

Athens, 9<sup>th</sup> September 2020

**Global Water Partnership – Mediterranean (GWP – Med)  
Legally and lawfully represented by the non-profit society  
MEDITERRANEAN INFORMATION OFFICE FOR ENVIRONMENT, CULTURE AND  
SUSTAINABLE DEVELOPMENT – MIO ECSDE**

**ANNOUNCES THE PRESENT CALL FOR OFFERS  
For the supply of the following Items:**

Set of equipment for Precision Irrigation

**SUBMISSION OF OFFERS BY: ~~10/09/2020~~ 17/09/2020, at 17:00 h Athens Time**

**MAX AVAILABLE BUDGET: 50.400 Euro including VAT (where applicable).**

The amount includes all other costs, shipment and customs costs, or cost that may be required for the completion of the work/service.

The tenderer should provide all the required equipment, not part of them.

**AWARD CRITERION: Most Economically Advantageous Offer with criterion the lowest price.**

#### **Description of Service**

GWP-Med/MIO-ECSDE (contracting authority) is announcing the present Call for Offers for the purchase of equipment to be used for the implementation of operational decision support system based on Information and communication technology in agriculture (ICT in agriculture) for water-efficient irrigation, that is conducted for the GEMWET Project: “Conservation and Sustainable Development of Coastal Wetlands with High Ecological Value. The case of Ghar El Melh, Tunisia.

#### **1. Project overview & site description**

The GEMWET Project ‘Conservation and sustainable development of coastal wetlands with high ecological value: the case of Ghar El Melh, Tunisia’ aims to contribute to the economic, socio-cultural and ecological development of the area.

The GEMWET project, funded by the MAVA Foundation, and is running from July 2018 to June 2021, is implemented by a consortium of national and regional partner organizations namely: WWF North Africa, Global Water Partnership Mediterranean (GWP-Med), BirdLife Europe, Association Amis des Oiseaux (AAO), Priority Actions Programme/ Regional Activity Center (PAP / RAC), National Agronomic Institute of

Tunis (INAT), Tour du Valat (TdV), International Union for the Conservation of Nature in the Mediterranean (IUCN Med).

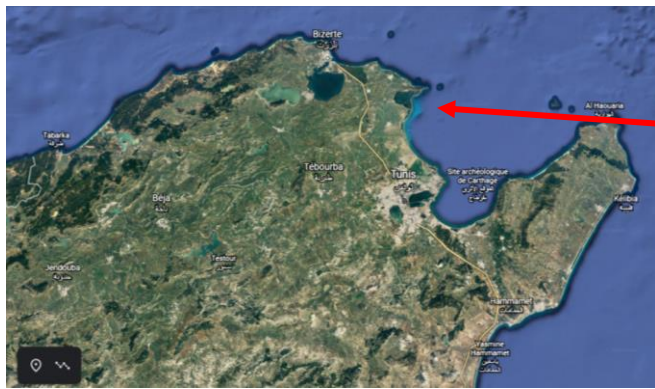
The project is implemented in the catchment basin of Ghar El Melh in the governorate of Bizerte located in the northeast of Tunisia (Figure 1).

The main economic activity of the area is fishing, mainly in the lagoon and the coast, supported by the old port. On the other hand, there is intense summer tourist activity. This seasonal demographic pressure constitutes a great challenge for the coastal zone and the management of resources, as well as an economic issue which reflects many conflicts of resources uses.

