United Nations Children's Fund

TERMS OF REFERENCE FOR INDIVIDUAL CONSULTANTS AND CONTRACTORS

Title:	Funding Code	Type of engagement	Duration and Duty Station:
WASH Information Management Consultant-	WBS:	☒ Consultant ☐ Individual Contractor Part-Time ☐ Individual Contractor Full-Time	Six months of in-country support, Freetown

Purpose of Activity/Assignment:

To provide technical support to the Ministry of Health and Sanitation, Ministry of Water Resources and other sector players to develop **Water, Sanitation and Hygiene Information Management System (WASHIMS)** in line with the National Policy on WASH and National Strategy for scaling up sanitation and hygiene services.

1. Background

Information management remains a critical need in the WASH sector in Sierra Leone. This has been thrown up at several meetings and forums as one of the key setbacks in driving evidence-based planning, investment mobilization, and results management in the sector. In the recent past, UNICEF supported the sector in developing a National Monitoring and Evaluation Framework and implementation plan. This followed a national WASH infrastructure mapping exercise conducted in 2016. There have also been efforts to develop and harmonize indicators and tools for tracking results in the WASH sector. Despite these efforts, the uptake and implementation of the M&E framework and use of the existing tools remain a challenge. Routine data collection and updates are currently not taking place at any level, while the existing WASH infrastructure data has become stale and obsolete. Tracking of WASH Behaviours (Sanitation and Hygiene) has been worse hit by this lack of systems for monitoring and reporting.

The Ministry of Health and Sanitation (MoHS) had in 2020 launched a National Strategy on Sanitation and Hygiene to serve as a roadmap for achieving universal access to basic sanitation in Sierra Leone by 2030 with an intermediate milestone to end open defecation by 2025. The strategy acknowledges that this ambition can only be possible with the availability of a system for routine monitoring and performance tracking to measure progress over time and provide critical information to support prompt decision-making towards scaling up and accelerating WASH services.

With access to basic water supply services at 56.3% and access to basic sanitation services at 18.5%[1], Sierra Leone is alarmingly off track to achieving the SGD 6. While some progress has been made in improving access to basic water supply services, access to basic sanitation services has made very slow progress (with only a 7% increase recorded in the past two decades). The situation is even direr when considering progress against the SDG indicators of safely managed water supply and sanitation services, 11% and 14%, respectively[2].

2. Justification

If Sierra Leone must make progress toward achieving the WASH SDGs, there is a need to expand investment in the sector and put in place a robust system to routinely track the improvements in WASH services and behaviours in line with the SDGs indicators and requirements. There is a need for deliberate efforts to streamline, systematize and scale-up evidence generation and data management in the sector. Availability of reliable and up-to-date data for the sector will make room for sector-wide planning, priority setting, effective resource mobilization and application. On the whole, this will promote sector governance, accountability, value for money and overall programme sustainability.

---

[1] Sierra Leone DHS, 2019
[2] WHO/UNICEF JMP, 2020

The National Outcome Routine-Mapping (NORM) of WASH Services and Behaviours has recently been commissioned as a routine exercise to assess the status of WASH services and behaviours from the users' perspective, focusing on users' perception of service levels, access, participation, satisfaction and sustainability. The WASH-NORM will be used as a routine data collection tool to generate data for monitoring progress towards attaining the national goals as captured in the government's Mid-Term Development Plan, Sanitation and Hygiene Roadmap and in achieving the WASH global commitments as enshrined in the SDGs.

Experiences and lessons from the past have shown that while surveys and data collection exercises are key steps in building a sector monitoring and reporting system, a sound information management system is also critical. An information management system ensures that the data collected are effectively managed and translated to information and evidence to drive measurable actions. Therefore, it is imperative that while the sector is embarking on a data drive, systems must be put in place to manage and grow the data to ensure that they can easily be retrieved and presented in forms that provide sound evidence for decision support.

