



## FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

### Terms of Reference for Consultant ☒/PSA ☐

Minimum number of years of relevant experience required: 1+yr ☐ 5yrs ☒ 12+yrs

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| <b>Job Title:</b> International Consultant: Wastewater Specialist |   |
| <b>Division/Department:</b> FNYAR                                 |   |
| <b>Programme/Project Number:</b> GCP/YEM/036/NET - TFNL110014325  |   |
| <b>Location:</b> Sana'a, Yemen                                    |   |
| <b>Expected Start Date of Assignment:</b> 1 July 2015             | <b>Duration:</b> 2 months within a period of about 2 years (to mid-2017) on When Actually Employed basis – Three missions |

#### GENERAL DESCRIPTION OF TASK(S) AND OBJECTIVES TO BE ACHIEVED

##### BACKGROUND

The Sana'a Basin is facing water scarcity since the 1980s when water use for irrigation and water supply started to exceed the natural recharge. Due to the rapid growth of Sana'a City and the increase of the area under irrigation, the deficit between water demand and water availability has continuously grown over the years. This over-exploitation has led to a continuous lowering of the groundwater table and the need to drill ever-deeper wells. As a result, water is becoming increasingly expensive. Without water management measures, the depletion of the water will continue and will lead to severe economic and social implications.

Based on the discussions of the Netherlands Embassy (EKN) in Sana'a with the Technical Secretariat of Sana'a Basin to assist them in the implementation of their five-year plan and the subsequent fielding by EKN of a project formulation mission in April 2013 which resulted in the project formulation report "Decentralized management of water supply and use in the Sana'a Basin to sustain water resources and rural livelihoods", a Project Document was formulated which elaborates on the above-mentioned proposal. The Project Document was signed by the Government of Yemen and FAO, and the Contribution Agreement was signed by EKN and FAO, both on 14 July 2014. The project is now being implemented.

The Sana'a Basin Project aims at increasing agriculture productivity and achieving sustainable Integrated Water Resources Management (IWRM) within four sub-basins of the Sana'a Basin. Groundwater is the only source for drinking water and the main source for agricultural production. The groundwater resources in the Sana'a Basin are being depleted at the rate of 200 million m<sup>3</sup> per year, which cannot continue, as the estimated available resources are limited.

The Project will cooperate with the farmers, organized in Farmers' Associations (FAs), to reduce their groundwater use and to make use of alternative water sources. An important source for water supply for agriculture could be wastewater once it is effectively been treated. The existing wastewater treatment plants for Sana'a city are not effectively treating the wastewater, its installation are obsolete and its capacity too little for the wastewater produced by Sana'a city. At present, farmers in the vicinity of the existing wastewater plants are using this poorly treated waste water which in fact

is a major health hazard for the consumers of the agricultural products grown by using this poorly wastewater.

The possibilities to overhaul the existing wastewater treatment plant in the short term are considered minimal. Therefore the Project will install a small-scale/pilot project wastewater treatment plant downstream of the existing wastewater treatment plant for Sana'a city so that the farmers in the nearby Water Users Association can use this water without the health hazard risks. The Project requires an international consultant for wastewater treatment.

## **DUTIES AND RESPONSIBILITIES**

Under the general supervision of the FAO Representative in Yemen and the direct supervision of the Chief Technical Adviser of the project, and in close consultation with Technical Officers from the Land and Water Division (NRL) and the Regional Office for the Near East and North Africa (RNE), the incumbent will be responsible for ensuring high quality of outputs of all matters related to wastewater treatment, safe utilization and soil and irrigation management for agricultural production in the four sub-basins of the Sana'a Basin.

In particular, the incumbent will:

- Assess the present situation of the re-use of the poorly treated wastewater: describe the health risks for the people living in the area and for the consumers of the agricultural products grown on this "treated" wastewater.
- Design a secondary level wastewater treatment plant, which will supply water for irrigation to the members of one selected association. The quality of the retreated water should meet the international standards set for its crop production use.
- Prepare the specification of the wastewater treatment plant, assist in selecting the best offer, and supervise its implementation.
- Assist the Association to become a responsible owner of the wastewater treatment plant and train so that they can manage and maintain the treatment plant effectively. The water fee to be paid by the members of the Association should reflect the real cost as to ensure the sustainability of this operation.
- Coordinate with national team / the Government agencies responsible for waste water collection and treatment to ensure their full support for this Project activity.
- Support and train the national consultant and the other government agencies in relation to all aspects related to the safe utilization of wastewater.
- Perform other related duties as required.

## **QUALIFICATIONS AND EXPERIENCE**

### **Minimum requirements:**

- Advanced university degree in water and sanitation or a related field.
- At least 12 years' experience in wastewater treatment and reuse related projects in a senior advisory or management position, of which at least five years in developing countries, preferably in Yemen or the North East and North Africa (NENA) region.
- Excellent working knowledge of English. Knowledge of Arabic is a strong asset.

### **Selection criteria:**

- Demonstrated experience in preparation and implementing successful medium scale wastewater treatment plants and reuse programs.
- Demonstrated experience in training and capacity building in wastewater treatment and reuse programs.
- Profound knowledge of the application of wastewater treatment and reuse programs in the management and development of water and related resources.
- Experience in results-based management of teams involved in implementing multi-disciplinary projects and programs, preparation and implementation of work plans and reports.

- Extensive work experience with central governments and/or donors
- Knowledge of water issues and of international cooperation.
- Fluent in English written and spoken, knowledge of Arabic is desirable.

#### **ADDITIONAL INFORMATION**

- Evaluation of qualified candidates may include an assessment exercise which will be followed by a competency-based interview.
- Your application will be screened based on the information provided in your iRecruitment online profile (see “How to Apply”). We strongly recommend that you ensure that the information is accurate and complete including employment record, academic qualifications and language skills.

#### **HOW TO APPLY**

- Interested applicants are required to create an online Personal Profile form (PPF) in iRecruitment. To create the PPF, please follow the instructions available at: <http://www.fao.org/employment/irecruitment-access/en/>
- Please upload to your Documents section an application letter stating your expression of interest and qualifications as well as a CV.
- In order for your application to be properly evaluated, please ensure that all sections of the on-line profile are completed.
- The PPF should be sent via e-mail to: **RNE-VAConsultant-y3@fao.org**
- **Deadline for submission of your application: 20 April 2015**  
Applications received after the closing date will not be given consideration. Only short listed candidates will be contacted.