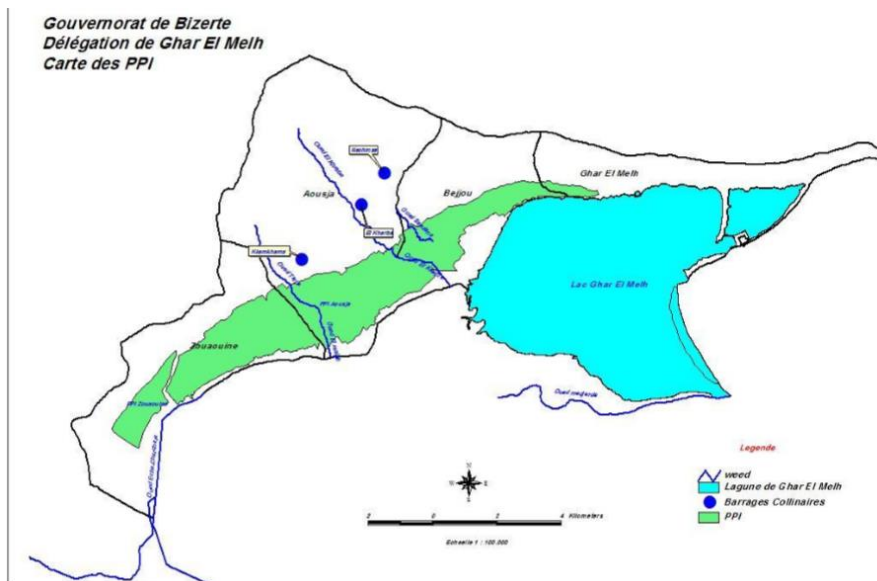
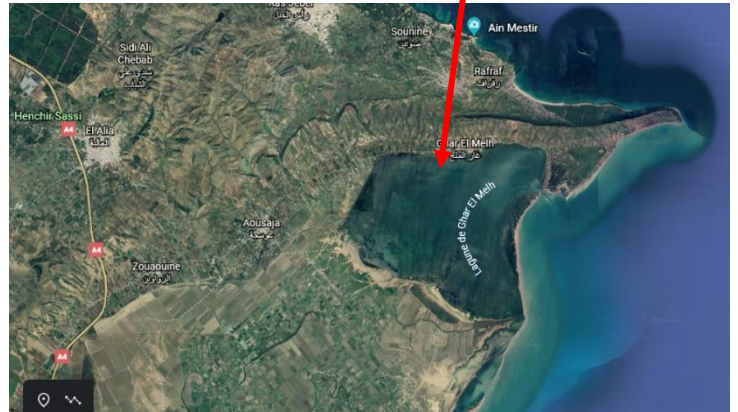
Furthermore, agriculture is well developed in the area. In addition to the ancient technique of Gataayas, plots of land over salty water, the area includes private and 2 public irrigated perimeters producing mainly vegetables.

The coastline is prone to erosion, which is becoming more and more visible, particularly along the coastline. The impacts of climate variability and change exacerbate the vulnerability of populations and economic activities concentrated on the coast, while water resources are becoming scarce, particularly in summer due to the high temperatures and increased demand for tourism. Moreover, there is a water quality challenge, as there is an increased pollution in the coastal aquifer in the Ghar El Melh area due to the pollutants resulting from anthropogenic activities, in particular agriculture, which infiltrate into groundwater. Furthermore, the Ghar El Melh aquifer being a coastal multilayer aquifer, is threatened by sea water intrusion. The aquifers in this area are exploited by wells, the majority of which are dug by hand and used for agricultural purposes in private irrigated farms.

One of the project activities aims to the development of sustainable agricultural practices with high environmental values, with a focus on strengthening the resilience of traditional agricultural practices. For this purpose, a decision support system based on information and communication technology in agriculture (ICT in agriculture) will be installed as a pilot for the optimisation of irrigation. The pilot system will be implemented in the Public Irrigated Perimeter (PPI) (Figure 2). The total surface of the PPI is 2,216 ha and is irrigated from 2 hill dams.



Ghar El Melh Lagoon



**Figure 2. Localisation of the Public Irrigated Area**

## 2. Objective of the assignment

The project provides operational decision support to a group of farmers in the pilot area of Ghar El Melh using **Information and communication technology in agriculture (ICT in agriculture)** with the objective of optimising the use of irrigation water. The **ICT System for Precision Irrigation** consists of monitoring various parameters of soil water profile through soil moisture probes, field/plot irrigation water management through pulse water flowmeter and solenoid valve as well as

meteorological data (solar radiation, air humidity and air temperature, wind speed and precipitation) through a weather station, processed using appropriate hardware and software (**LoRaWAN**) and transformed into messages and recommendations on sustainable irrigation, transmitted to farmers through a platform.

The installation of this **ICT System for Precision Irrigation** aims above all to achieve savings relating to the use of water for irrigation given the strategic importance of this resource and the financial and biological benefits of a poor estimation of irrigation needs. The system can also increase crop production and water productivity in the plots.

In this context, the Global Water Partnership - Mediterranean (GWP-Med) seeks the service of an appropriate agricultural technology company for commissioning an **ICT System for Precision Irrigation** in the Public Irrigated Perimeter (PIP) in Ghar El Melh.

