TERMS OF REFERENCE

CONSULTANCY TO INVESTIGATE AND REVIEW WATER TREATMENT PROCESSES IN THE SAHRAWI REFUGEE CAMPS IN TINDOUF, ALGERIA

1. Context

The Sahrawi refugee camps located in Tindouf (South-West of Algeria) have developed over the past 44 years into semi-permanent settlements with a full array of public services. The refugees are distributed in five camps, with their distances given from Tindouf city: Awserd (35 km away from Tindouf), Boujdour (25 km), Laayoune (10 km), Smara (53 km), and Dakhla (180 km). The camp administrative structure is organized, up to neighbourhood level. There is peace and social stability in the camps, and Sahrawi refugees live in peaceful coexistence with local communities in Tindouf.

Tindouf region does not enjoy surface water resources, and the only source available has been from the underground aquifer in the form of boreholes. Water produced from the existing boreholes in the camps is hindered by the presence of suspended solids, and chemical elements as nitrates, fluoride and chloride. Before its distribution to the refugees, water is currently treated by two reverse osmosis plants (one is located in zone 1 “Layoune and Ausserd camps” and the second in zone 2 “Smara and Boujdour camps”). Considering only the high conductivity of water produced in both zones, the two reverse osmosis plants were installed in 2002 and 2010, without much consideration of their operation cost over time.

In order to review existing water treatment systems in the camps and define the most appropriate solution to treat water. The focus of the current assignment will include a remote study and a short field mission to the camps. The remote study will involve desktop review of relevant and available data and information on water quality, water quantity (production from each borehole), water storage and water scheme in each zone / camp (connections between boreholes), as well as the analysis of efficiency of the existing water treatment systems (two reverse osmosis plants).

2. Who we are and what we do?

Solidaridad Internacional Andalucía (SI-A) is a Spanish NGO that supports the Saharawi Refugee population in Tindouf camps since 2002. SIA contribution is through the delivery of Humanitarian assistance projects in order to guarantee daily supply of potable water to all Sahrawi refugees living in the five camps in Tindouf, Algeria.

Over these years, SI-A is working in close collaboration with various WASH actors present in area including UNHCR, ECHO, AICIED, WASH INGOs, …and the Ministry of Water and Environment of the RASD present in the camps.

Following step forwards and recommendations from the 2019 WASH strategy and Multiyear plan to improve the water supply system in the Sahrawi camps. This assignment work is founded by UNHCR within the framework of the 2020 WASH project with SIA, to improve the water treatment system in the camps.

3. Objective of the assignement

The objective of the assignment is to better understand the need for water treatment systems in the camps and to offer a more appropriate solution (efficient and less expensive). The specific objectives of this assignment are as follows:

1) Desktop review of available data and information.
2) Short field mission to the camps.
3) In-depth need assessment together with lessons learned from the existing treatment system.
4) Full project proposal for the agreed solution
4. Specific Activities

In light of the above, a consultant (s) or a specialized company in the design and or in the installation of water treatment systems is needed for the following:

1. Desktop review of relevant data and information. All available data will be shared by SIA with the assigned/selected (company/consultant (s)) following the signature of the contract. Data will be on:
   - water quality analysis results from each borehole (the most recent 2019/2020, …),
   - water production from each borehole (with exact location and capacity, …),
   - water storage (capacity, purpose of use and location, …),
   - water treatment systems (capacity of existing reverse osmosis stations, type/model, location, …)
   - water scheme in each camp or zone (connection between boreholes, reservoirs, osmosis stations, …).

2. Remote study on most appropriate and less expensive options which may be adopted to the context to grantee an appropriate and efficient treatment system for each zone /camp. Combine findings from disk review and discoveries with remote consultations with SIA and any other relevant WASH stockholder present in the camps (i.e. UNHCR, Oxfam, MIAMA, …) – Meetings and communication will be facilitated by SIA.

3. In consultation with SIA, develop a more detailed work plan for the assignment, including mission plan.

4. During mission, hold meetings and discussions with relevant local organisations, NGOs, UNHCR and relevant local government and conduct field visits to the 5 camps (existing reverse Osmosis stations and boreholes) to develop a good understanding of needs and visions of stakeholders. _ Meetings will be organized / facilitated by SIA.

5. Based on findings from field visits, discussion and meetings with WASH actors and combined with options proposed in the preliminary study. Analyse all information in order to verify feasibility for the proposed water treatment system solutions for each zone/camp.