On this premise, the Ministry of Health and Sanitation had identified the WASH information management system development as a key element of the game plan for scaling up sanitation and hygiene services in Sierra Leone. The MoHS, thus requested the support of a technical expert to facilitate the development of a WASH information management system for the sector. This terms of reference is thus for the engagement of an international consultant to support the Ministries in the development of a WASH Information Management System (WASHIMS)

3. Purpose and objectives

The objective of the consultancy is to provide technical support to the Ministry of Health and Sanitation and other sector players to develop a Web-based Information Management system for growing and managing data for decision support. Within the consultancy period of 6 months, the Consultant will support the Ministry in reviewing existing data in the sector, consolidating them into a sector database, and creating interphase for data updates, analytics, and infographics for real-time retrieval and presentation of sector information.

This is in line with **Output 1** *(The Government has improved evidence and strengthened institutional capacity to ensure WASH policy implementation and coordination)* and **Activity 1.3.2** *(Provide technical assistance to develop WASH M & E system, including WASHIMS to strengthen service delivery and implementation of WASH policies, procedures, standards and guidelines.)* of the **2022-2023 WASH Rolling work plan** and also in response to **Recommendation Action 7.2** *(Support the sector Ministries to set up a web-based database and information management system to track progress against key WASH outcome and SDG indicators)* of the **ASWA Evaluation Management Response Plan**.

4. Methodology and Technical Approach

WASHIMS will be deployed as a user-friendly web-based platform for building, organizing and processing sector data into information and evidence to inform decision-making. The Consultant will conduct a detailed review of the existing systems for monitoring and reporting in the sector, critically examine, clean, and integrate available data into a structured database and provide interphases for data entry and update, interactive analysis and presentation of information to support management decision. The Consultant will engage with stakeholders to agree on key WASH indicators and parameters aligned with SDG6, needed for the development of interactive dashboards for management support. The Consultant will develop interphase to host critical sector documents and knowledge products on the management dashboard for easy retrieval. S/He will work closely with the sector Ministries to analyze capacity gaps, training needs and facilitate the training of National and District levels planning and monitoring officers. The Consultant will work closely with the technical working group on M&E to promote the roll-out of the systems across the country and provide ongoing support for the use of the system. S/He will ensure the documentation of key

processes and outputs, including the report of meetings, database architecture, input indicators for data analysis and dashboards development, presentations and the interim consultancy reports.

5. Scope of work and Tasks

The development of the WASH Information Management System will cover the following thematic areas with their detailed attributes as follows:

1. WEB-BASED DATABASE
   - Web-based Central Database (30GB RAM, 1TB Hard Drive, 10 TB of monthly traffic)
   - Virtual and Physical backup enabled
   - Robust database architecture with attributes built around communities
   - Multi-User System (with structured access, rights and controls)
   - Interactive and User-friendly inputs and outputs interphases (across all levels)
   - Multiple Data input interphase (Desktop, Mobile device, SMS, APIs, etc.)
   - Management (Open) Dashboards and infographics (including trend analysis)
   - Spatially Enabled with map displays
   - Scalability and Integration capabilities
   - Reliability with minimal downtimes (not more than 6 hours downtime where they arise)
   - Query building and graphic data presentation
   - Data and Reports export and presentation on google earth map, excel and PDF.

2. FACILITIES STATUS TRACKING SYSTEM
   - Building and maintenance of facilities' database
   - Building and updating the database of facilities' caretakers (FCTs)
   - Building and updating the database of Local Area Mechanics (LAMs) and linking them to facilities under their clusters
   - Pull facilities status reporting updates through API
   - Real-time reports generation (capturing facilities' functionality status and trends over 12 months)
   - Share information on defunct facilities with Local Area Mechanics (LAMs) and capture repairs update using SMS
   - Run filters on the last report date for the facilities to manage reporting
   - Data and Reports export and presentation on google earth map, excel and PDF.