### **3. Selection of farmers, plots and delimitation of the irrigated perimeter PPI**

The selection of farmers/plots that will benefit from the installation of the **ICT System for Precision Irrigation** will be the responsibility and ensured by the project team (GWP-Med and INAT team) in collaboration with the local authorities. The selection will take into account several parameters such as distribution of plots in the field, type of crops, type of soil, soil moisture, meteorological data (solar radiation, air humidity and air temperature, wind speed and precipitation), irrigation techniques and management in the field/plot by means of water flowmeter and solenoid valve, etc.).

Notes:

1. Data concerning farmers, agricultural areas, crops grown, land use, etc.: will be provided by the Project team;
2. The delimitation of the public irrigated perimeter of Ghar El Melh will be done by the project team jointly with local authorities;
3. The number of the beneficiary farmers / plots will be around 10 to 12.

**Analysis of data and elaboration of irrigation instructions to farmers: this task will be ensured by the project team using WEAP-MABIA Module.**

### **4. Description of the assignment: Supply and delivery of equipment**

The service provider will supply and deliver the equipment of the ICT System for Precision Irrigation in the public irrigated perimeter of Ghar El Melh as detailed below.

This **ICT System for Precision Irrigation** should make it possible to collect the necessary measures and once instructions to farmers for irrigation optimization are elaborated by the project team, to convey these instructions to farmers.

The ICT system includes the platform (LoRaWAN Server) which will allow to:

- Receive the various measurements which will be transmitted by the weather station, the soil moisture probes, as well as by the pulse water flowmeter and Solenoid valve for irrigation management
- Data storage, processing and monitoring of weather, soil moisture and irrigation parameters.

- Access to data by multi-users (i.e. project team, project partners, farmers, etc.)

**The ICT System for Precision Irrigation will therefore be composed of:**

- A weather station to measure the following parameters: solar radiation, air temperature, air relative humidity, wind speed and precipitation (**technical specifications - Annex II**);
- Sensors / probes for measuring soil moisture and soil temperature profiles. These measurements of soil moisture and temperature must be done at different depths (**technical specifications in Annex II**).
- Pulse water flowmeters and solenoid valves for irrigation management (**technical specifications in Annex II**);
- A real-time data transmission system (Gateway) with recording of data;
- A platform (LoRaWAN server): Sensors transmit periodically their values via the gateways to the platform for visualization and report with one (01) year connectivity.

**Note :**

- **The sensors/probes are to be installed in different farms. Brochures/Data Sheets of the different components of the ICT System must specify the operation conditions and any field constraints that can affect the precision/functioning of the system.**
- **The installation of the equipment will be ensured by the Project Team. However, the service provider must be available to provide remote technical assistance to the project team during the installation.**
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### **Procurement procedure**

The procurement will proceed abiding to:

- ✓ General principles of EU law on procurements.
- ✓ Internal Rules and Regulations of MIO-ECSDE/GWP-Med.
- ✓ The present CALL FOR OFFERS.

### **Offer Submission**

Interested parties can submit

- 1) Submission Form: Annex I
- 2) Financial offer for items and services as listed in Annex II "Technical Specifications" and Annex III "Bill of Quantities".
- 3) Technical specification leaflets and brochures and calibration certificates for the Compliance of the equipment should be provided.
- 4) A list of projects proving at least three (3) years in the field of smart agriculture and support for farmers with a proven experience in supply and delivery of **ICT System for Precision Irrigation** / irrigation management in the framework of projects.
- 5) Official registration documents proving Valid registration certificate, VAT number registration and/or legal status form proving the establishment of the company for more than 5 years.

- 6) Solemn declaration that they are not bankrupt or subject of proceeding for a declaration of bankruptcy, that they are in good standing, operate under no legal restrictions, are not under any liquidation procedure or the subject of proceedings for declaration of liquidation or any similar situation and that they have not been convicted for any one of the following legal offences participation in a criminal organization, corruption, bribery, fraud, money laundering, terrorist, child labour and human trafficking;

**The language of this procedure, the tender documents and the offers is English.**

#### **Deadline for submission of offers**

The **deadline** for submission of offers is set to ~~10/09/2020~~ **17/09/2020 at 17:00 h Athens Time**

The successful participant in this call will be informed within 10 working days following the submission deadline.

