system in the Southern Gaza Governorates and defect liability period (D.L.P) for CP3 and CP4a are 18&12 months respectively.

During the construction phase, the PIC will guide a process of implementation that guarantees the operationalization of the two packages in independent phases.

The payments shall be affected on quarterly basis based on the actual man months and other actual reimbursable expenses specified in the contract, and approved by the client.

## 5 QUALIFICATIONS

### 5.1 Experience of the consulting firm

**General experience:** Have been in business for at least the past 15 years in strategic development field, planning and design.

**Specific experience:** Evidence of Firm capability and relevant experience in the execution of Consultancy Assignment of a similar nature, including the nature and value of the relevant contracts, as well as works in hand and contractually committed. The evidence shall include successful experience in the execution of at least two (2) Consultancy Services of a similar nature and size and complexity during the last five (5) years.

## 5.2 Consultants Personnel

The PIC will mobilize a coherent, dynamic and organized professional team of experts with experience in similar assignments to undertake this assignment.

All key personnel will have a good knowledge of written and spoken English. Knowledge of local languages will be an asset.

All experts must be independent and free from conflicts of interest in the responsibilities accorded to them. Note that civil servants and other staff of the public administration of the beneficiary country cannot be recruited as experts. The selection procedures used by the PIC to select these other experts shall be transparent, and shall be based on pre-defined criteria, including professional qualifications, language skills and work experience.

CVs for all key experts and other experts need to be submitted with the proposal.

Regarding the working days, PWA confirm that the input for the consultant shall be from Saturday to Thursday. And the consultant staff should be available during the working hours of PWA and the contractor 8hours per day.

## 5.3 Key experts

### 5.2.1 Key experts

The list of the Consultant's Personnel are detailed in the table below with an estimated of the level of effort of **172.25** Man-month.



Position		Qualification	Professional Experience
International Director	Construction	MSc in Civil engineering	15 years in project management
International manager	Construction	BSc in Civil engineering/mechanical/industrial	15 years in construction management of similar works
International Control engineer		BSC in Control Engineering	10 years in construction of control systems
International Electro-mechanical engineer		BSc in electromechanical engineering	10 years in construction of electromechanical works of similar facilities.
National Specialist	Environmental	BSc in Environmental Engineering	10 years in construction of water facilities of similar works
National Social Specialist		BSc in Social science or any relevant field.	7 years of experience in construction of water facilities of similar projects Experience in the World Bank Environmental and Social policy Experience in the projects social screening and in the implementation of Resettlement Action Plan (RAP) for similar projects, specifically in the projects including Pipelines installation. Experience in the implementation of the ESMP of similar projects
National Procurement officer		BSc in Business administration or Engineering	10 years in procurement and management of similar projects.
National Senior Safety engineer		BSc In Civil Engineering	10 years in providing safety procedures in similar works
National Water Quality Expert			
National Hydraulic Engineer			

### 5.2.2 Other support staff:

The PIC shall mobilize additional other experts who will report to the Team Leader and be responsible for specialist inputs as required. The numbers of staff have been determined in order to suit the project requirements and will include the following position.

<b>Other Experts</b>
Construction Manager Assistant
Site Manager
Mechanical Engineer
Electrical Engineer
<b>Support Staff</b>
Site Inspector/surveyor
Site Inspector/surveyor
Site Inspector/surveyor
Quantity Surveyor
Safety Engineer Assistant
<b>Ancillary Staff</b>
Secretary /admin.

#### **5.4 Support provided by the Client**

The Project Owner will provide the PIC with all documents and reports as far as available which could be useful for performing the assignment.

The Project Owner will provide support (invitation letters, notification to relevant authorities) in obtaining visas and entry permits to the Gaza Strip.