

## **Section 3a: Scope of Works, BOQs and Drawings**

### **Comprehensive Wastewater Management For Better Hygiene And Health Conditions In Moqaybleh Installation Of The Main And Secondary Sewage Networks From The 4 Main Quarters Of The Village To The River (7698m Long)**

#### **1. BACKGROUND**

Aiming at addressing the current needs caused by the Syrian refugee influx, UNDP has undertaken a conflict-sensitive needs assessment through the Maps of Risks and Resources (MRR) methodology with the objective of producing municipal participatory action plans for local impact projects.

The MRR facilitates the dialogue and collaboration between local stakeholders within a common process for the identification of risks, needs and available resources in order to find the proper solutions. Municipal Working Groups were formed involving local authorities, civil society from the public and private sector in order to ensure participation, inclusiveness and ownership of the community as a whole.

The Municipality of Moqaybleh is located in the Kaza of Akkar near the Syrian border. It is 141 kilometres (87.6174 mi) away from Beirut the capital of Lebanon. Moqaybleh elevation is of 400 meters above sea level. Its surface stretches over 1231hectares (12.31 km<sup>2</sup> - 4.75166 mi<sup>2</sup>). Moqaybleh shares many geographical, administrative and social features with the other villages of Wadi Khaled and is characterized by its positive relationship with its dynamic surroundings which makes it an essential part of Wadi Khaled.

The limited competencies of the newly established municipality and its preoccupation with the influx of Syrian refugees causing a burden on the rudimentary infrastructure and services are the main factors contributing to the worsening environmental and health problems. These factors are reflected through the alarming groundwater pollution and the contamination of Nahr El-Kabir irrigating the agricultural lands in both Lebanon and Syria.

Natural resources within Moqaybleh undergo significant damage as a result of the exponential expansion of urbanization and lack of sewage networks. Households dispose their wastewater either randomly through non isolated septic tanks or natural potholes and rainwater streams. Therefore sewage is contaminating Safa spring (main drinking water source for all of Wadi Khaled area) which water is becoming scarce in summer as a result of the increasing number of artesian wells.

Most households rely on randomly drilled artesian wells that quickly dry out in summer due to the lack of precipitation or because of the excessive use of water. Sewage water is then converged in these wells, which add up to the water crisis. Especially that the residents are obliged to purchase bottled water for drinking and pay for reservoir trucks to supply them with water for domestic use, thus suffering from additional costs.

As for the septic tanks, either they are not isolated and directly leak and contaminate the underground water or wastewater is pumped out by private tankers to be dumped in the nearby valleys, water streams or directly into the river.

By installing the sewage network, the municipality will remove the health threatening and pollution factors. This action will also have an impact on livelihood conditions, since the wastewater will not any more pollute the agricultural lands, so the quality of the products and their reputation will rise.

By reinforcing capacities and governance of the wastewater actors, as well as the population awareness

on health and hygiene, the project will release part of the pressure under the wastewater system, improving efficiency and reducing bad habits, and will improve hygiene and health conditions of the population, upgrading their habits.

## **2. OBJECTIVES**

Those TORs were developed to award a qualified contracting company to undertake in Moqaybleh, the construction of a Waste Water Management System (7698m long), noting that the construction works include all digging works, backfilling, installation of specified sizes of pipes and the building of manholes as per the engineer study and map, and asphaltting.

## **3. SCOPE OF WORKS**

Build waste water management network in Moqaybleh through the Installation of the main and secondary sewage networks from the 4 main quarters of the village to the river, 7698m long.

### **Activities:**

- Excavation and backfilling works;
- Installation of sewage pipes as per specified sizes and technical specifications provided by engineer study and map;
- Installation of Manholes as per specified sizes and technical specifications provided by engineer study and map;
- Asphalt works in the areas of excavation as per technical specifications provided by engineer study and map.
- Approval from UNDP designated engineer is needed at the initiation and ending of each phase of the project implementation.