#### **Awarding Criterion**

The awarding criterion Is the Most Economically Advantageous Tender with criterion the lowest bidding price.

#### **Grounds for exclusion – disqualification (ON/OFF)**

Participants should verify by submitting a solemn declaration that they are not bankrupt or subject of proceeding for a declaration of bankruptcy, that they are in good standing, operate under no legal restrictions, are not under any liquidation procedure or the subject of proceedings for declaration of liquidation or any similar situation and that they have not been convicted for any one of the following legal offences participation in a criminal organization, corruption, bribery, fraud, money laundering, terrorist, child labour and human trafficking;

#### **Selection Criteria (ON/OFF)**

Participants must have:

- at least three (3) years in the field of smart agriculture and support for farmers with a proven experience in supplying **ICT Systems for Precision Irrigation / irrigation management** in the framework of projects (A list of projects must be submitted, stating the Project (or portion that was solely executed by the consultant), the end clients, Contract value of the Project (or portion that was solely executed by the consultant) and its duration, description of activities undertaken along with contact details for reference checking purposes (please indicate the e-mail addresses of contact persons). In so listing the end clients, the Participant is giving a consent to the Contracting Authority, to contact the relevant clients for reference checking purposes).

- Valid registration certificate, VAT number registration and/or legal status form proving the establishment of the company for more than 5 years (Proven through official registration documents).

All supporting documents must be submitted together with the financial offer.

### **Place & Time of Offers Submission**

Interested participants in this call shall submit their offers on their own responsibility, either in person or through a specially authorized representative, or by sending it by registered prepaid post with delivery receipt, at the premises of MIO-ECSDE, in Athens, Greece at the following address: 12 Kyrristou str, 10556 Athens, Greece (Tel: +30, 3247490) on the condition that offers shall reach MIO-ECSDE's premises by ~~10/09/2020~~ **17/09/2020 at 17:00 h Athens Time.**

Offers submitted after the specified date and time or offers that have been duly posted but have not reached the designated place in good time, shall not be taken into consideration and shall be returned as inadmissible, without being unsealed.

Inquiries on the call for quotations terms should be submitted by not later than 4 working days prior to the closing date for the submission of the offer to :

Ms Sondos Njoumi

Phone number: +216 22 69 20 68

E-mail : [sondos.njoumi@gwpmed.org](mailto:sondos.njoumi@gwpmed.org)

Web: [www.gwpmed.org](http://www.gwpmed.org)

Mr. Nikolaos Michopoulos

Phone Number: 30-210-3247490, 3247267, ext. -310

E-mail : [nikos@gwpmed.org](mailto:nikos@gwpmed.org)

Web: [www.gwpmed.org](http://www.gwpmed.org)

### **INSTRUCTIONS TO Participants -**

**Participants to this call are requested to:**

1. Fill in the Details in the Submission Form (see Annex I) and sign the declaration included therein.
2. Submit their offer, in a single sealed envelope, with the indication "CALL for OFFERS for the supply of equipment – GEMWET Project" by ~~10/09/2020~~ 17/09/2020 at 17:00 h Athens Time at the following address: MIO-ECSDE, 12 Kyrristou str, 10556 Athens, Greece.
3. Submit technical specification leaflets and brochures for all equipment offered. All technical specifications (brochures/data sheets, conformity and calibration certificates for the Compliance of the equipment should be provided.
4. Commit to the provision of 'Remote Technical Support' to ensure delivering top-notch performance. That implies offering remote and technical assistance for the equipment installation, technical issues that can potentially disrupt the

functioning and performance of equipment. This should be provided in a form of signed declaration that they commit to the service requested.

The sensors/probes will be installed in different farms. Brochures/Data Sheets of the different components of the ICT System must specify the operation conditions and any field constraint that can affect the precision/functioning of the system.

In case the equipment do not meet the minimum technical specification mentioned in the call, the offer will be rejected.

5. Price breakdown

The Price Schedule must be provided with the prices indicated in for each item of equipment to be supplied without erasure or correction.

The Cost Estimates must highlight the designation of the equipment, the unit of measurement, the quantities, the unit price including all taxes and the total amount in figures

The prices indicated in the Price Schedule will not be revisable and cannot be updated.

