unicef | for every child

TERMS OF REFERENCE

National Consultant for Climate-Resilient Sanitation and Environmental Health Module Development

CONTRACT MODALITY	**Individual Consultancy**
DUTY STATION	**Remote work, Sierra Leone, Freetown**
DURATION OF CONTRACT	**10 Months**

Purpose of Assignment

1. Background

Access to sanitation and hygiene remains a major challenge in Sierra Leone. Only 31.4% of the population has access to basic sanitation services, while 25.1% still practice open defecation, particularly in rural and poor communities. Basic hygiene services remain very low at 11.6%, despite widespread awareness of handwashing practices.

Many households, schools and healthcare facilities lack access to affordable, safe and climate-resilient sanitation options suited to local conditions such as high groundwater tables, flooding, coastal environments and difficult soil conditions. Limited technical guidance, shortages of skilled artisans, weak environmental sanitation practices and inadequate operation and maintenance arrangements further affect the quality and sustainability of sanitation services.

A major constraint is the limited availability of practical and standardized sanitation options adapted to the country's diverse contexts. Soil instability, rocky terrain, high groundwater tables, seasonal flooding, coastal conditions, limited space, affordability constraints and weak access to appropriate construction materials can affect the safety, durability and acceptability of sanitation facilities. In some locations, inappropriate technology selection contributes to structural failure, groundwater contamination, flooding of sanitation facilities and poor long-term use and maintenance.

Women, girls, children, older persons and persons with disabilities often face additional barriers related to accessibility, safety, privacy, menstrual health and hygiene, ease of operation and cultural acceptability. Environmental-health considerations, including drainage, greywater management, wastewater containment, flood protection and safe management of sanitation waste, also need greater attention within sanitation planning and implementation.

There is therefore a need for a practical national sanitation and environmental health module that consolidates context-appropriate sanitation options, standard designs, technical specifications, bills of quantities, quality assurance tools, environmental safeguards and implementation guidance for use by government institutions, District Councils, development partners, implementing partners, engineers, contractors, artisans and communities.

The assignment will support development of an upstream national sanitation and environmental health module rather than a project-specific product. However, selected sanitation options and tools will be pre-tested in a limited number of Iceland-supported communities and in selected additional

locations representing different geographical, geological, hydrogeological, environmental and settlement conditions. Lessons from these field applications will be used to refine the module before validation and wider national rollout.

The Consultant will be contracted and administratively supervised by UNICEF Sierra Leone. Technical guidance and oversight will be provided jointly by UNICEF and the Ministry of Water Resources and Sanitation through the designated focal point(s).

The Consultant will be embedded within and work in close day-to-day coordination with the Ministry of Water Resources and Sanitation to support priorities of TOR and strengthen institutional capacity. The Consultant will also engage regularly with the Ministry of Health, Ministry of Fisheries and Marine Resources, Ministry of Environment and Climate Change, District Councils, implementing partners, community structures, local artisans, technicians, and other relevant stakeholders to facilitate implementation of assignment activities.

Scope of Work

2. Purpose and objectives

The purpose of the consultancy is to support the ***Ministry of Water Resources and Sanitation to develop, field-test and validate a practical national module for planning, selecting, designing, constructing, supervising and maintaining climate-resilient, environmentally safe, affordable and inclusive sanitation facilities.***
The module will be applicable to household, community and institutional settings, including schools and healthcare facilities.

It will help government institutions, implementing partners, engineers, artisans and communities select sanitation technologies that respond to local geological, hydrogeological, environmental, social and economic conditions.

1. Development of a Sanitation Technology Catalogue and Design Module

- Develop standardized sanitation technology options suitable for different geological, hydrogeological, environmental, and settlement contexts in Sierra Leone.
- Provide practical guidance for selecting appropriate latrine technologies based on soil conditions, groundwater levels, flooding risk, population density, finance need, environmental considerations, and user requirements.
- Produce simplified technical designs, standard drawings, specifications, BOQs, supervision tools, and quality assurance checklists that can be applied by engineers, artisans, contractors, and implementing partners.

2. Environmental Health Considerations

- Guidance on drainage management around WASH facilities.
- Decentralized management of greywater and wastewater.
- Community environmental sanitation measures.
- Protection of sanitation facilities from flooding and environmental contamination.

