Terms of Reference
WASH Data Analyst (Home-based, 50%)

MISSION LOCATION

Homebased with missions to the field if possible and relevant as agreed by Technical Support Section (TSS), country operations, UNHCR Regional Bureaux (RB), and RVO. Field missions should be made to countries where RVO has a presence directly or through their partners. 50% of dedicated time to UNHCR.

DURATION

6 months

OPERATIONAL CONTEXT

The WASH Data Analyst deployed by RVO will be a part of the Geneva Technical Hub (GTH), an initiative launched jointly by UNHCR and SDC in 2021 to bring technical expertise together within the Technical Support Section. The GTH experts work alongside each other to leverage expertise and bring stronger expert integrated technical support and guidance together for shelter, settlement, Water Sanitation & Hygiene, Energy and Environment in support of UNHCR operations and partners.

Under UNHCR's recently launched *Operational Strategy for Climate Resilience and Environmental Sustainability 2022-2025 (Strategy for Climate Resilience)*, there is a significantly increasing focus on improving service delivery while delivering environmentally friendly services and building climate resilience of people and communities, based on the second pillar of the UNHCR Strategic Framework for Climate Action.

UNHCR is currently implementing the Real-time monitoring (RTM) project based on Long Range Wide Area Networks (LoRaWAN) technology in 11 countries in Africa, Asia and Middle East. This consists of 3 major components; smart water sensors (SWS) for monitoring water supply service delivery (quantities and quality), Gateways and software (application) which allow for communication, data transfers, processing and visualization. Data from RTM shall ensure efficient water resource utilization hence contribute to environmental sustainability e.g, by minimizing over abstraction from aquifers especially in drought prone areas.

To date, over 1200 LoRaWAN goods (Sensors and Gateways) were procured, shipped through a frame agreement with a supplier, and delivered to 11 participating country operations (CO) i.e., Angola, Bangladesh, Cameroun, Chad, Iraq, Kenya, Malawi, Nigeria, Tanzania, Uganda, & Zimbabwe. In 2023 in-country trainings on the installations of the LoRaWAN goods have been conducted in 10 out of 11 COs (except for Chad). The trainings, which included the installation of each type of sensor in each operation, aimed at knowledge transfer and hands-on coaching of the CO focal persons (WASH staff and ICT staff) from UNHCR and its partners to ensure the field teams continue with the installations to completion. In addition to training in the sensor installation, capacity building of the CO focal points on the effective use of the online Dashboard for real-time monitoring of service provision is paramount.

With installation of the sensors currently at 40% completion, it is important to now focus on the utilization of the online Dashboard as installation of more sensors proceed, alongside troubleshooting of emerging technical issues. This will involve conducting online training sessions with each CO to review the data being remitted by the sensors to the online Dashboard and better understand their usefulness both in short term and long run.

The secondment of experts from RVO-DRRS in the past years has positively contributed to filling existing gaps in UNHCR's operations and response to displacements. Based on the existing collaboration between UNHCR and DRRS, UNHCR seeks for the support of an expert with Data Analysis expertise and real-time monitoring experience to support the current phase of the RTM project, in close collaboration with UNHCR (TSS, regional bureau and concerned country operations) and other GTH experts deployed by SDC (including but not limited to the hydrogeological expert, and the water network expert).

AIM OF THE MISSION

The expert will support the implementation of smart water sensors in 5 priority country operations (TBC) to ensure installations are completed, and capacity building of the country teams to effectively utilize the real-time monitoring solution through the existing online dashboard is enhanced. The incumbent will provide support to UNHCR and Partners staff in country operations remotely and through field visits where possible and in agreement with RVO.

MISSION OBJECTIVES

i. Support 5 priority Country operations (TBC) on the utilization of the Dashboard through online sessions with the relevant teams. This will aim at ensuring that the necessary updates to the dashboard of each CO is done to improve its usability. Review of some of the critical analyses to facilitate monitoring and decision.

ii. Conduct field visit to selected country operation as may be deemed necessary in consultation with the respective operations, regional bureaus, TSS and RVO. This aims to ensure the expert appreciates hands on experience with the real-time monitoring solution, better understand the operational contexts and be better placed to support the country teams in ensuring effective utilization of the online Dashboard for monitoring.

iii. Review the current Dashboard from an independent point and provide feedback to the supplier on its user friendliness, the analyses presented, possible improvements, and any other relevant aspect.

EXPECTED OUTPUT

i. Recommendations on the dashboard before the end of the mission period and as agreed by TSS and RVO.
ii. Online training sessions conducted with country operations on the Dashboard application.
iii. End of mission report with recommendations.

RESPONSIBILITIES

The expert will be a member of the GTH, under the overall supervision of the Technical Coordinator in TSS and shall work closely with the WASH Officer which is the Project Manager for smart water sensors. Potential tasks are listed below. The specific activities which will be undertaken by the expert will be prioritized through discussions between the expert, the Technical Coordinator, the PM and other members of TSS and GTH.

Technical Assistance and Field Support
- Provide support (remotely and/or through field missions) to 5 country operations implementing Smart Water Sensors to be confirmed, with the focus on improving installation progress and ensuring effective utilisation of the online dashboard.
- Document a good practice case study on the effectiveness of the Smart Water Sensors. This shall be done in close collaboration with at least one Country operation with significantly good progress on the installations and use of the smart water sensors. This review shall include a thorough and broad cost benefit analysis of utilizing SWS compared to compared to "traditional" WASH service monitoring (i.e. through on-site staff).
- Strengthen the capacity of UNHCR and partner staff in the allocated countries on the IoT monitoring solution (Smart Water Sensors).

Coordination, Training and Capacity Building

- Coordinate with the relevant UNHCR staff at HQ, Regional Bureau and country operation to gain insights into the ongoing IoT project and subsequently be in position to support its implementation.
- Review the existing training materials videos and texts on the Hummbox campus and provide recommendations.
- Support or organize online meetings/trainings on topics related to Smart Water Sensors to enhance the skills of the field staff to better utilise the solution.

PROFILE

Experience

- Proven technical expertise in WASH monitoring and data analysis in humanitarian contexts.
- Relevant proven experience in Internet of Things (IoT) solutions in monitoring service delivery such as water supply, sanitation etc.
- Proficiency in handling data sets using various tools.
- Proven experience in designing capacity strengthening content and materials, coaching, trainings, and capacity building.
- Proven ability to deal with multiple tasks in a courteous and service-oriented manner in demanding working conditions that often have short deadlines.
- Experience in humanitarian assessments including survey, programme implementation, monitoring and coordination is desirable.

Essential requirements
- Academic background in Water and Sanitation Engineering, Data management, Monitoring and Evaluation, or any other relevant field.
- Minimum of 10 years of relevant professional experience after first degree (8 years after master's degree)
- Required: Excellent knowledge of English (written / oral / comprehension)
- Desirable: Working knowledge of French (written / oral / comprehension)

Personal Characteristics
- Ability related to analytical and creative thinking for rapid solutions.
- Good communicator with strong interpersonal and negotiations skills to deal with persons of various cultural and educational backgrounds.
- Strive to live up to high ethical and professional standards, will commit to UNHCR's Code of Conduct.
- A team player with service-oriented attitudes.