The tables of price schedules and estimated quotes are given in Annex III.

6. Participant in this call are hereby informed that:

- a. The contracting authority reserves the right to reject any offer.
- b. Offer and quotations therein shall be valid for a period of two months.
- c. The contract shall be awarded to the cheapest quotation that is compliant to the technical specifications and exclusion rules as described in this call.
- d. The participant in this call may submit a Financial offer by submitting the fulfilled Submission form (Annex I) and Bill of Quantities (Annex III), for all items as listed in Annex II "Technical Specifications" and Annex III "Bill of Quantities".

**SPECIAL CONDITIONS**

1. The successful Participant in this call (Contractor) shall submit a performance guarantee which shall be for the amount of 10% of the contract value.

2. The successful Participant must provide all equipment and deliver within a month from signing the contract as shown in the Table Below

Tasks	Deliverables	Timeline
Supply and delivery of equipment and implementation of ICT System	-Equipment provision (including data sheets, user manuals, conformity, calibration and warranty certificates)  - Testing for data relevance and reception	One month after contract signature



	by project team and operation of the platform* at field/plot and global (all fields/plots) levels	
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3. The performance period for the equipment delivery will be no more than 2 months from the issue of the Award Decision.
4. The Participant shall be liable to a deduction of €200 per day, for every day of delay, including Sundays and public holidays, up to a maximum of 10% of the contracted amount.
5. The Participant will specify the guarantee of the equipment operation in the proposal, however a guarantee on all equipment has to be offered for a minimum period of 12 months against faulty workmanship and materials and on the operation of the system as a whole. If during this period any parts or equipment have to be changed, the guarantee on that part is to be renewed for another year from the date of replacement. The initial guarantee as well as the replacement guarantee include the equipment cost (transfer, labour cost, taxes, insurance etc.).
6. Payment terms: Payments will be made upon receipt and validation of the deliverables, as indicated in the table below:

The successful Tenderer shall be entitled to invoice the Contracting Authority based on the confirmation by the Contracting Authority of the deliverables as laid on the following schedule

<b>Deliverables</b>	<b>Payment</b>
Contract signing	30% - Advance Payment
Supply and delivery of equipment, access to the platform and testing for data acquisition & relevance, transmission and reception	70%

### **Termination / cancellation / repetition / reformulation of the procurement procedure**

1. The Contracting Authority may, by a reasoned decision, and after the opinion of the competent body, cancel the procurement procedure by annulment of the respective Call, either due to failure to submit a tender or the rejection of all tenders or the exclusion of all bidders in accordance with the terms and conditions of the Call.
2. Cancellation of the procurement procedure may take place by a reasoned decision of the Contracting Authority, in the following cases:

- i. due to the irregularity of the procurement procedure
- ii. if the financial and technical parameters related to the award process have changed substantially and the execution of the contractual object is no longer of interest to the Contracting Authority
- iii. if due to force majeure, the contract cannot be properly executed
- iv. if the tender selected is deemed not economically advantageous
- v. in case of expiry of the bids
- vi. in case the needs of the contracting Authority and / or of the beneficiary (-ies) of the project have changed
- vii. in case the circumstances have changed resulting in the inability to deliver the contract / project (eg local community reactions, inability to fund, etc.).
- viii. in case of other imperative reasons of public interest such as for purposes of public health or environmental protection.

3. If errors or omissions are found at any stage of the award procedure, the Contracting Authority may, after the opinion of the competent body, either cancel the proceedings partially or reshape the outcome accordingly or decide to repeat the procedure from the point where the error or omission occurred.

4. The Contracting Authority also reserves the right, after the opinion of the competent body, to decide, in addition to the cancellation of the procurement procedure or the annulment of the Call, the repetition of any phase of the concluding procedure, as well, with or without modifying its terms or recourse to the negotiation process, provided it is in conformity with the Internal Rules and Regulations of the Contracting Authority.

5. Under no circumstances shall the Contracting Authority be obliged to pay to Bidders / Participants any compensation for expenses or other positive or consequential damages that may have been incurred by their participation in the proceedings.

The present call for quotations is posted on the website of GWP-Med ([www.gwp-med.org](http://www.gwp-med.org)).

The Chairman of GWP-Med/MIO-ECSDE  
Prof. Michael J. Scoullas