6. In consultation with SIA, compare parameters with similar projects and locations and identify unique Tindouf challenges to the water treatment and confirm the most efficient solution for water treatment in each zone/camp, or depending on the agreed solution, detail how the existing treatment systems can be improved (document the most challenging parameters and suggest adjustments that would be sustainable).

7. Draft document “call to implement the agreed solutions for each zone/ camp in Tindouf”.

5. Outputs

Technical reports and annexes:

1. Short technical report that should include findings from specific activities (1&2). Report to be shared before the field visit to the camps.

2. Detailed work plan including mission plan according to specific activity (3). To be shared before the field mission to the camps.

3. Detailed and final report that should include the following:
   - Interpretation of the current situation in terms of: quality of raw water produced from each borehole, quality of raw water produced from group of boreholes considering their production capacity and their connection to reservoirs. This will be for each zone/camp.
   - Detailed technical specification of treatment system option(s) adopted and agreed with SIA, for each zone/camp based on results from specific activities (4, 5, 6), and considering needed capacity, which will be confirmed by SIA based on water need in the camps.
   - A simplified roadmap for proposed solution(s), including concrete actions.
   - Include a pilot water-treatment studies in situ, focusing on pre-treatment before the reverse-osmosis plants.
   - Bills of quantities to implement proposed actions and to installation new systems (This will depend on agreed options).
Note: All reports / annexes need to be drafted in English and the final report has to be drafted in both English and Spanish.

6. Indicative timeframe
The assignment will include the following:
1. Feasibility study and mission preparations 9 days period - home work based. (delivery of outputs 1 and 2).
2. Mission to the camps (one person) – 8 days period.
3. Final report writing – 12 days period - home work based (delivery of output 3).
The mission (a total of 30 days) should take place in **10/03/2020** and the outputs should be finalized by **08/04/2020**.

Note: The final report will be reviewed /validated by SIA within 1-week period after the reception of the consultant (s) / Company’s report.

7. Minimum competencies required:
All private and public companies or consultant (s) interested by this assignment should meet the following requirements:
- Proven experience in the design and /or installation of water treatment systems (At least, 10 years of working experience or design of a minimum 5 similar projects). Justify experience by presenting relevant certificates, agreements, … (i.e. water treatment engineering certificate or similar, …).
- Fluent in English, and good knowledge of Spanish and French.

8. Terms of payment
The fee is payable upon satisfactory completion and acceptance of the deliverables by SIA. Breakdown of deliverables and percentage is as follow:
1. 30% of the total cost will be paid following the reception of Outputs 1 & 2.
2. 70% of the total cost will be paid following the reception of the final report (Output 3).

Note: Please complete:
ANNEX 1: OFFEROR’S LETTER TO SIA, and ANNEX 2: FINANCIAL PROPOSAL FORM

9. Other considerations:
During the mission to the camps, SIA will provide the following for 1 person during the entire mission’s period:
- **Transportation:** SIA will provide transportation:
  - From and to (Tindouf airport/ accommodation in Tindouf).
  - From and to (Accommodation in Tindouf/ camps).
- **Accommodation:** SIA will provide accommodation (logging and transportation of the consultant in the field) during the entire mission period in the camps.
- **Other considerations:** Related to the visa issue (in case if a visa is needed for the consultant to visit the camps – It is the responsibility of the consultant to cover the visa fees and proceed with the visa request _ SIA will provide all needed documentations to facilitate this process.

For more technical details and accommodation regarding the work please contact temzi_djillali@hotmail.com

10. Documents to be included when submitting proposal
Interested individuals or companies must submit the following documents/information to demonstrate their qualifications:
- Cover letter (maximum of 2 pages) on how your qualifications and experience can lead towards the successful deliverable of this assignment within the required timeframe;
- Financial Proposal (refer to template as provided).
- Personal CV including areas of expertise and past experience in similar projects and at least three (3) references
11. How to Apply:
- Kindly download and fill the Letter of Confirmation of interest and availability, and the Financial Proposal Template.
- Please scan, save and upload all documents (Letters, CV, Financial Proposal) into one PDF file.
- Please send the methodology of the implementation's study.
- Please include as subject of the proposal’s email: (Consultancy to investigate and review water treatment processes in the sahrawi refugee camps in Tindouf, Algeria)

- Please email scanned documents and proposal (technical, financial and methodology) to:
  temzi_djillali@hotmail.com
  louchifaycel@yahoo.fr

12. Deadline for application:
The closing date for application is: 29/02/2020.