3. ONLINE RESOURCE CENTER (KNOWLEDGE MANAGEMENT)
   - Profiles and Access Management
   - Upload and submission of knowledge products
   - WASH Photo Gallery
   - Publishing of key WASH documents, reports and knowledge products
   - Publishing of routine WASH results monitoring reports

The detailed scope of work for the Consultant will include the following:
   I. Collate, clean up and compile existing sector data into a structured database with attributes built around communities
  II. Develop an automated coding system for communities and facilities to ensure discrete identities of the units
 III. Develop interactive and user-friendly inputs and outputs interphases with user rights defined across all levels
 IV. Development of an integrated data input processes using multiple channels (desktop, SMS, online

forms, APIs, etc.) for building and updating the database

V. Develop interactive management dashboards with query-building capabilities, including trend analysis

VI. Integrate spatial analysis features with interactive map displays

VII. Develop interactive learning tools to support trainings on the use of the application

VIII. Support training activities at the national and sub-national levels on the roll-out of the system

IX. Generate and disseminate quarterly databased summary reports across the national and sub-national levels

X. Assess and define infrastructural requirements for the building of the system and provide details specifications for the procurement of the needed software and hosting service

XI. Develop online resources for uploading key sector documents and knowledge products

XII. Provide system maintenance and technical support services on the management of the WASHIMS database

XIII. Submit monthly progress report

6. Management, Organization and Timeframe

The Consultant shall work with a desk officer assigned by the Directorate Environmental Health (DEH), Ministry of Health and Sanitation and Ministry of Water Resources M & E Officer. The Consultant will be supervised directly by WASH Specialist with oversight role of Chief of WASH, UNICEF, Sierra Leone. S/He is expected to submit the deliverables electronically based on the work schedule. The deliverables will be certified by the Chief of WASH. Further, the Consultant will prepare and present monthly progress updates against agreed targets at the end of each month and a final report at the end of the consultancy.

7. **Child Safeguarding**

Is this project/assignment considered as "Elevated Risk Role" from a child safeguarding perspective?

☐ YES   ☒ NO   If YES, check all that apply:

Direct contact role   ☐ YES   ☒ NO

If yes, please indicate the number of hours/months of direct interpersonal contact with children, or work in their immediately physical proximity, with limited supervision by a more senior member of personnel:

Child data role   ☐ YES   ☒ NO

If yes, please indicate the number of hours/months of manipulating or transmitting personal-identifiable information of children (name, national ID, location data, photos):

More information is available in the Child Safeguarding SharePoint and Child Safeguarding FAQs and Updates

Budget Year: 2022/2023	Requesting Section/Issuing Office: *Water, Sanitation and Hygiene (WASH)*	Reasons why consultancy cannot be done by staff: The skill set required is specific and wide experience in developing a database and information management system for WASH, which is not available in the country. The consultancy is for a short period.		
Included in Annual/Rolling Workplan: ☒ Yes ☐ No, please justify:				
Consultant sourcing: ☐ National ☒ International ☐ Both **Consultant selection method:** ☐ Competitive Selection (Roster) ☒ Competitive Selection (Advertisement/Desk Review/Interview)			**Request for:** ☒ New SSA – Individual Contract ☐ Extension/ Amendment	
If Extension, Justification for extension: N/A				
Supervisor:	**Start Date:** *July 2022*	**End Date:** *Dec 2022*	**Number of Days (working)** *6 months*	