## **4. DURATION OF WORKS**

The contracting company is expected to commence the works immediately after Contract signature. The overall execution timeframe for the whole project is 75 working days spread over a period of 2 months, effective from contract signature date.

Extensions, if deemed necessary, can only be granted through mutual agreement between UNDP and the contracting company.

Urgent cases that could justify delays of works are mainly due to security reasons, in case of any conflicts in Moqaybleh, or for extreme bad weather conditions.

In case of default on the part of the Company in carrying out an instruction of the Engineer, the Employer shall be entitled to employ and pay other companies to carry out the same and all expenses consequent thereon or incidental thereto shall be borne by the Company and shall be recoverable by the Employer and may be deducted by the Employer from any money due or which may become due.

## **5. STANDARD OF PERFORMANCE**

The Contractor shall perform the required services and carry out his obligations under this Contract with all due diligence, efficiency and economy, in accordance with generally accepted techniques and practices used in performing such type of activities and with professional engineering and contracting standards recognised.

He shall observe sound management, and technical engineering practices, and employ appropriate advanced technologies and safe and effective equipment, machinery, materials and methods.

The Contractor shall operate and maintain the equipment and machinery involved in the implementation activities in accordance with the relevant laws, standards, regulations and legislation, as well as the

requirements under the Contract, and the manuals and guidelines as provided by the manufacturers and suppliers of the equipment and machinery.

#### **Site Safety:**

The Contractor shall be responsible for implementing strict safety measures on site in view of the type of works being implemented; the Contractor shall provide and erect protection items required by site conditions or as requested by the Engineer to protect persons, onsite and offsite property, as required and as supplementary to such items that have been left in place; ascertain legal and other requirements.

The Contractor shall maintain protection in place until work is complete and danger of damage has ceased; at such time as approved by the Engineer, remove protections.

#### **Contractor's Resources:**

The Contractor shall utilise all necessary resources, manpower, machinery and equipment etc. in order to perform the required works in a proper, safe and timely manner.

The Contractor should employ, to the maximum extent possible, the necessary labourer (skilled and/or unskilled) from within the project area (a minimum of 70% of skilled/unskilled labourer should be from the region of Wadi Khaled).

### **6. MANAGEMENT MODALITIES**

An engineer will be assigned by UNDP to directly supervise the works of the Contractor.

The engineer will be directly reporting to and seeking approval/acceptance of output from the project Manager.

The engineer will be reporting on progress of works on a weekly basis.

### **7. QUALIFICATION OF CONTRACTING COMPANY**

#### **Experience:**

- Minimum 5 years in implementing waste water management networks and projects, with overall value above USD \$200,000.00

#### **Resources:**

- Availability of a site engineer to follow up on all construction works.
  - A copy of his/her CV is required to be submitted with the offer.
- Availability of machineries (Excavator, Formworks, Construction Tools, Asphalt Paver, etc...) and workers to carry out the required works.
  - A list of the companies' machineries to be submitted with the offer.
  - In the case that the companies need to rent machineries, it should be done so from the Wadi Khaled region as there is availability of varied machineries in the area.
- Ability to store all equipment and material in a safe yard.
- Ability to operate on and implement drawings and engineer studies and maps as provided by the engineer from UNDP side for the implementation of the wastewater management network.
- Ability and commitment to employ workers from the area.
  - A minimum of 70% of skilled/unskilled labourer should be from the region of Wadi Khaled.

#### **Timelines and Safety:**

In addition to presenting an offer that shows the previously mentioned qualifications:

- The Contractor shall present a work plan including activities and timelines;
- The Contractor shall provide safety equipment to all site basis personnel:

- Safety Helmets, Shoes, Jackets;
- Construction Site should be closed and surrounded by a fence;
- Signs and lights should be used.

#### **8. ANNEXES**

- BoQ Based on Engineer study indicating quantities per line of activity;
- Drawing, Maps and Details.
- Specification and Conditions of Implementation

