Terms of Reference  
Establishment of Rainwater Harvesting system (RWH) at UNHCR Amman Office/Jordan  
RFP/UNHCR/JOR/2022/10

Introduction/Background

The water situation in Jordan is a strategic issue, as Jordan is one of the most water-scarce countries in the world. The water supply comes from depleting aquifers and due to climate change, the annual average rainfall has decreased and will decrease further.

Therefore, for increasing the sustainability and attaining sustainable development in the water sector, goes compliance with the UN sustainable management strategy and our “Greening the Blue” initiative in compliance with the Jordanian Government’s Green Growth National Action Plan, rainwater harvesting is an important technological option to improve water supply. Rainwater harvesting from rooftops, roads, and parking lots can increase the overall water supply, creating resilience to local supply problems, and decreasing the liability on our main supply and increase capacity for the greening initiatives invested in our offices without increasing our municipality-based water consumption.

The United Nations High Commissioner for Refugees (UNHCR) is looking to acquire the services of a qualified contractor for the purpose of designing, supplying, installing, testing, and commissioning of rainwater harvesting system and capacity building/ training of designated personnel in charge of the system in UNHCR Branch Office BO-Amman.

SCOPE OF WORK AND WORK ASSIGNMENT:

Work Assignment:

Design, supply, install, testing and commissioning for rainwater harvesting system in addition to capacity building/ training of designated personnel in charge of the system; it is proposed to collect “200 m³” annually of rainwater in tanks, these tanks should be built above the ground. The potential application of the harvested rainwater will be for gardening, cleaning, washing purposes, and in specific building flashing systems.

Scope of Work:

The following activities will need to be undertaken in order to help meet the objectives of the project:

1. **Designing the rainwater harvesting system based on the site visit.**
   - Site analyses including all relevant and necessary tests
   - Mapping roof areas – determining the contributing catchments
   - Calculating volume of water off mapped catchment area (roof)
   - Gutters sizes and locations design to Minimize contamination from the catchment
   - Estimating Storage Requirements, Tank design and location(s) Distribution system
2. **Supply of the system components and other relevant materials**

Supply of rainwater harvesting system components as following:

- Catchment and conveyance systems
- Storage water tank/s
- Sprout Pipes and Valves
- Faucet
- Pumps and pressure tank
- Any other relevant components or materials that are needed

3. **Installation of the rainwater harvesting system**

- In-situ and factory fitted delivery system and water storage based on the proposed design

4. **Testing and commissioning (including warranty period)**

- Checks and dry run of all component installations to ensure system integrity
- Catchment, conveyance systems and tank maintenance manual
- Monitoring and regular maintenance during the defect liability period of 24 months
- The contractor also assumes liability for the manufacturer warranties of system components/materials.

5. **Capacity building/ training for personnel in charge**

- Conduct training of designated UNHCR personnel in charge of proper use and maintenance of the system to ensure optimum efficiency.

**Deliverable and Timeframe:**

This service is for an estimated contract period of maximum 3.5 months. Perspective companies are requested to propose their approach, including the detailed design, work plan, flowchart, and timeline of activities referring to the desired deliverable:

**Deliverables:**

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Duration</th>
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<tbody>
<tr>
<td>1. Designing the rainwater harvesting system</td>
<td>1 month</td>
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<tr>
<td>2. Supplying and installing the rainwater harvesting system</td>
<td>2 months</td>
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<tr>
<td>3. Testing and commissioning and capacity building/training for the designated personnel in charge</td>
<td>15 days</td>
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Weekly Reporting from the selected contractor to UNHCR designated focal person in English language about the activities, updates, and any other related information.
Specific Conditions:

- Site visit is mandatory for all prospective contractors before submitting their proposal.
- UNHCR official working hours are from 8 am to 4 pm, Sunday to Thursday, and the contractor should arrange to work after 4:00 pm and on weekends/holidays, unless requested by the UNHCR.
- All designs, supply, installation works, and equipment shall comply with environment-friendly, cost-effective, and genuine components from reputable suppliers that conform with the available and appropriate national and international standards.
- Safety construction solution and overall aesthetics consideration in the design and installation.
- The contractor shall be responsible for ensuring that waste materials, packaging, and any other items associated with these installations, do not get blown or otherwise distributed around the site, and should be disposed in an environmentally friendly manner in governmentally approved location. Any costs incurred in cleaning wastes or debris generated by the contractor shall be charged to the contractor.

Availability of resources:
Contractors must demonstrate availability of all necessary resources dedicated for the project to ensure continuity and successful completion of project on time:

1. Personnel (engineers, foremen, workers...etc.)
2. Equipment and material
3. Financial capacity

Realistic Delivery Dates and Details on How the Work must be Performed
Prospective contractors must demonstrate ability to meet the deadline, clear and detailed program of work must be included.