8. **Work Assignment Overview (Tasks, Milestone, Timeframe and payment)**

Tasks/Milestone	Deliverables/Outputs	Timeline	Payment
1. Inception meeting and report	Approved inception meeting report	Within 2 weeks of resumption	Monthly payments based on the planned deliverables with the period
2. Conduct consultative meetings with stakeholders (at least two meetings).	At least two stakeholders' consultative meeting reports submitted	Within 4 weeks of resumption	
3. Compilation of infrastructure required and development of specifications for hosting services	Detailed specification of infrastructure requirements and hosting service.	Within 6 weeks of resumption	
4. Collation, cleaning and compilation of existing data into a database	WASH Database Compiled	Within 12 weeks of resumption	
5. Development of management dashboard for query building and infographics	Management Dashboard compiled	Within 14 weeks of resumption	
6. Integration of facility status tracking system to the database and present real-time functionality tracking	Facilities Status tracking system integrated	Within 16 weeks of resumption	
7. Integration of an online repository for hosting and management of knowledge products	Online repository integrated	Within 18 weeks of resumption	

8. National and sub-national trainings on the application and roll-out of the system	National and District WASH Officers Trained	Within 22 weeks of resumption	
9. Final compilation of the system and submission of a final report	Final report submitted	End of Consultancy	

9. Estimated Consultancy fee

Professional Fees including the dsa in Freetown		6 Months	
Travel International (two-way ticket for one trip)	Will be reimbursed as per actual and for one entry only		
Local Travel	For the filed visit dsa will be paid as per UN dsa rate		
~~DSA (if applicable)~~	~~As per actual~~		
Work Permit	Will be reimbursed as per actual		
Total estimated consultancy costs[i]			

Minimum Qualifications required:	Knowledge/Expertise/Skills required:
☐ Bachelors ☒ Masters ☐ PhD ☐ Other **Enter Disciplines** An advanced university degree (Masters or higher) in one of the disciplines relevant to the following areas: Computer Science, Software Engineering, Information management System or other relevant technical fields from a recognized University/ Institution Additional training in software development and developing similar solution applications is an asset. The candidate with only a Bachelor degree will be accepted if the s/he has over 10 years of experience in related field.	- A minimum of eight years of professional experience in WASH-related programmes for developing countries is required, of which at least five years at a senior level work experience in the areas of systems application development - Familiar with the deployment of multiple data input sources, including SMS-based reporting - Experience in scoping, user testing and training for ICT4D related projects - Experienced with Linux ubuntu 14.04 LTS Server operating system (OS) - Experienced with Phpmyadmin, web design and dashboard management - Capable of deploying interactive learning tools for training purposes - Familiarity with the West African context is an asset. - Ability to align technical goals with UNICEF strategic goals - Strong communication skills and fluency in spoken and written English

Administrative details:	Home Based ☐ Office Based: ⊠
Visa assistance required: ⊠	If office based, seating arrangement identified: ⊠
Transportation arranged by the office: ⊠	IT and Communication equipment required: ⊠
	Internet access required: ⊠
Request Authorised by Section Head: ***Signature*** ***Bishnu Timilsina***	**Request Verified by HR:**

Approval of Chief of Operations (if Operations): _____

Approval of Deputy Representative (if Programme) _____

Representative (in case of single sourcing/or if not listed in Annual Workplan)

_____

---

[i] Costs indicated are estimated. Final rate shall follow the "best value for money" principle, i.e., achieving the desired outcome at the lowest possible fee. Consultants will be asked to stipulate all-inclusive fees, including lump sum travel and subsistence costs, as applicable.

Payment of professional fees will be based on submission of agreed deliverables. UNICEF reserves the right to withhold payment in case the deliverables submitted are not up to the required standard or in case of delays in submitting the deliverables on the part of the consultant

Text to be added to all TORs:
Individuals engaged under a consultancy or individual contract will not be considered "staff members" under the Staff Regulations and Rules of the United Nations and UNICEF's policies and procedures, and will not be entitled to benefits provided therein (such as leave entitlements and medical insurance coverage). Their conditions of service will be governed by their contract and the General Conditions of Contracts for the Services of Consultants and Individual Contractors. Consultants and individual contractors are responsible for determining their tax liabilities and for the payment of any taxes and/or duties, in accordance with local or other applicable laws.