

Section 3a: Scope of Works, BOQs and Drawings

Efficient Irrigation System For An Improved Productivity Of Agriculture In Al Hisheh - Rehabilitate 1640m Of The Irrigation Canal

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.

Al Hisheh municipality has been trying to develop the local infrastructure since its establishment for its inhabitants among whom farmers represent the largest community. Given its limited financial resources and the massive works that need to be done, the absence of well structured and active agricultural cooperatives, the municipality is not able to solely rehabilitate the agricultural infrastructure. Within its effort to improve the agricultural sector, the municipality identified along with local farmers the scarcity of irrigation water due to the old and unefficient irrigation systems, as the major problem residing in the agricultural sector.

Al Hisheh has a 400,000 sqm agricultural land that is severely affected by the scarcity of irrigation water due to primitive irrigation canals and improper management of water resources. Landowners tend to have the strong preference to invest directly in their lands rather than leasing them. But the bad irrigation infrastructure is leading landowners (more than 100 farmers) to abandon their lands.

Limited access to irrigation water is also increasing the already high cost of production. To note that most farmers used to rely on getting their seeds, medicines, fertilizers, tools, machinery and some of the required services from Syria for a much better price than in the local Lebanese market. But after the Syrian crisis, Syrian farm tools and products were no longer channeled to Lebanon. Consequently farmers are obliged to purchase these items and services from Lebanon for a much higher price.

With the objective of increasing and diversifying the local agricultural production, given the lack of revenues from rain-fed agriculture and decrease of rainfall, Hisheh farmers identified a 1640m main irrigation canal that needs to be rehabilitated. Between leaking, overflowing and evaporation, the canal is losing up to 75% of the water quantity and therefore is limiting the agricultural activities to its minimum in an area with a very high agricultural potential. This canal is barely conveying irrigation water from the main water source Nabaa El Safa to irrigate through mud channels the 400,000 sqm area where farming activities are limited to wheat production that is not fetching good market prices. The municipality did some soil testing where the findings recommended growing Anis that can be sold for 6,000 \$/ton. But to shift from wheat to Anis, or other plantation matching the market demand, an increase in irrigation water is a fundamental requirement.

2. OBJECTIVES

Those TORs were developed to award a qualified contracting company to undertake in Al Hisheh, the rehabilitation of an irrigation canal, 1640m long, noting that the rehabilitation works include all digging works, construction frames for canal, cement base for the canal, building canal flooring and walls with reinforced concrete, and installing metal sluice gates as per the engineer study and map.

3. SCOPE OF WORKS

Rehabilitate 1640 m of the irrigation canal in Al Hisheh

Activities:

- Digging the canal;
- Cement base for the canal (7cm thick; 4 bags per m³);
- Reinforced canal flooring and walls Length: 1.64km; 7 bags per m³);
- Metal sluice gates (60x40cm)

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 50 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 Al Hisheh, 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 rehabilitation of irrigation canals, with overall value above USD \$100,000.00

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, 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;
- Drawings.
- Specification and Conditions of Implementation