3. Methodology and Technical Approach

The Consultant will apply a structured, participatory, and evidence-based methodology to ensure that sanitation designs, technical assessments, construction-related documents, and operation

and maintenance arrangements are technically sound, context-appropriate, inclusive, climate-resilient, and sustainable. The approach will include the following key components:

- Desk review and technical assessment
- Field verification and site assessment
- Demonstration of the toilet options for real-time design and BOQ.
- Technical design review and rectification
- Development of guidance and tools
- Stakeholder engagement and validation
- Reporting and documentation

Work Assignment Overview	Deliverables/ Outputs	Delivery deadline and Input days
Inception, desk review and field assessment report	Inception report with methodology, workplan and assessment tools. Review of existing sanitation policies, standards, designs and guidance. Field assessment covering soil and groundwater conditions, flooding, drainage, environmental risks, accessibility, affordability, local materials and construction capacity.	**15.02.2027** **20 days**
Sanitation technology catalogue and selection tool	Practical catalogue of household, community and institutional sanitation options suitable for different soil, groundwater, flood-risk, coastal and settlement conditions. It will include a simple decision tree and selection matrix covering affordability, climate resilience, environmental safety, gender, age and disability inclusion.	**31.03.2027** **25 days**
Costed sanitation design and environmental health package	Standard drawings, technical specifications, model BOQs/BOM, indicative costs and quality-assurance and construction-supervision tools for recommended sanitation options. The package will include guidance on drainage, greywater and wastewater management, flood protection, groundwater and water-source protection, and safe management of sanitation waste.	**30.04.2027** **20 days**

Field-tested sanitation module, training package and Training of Trainers	Pre-testing of selected designs and tools in Iceland-supported communities and other representative locations and training of Master trainers across districts. Field-testing report, demonstration activities, practical training materials, and training for government staff, partners, technicians and artisans. The module and designs will be revised based on field findings and user feedback.	**31.07.2027** **40 days**
Validated national sanitation and environmental health module and final report	Final national module incorporating field evidence and stakeholder feedback. Technical validation workshop, final designs and tools, recommendations for institutionalization and wider rollout, and a final consultancy report summarizing the work completed, results, lessons learned and recommendations. All final materials will be submitted in editable and printready formats.	**30.09.2027** **15 days**

Payment Schedule:

Payment will be made on submission and acceptance of 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.

Important Notes

- 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.
- The selected candidate is solely responsible for ensuring that the health insurance (and visa if applicable) required to perform the duties of the contract are valid for the entire period of the contract. Selected candidates are subject to confirmation of fully vaccinated status against SARS-CoV-2 (Covid-19) with a World Health Organization (WHO)-endorsed vaccine, which must be met prior to taking up the assignment. It does not apply to consultants who will work remotely and are not expected to work on or visit UNICEF premises, programme delivery locations or directly

interact with communities UNICEF works with, nor to travel to perform functions for UNICEF for the duration of their consultancy contracts.

- UNICEF offers reasonable accommodation for consultants with disabilities. This may include, for example, accessible software, travel assistance for missions or personal attendants. We encourage you to disclose your disability during your application in case you need reasonable accommodation during the selection process and afterwards in your assignment.

QUALIFICATIONS / SPECIALIZED KNOWLEDGE / EXPERIENCE/ COMPETENCIES (CORE/TECHNICAL/FUNCTIONAL) / LANGUAGE SKILLS REQUIRED FOR THE ASSIGNMENT

Minimum Qualification required:
Education:
Masters degree in Civil Engineering, Sanitary Engineering, Environmental Engineering or Sciences, Public Health Engineering, WASH, or a related field.
Work Experience:

- Advanced university degree in Civil Engineering, Sanitary Engineering, Environmental Engineering, Public Health Engineering, WASH, Architecture with relevant sanitation experience, or another closely related technical field.
- At least five years of relevant professional experience in sanitation planning, technology selection, design, construction supervision or environmental health programming.
- Demonstrated experience preparing sanitation designs, technical drawings, specifications, bills of quantities and construction quality-assurance tools.
- Strong knowledge of sanitation solutions suitable for rural, coastal, floodprone, high-groundwater-table, rocky and difficult-access areas.
- Experience integrating climate resilience, environmental protection, gender, accessibility and user requirements into sanitation infrastructure.
- Experience conducting field assessments, technical consultations, practical demonstrations and capacity-building activities.
- Excellent technical writing, communication and facilitation skills.

Language Requirements:
English
Knowledge/Expertise/Skills:
Proficiency in AutoCAD, GIS or other relevant engineering software
Desirables:

- Experience developing sanitation technology catalogues or sanitation technology selection tools.
- Experience designing household, community, school or healthcare-facility sanitation systems.
- Experience with environmental health, wastewater, greywater or faecal-sludge management.
- Previous experience working with UNICEF, another UN agency, government, development partner or international NGO.
- Experience working in Sierra Leone or a comparable coastal and climate-vulnerable context

Technical proposal requirement:
A short technical proposal describing the proposed methodology, workplan and relevant experience.