Invitation to tender:
Research Assistant for In-Country evaluation of WASH systems Climate Resilience in Zimbabwe

IVL/SIWI is pleased to invite individual consultants to participate in a tender procedure for the above contract.

The deadline for receipt of tenders is Sunday 23rd March at 23.59 CET.

Point of contact: Thomas Heath

E-mail address: tom.heath@siwi.org (SIWI is supporting IVL in the tender)

Background to IVL and the project

IVL Swedish Environmental Research Institute runs projects and collaborates with industry, the public sector and academia around the world for a more sustainable society. Through our consultants and researchers, we offer expertise in circular flows, renewable energy, waste management, clean water, life cycle assessment, clean air, mobility and transportation. IVLs work is evidence-based, and our research is characterized by interdisciplinary science and system thinking. Our vision is sustainable communities everywhere. Website: https://www.ivl.se/english/ivl.html

The Need to Strengthen Climate Resilient WASH Programming in Zimbabwe

In recent years, Zimbabwe has faced frequent climate-related crises, including severe droughts, floods, and cyclones such as Cyclone Idai. These extreme weather events are increasing in frequency and intensity, bringing numerous negative consequences to an already vulnerable population. Approximately 63% of Zimbabweans lack access to basic water, sanitation, and hygiene (WASH) services[1]. The deteriorating economic situation has further exacerbated the decline in WASH infrastructure, leading to unsustainable coping mechanisms such as using unsafe water sources and open defecation.[1] Climate change is expected to exacerbate these challenges.

To address these challenges, UNICEF Zimbabwe has been supporting at-risk communities with climate-resilient WASH services at home, in schools, and in health care facilities. This work aims to strengthen the ability of beneficiaries to anticipate, adapt to, and recover from the negative effects of climate change. UNICEF is now working to support National Stakeholders in the development of a Climate Rational for WASH in Zimbabwe. The process includes the review of WASH Climate Policies, builds on existing work on vulnerability and will include a multistakeholder workshop to review the main climate risks and adaptation options. The process will be used to support the developing of a Climate Rationale. The document will help provide an evidence base to support a proposed National WASH Climate Change Response Strategy. This project aims to collect field data on WASH system infrastructure resilience to support this process. The project intends to visit a series of climate hotspots in Zimbabwe and to identify and visit a series of WASH systems considered representative of WASH programming for the regions. The resilience of these WASH systems will then be evaluated using a survey developed by IVL and used to provide a baseline on systems climate vulnerability.

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[1] WASH_Climate Resilience_2 pager_Oct2022

Assignment objective

IVL / SIWI is looking for a Research Assistant based in Zimbabwe to provide in-country support for Strengthening Climate Resilient WASH Programming in Zimbabwe. The selected consultant will support IVL / SIWI in organizing, conducting field data collection, and reporting accordingly. Their role is to evaluate program sites to assess the climate resilience of WASH systems.

Key requirements of consultant

The key requirements for the consultant are as follows:

Experience required

- Zimbabwe Consultant working and based in Zimbabwe
- At least five years of experience and/or research in working on WASH and Climate change, demonstrated through studies/reports/projects in Zimbabwe.
- At least 8 years of experience in similar roles, as a research assistant, working with the government, Civil Society Organizations (CSOs) and/or the private sector;
- Established Network with different actors, water sector partners and water users (governments, NGOs, donors, inter-governmental organizations, private sector).

Skills/Technical skills and knowledge

- Working experience in disaster risk reduction/management or climate resilience programming.
- Demonstrated experience of evaluations includes developing clear pragmatic recommendations (reports to be available on request).
- Clear and concise writing skills with demonstrated ability to analyse systems and distil key concepts.
- Excellent organizational, team and inter-personal skills in view of interacting with multiple stakeholders at country and regional levels.
- Candidates must have proficiency in English.

Scope of Works

The scope of work includes, but is not limited to:

- Overall coordination and logistical support, including planning fieldwork, coordinating with authorities, arranging any permissions.
- Arranging meetings with stakeholders in the districts for fieldworks.
- Refining the survey tools provided (an Excel document with surveys for infrastructure, stakeholder interviews, and community focus groups) to ensure they are adapted to Zimbabwe.
- Conducting field data collection, including community focus groups, site visits to WASH infrastructure, and discussions with stakeholders at the district level.
- Preparing a short summary of all open interviews (full transcripts are not required).
- Analysing fieldwork data to identify key findings and complete the analysis, including a matrix of key recommendations that details key findings, sources of information, and differentiation by hazard.
- Developing a final report summarizing key findings, developing recommendations, and preparing a presentation slide deck.
- Any other tasks as may be assigned in the course of project implementation.

Task Description

Phase I. Refine the Survey Tools and Targeting matrix

Refine Survey Tools: IVL/SIWI has developed a draft survey tool for the process, which has been tested in Mozambique. The consultant is to review the tool and confirm how it should be adapted for the Zimbabwean context, ensuring it aligns with local technologies such as the Blair latrine. It is not anticipated that this will be a significant task. The survey forms are described in the below table.

	Infrastructure Survey	Stakeholder Interviews
Method	The survey includes multiple questions for each hazard and infrastructure type. Each question assesses specific aspects such as the protection structure quality, accessibility, and potential impacts of various hazards (e.g., flooding, drought, extreme heat, fires, desertification, landslides, storms, sea-level rise, water pollution, air pollution).	The document contains interview scripts for self-assessment of climate-resilient WASH interventions. The interviews are structured around different project cycle phases, including design, risk assessment, climate adaptation, outputs, and outcomes.
Targets	To visit different Water System, Sanitation hygiene systems and communities	Project Managers (PM); Government Representatives (Gov); Service Providers (SP) Community Members (Community FGD)
Questions	The survey uses a scoring grid to assess the resilience of various WASH (Water, Sanitation, and Hygiene) infrastructure systems against different climate hazards. Each type of infrastructure is scored separately for all relevant hazards using a simple system: High (H) exposure = 3, Medium (M) exposure = 2, Low (L) exposure = 1. The survey includes detailed instructions for scoring each indicator individually and provides guidelines for considering potential changes over the next 15–20 years.	• Project Managers (PM) Form: 20 questions covering design, risk assessment, climate adaptation, program activities, and outcomes. • Government Representatives (Gov) Form: 19 questions covering design, risk assessment, climate adaptation, program activities, and outcomes. • Service Providers (SP) Form: 17 questions covering design, risk assessment, climate adaptation, program activities, and outcomes. • Community FGD Form: 15 questions covering design, risk assessment, climate adaptation, program activities, and outcomes.

The survey locations were targeted based on a recent vulnerability analysis completed by UNICEF. The main output from the study summarising the climate hotspots that determined the targeting location is detailed in Figure 1. Table 1 provides an overview of the initial WASH systems identified and the hotspots. The survey will be limited to 2 districts but the location may change.
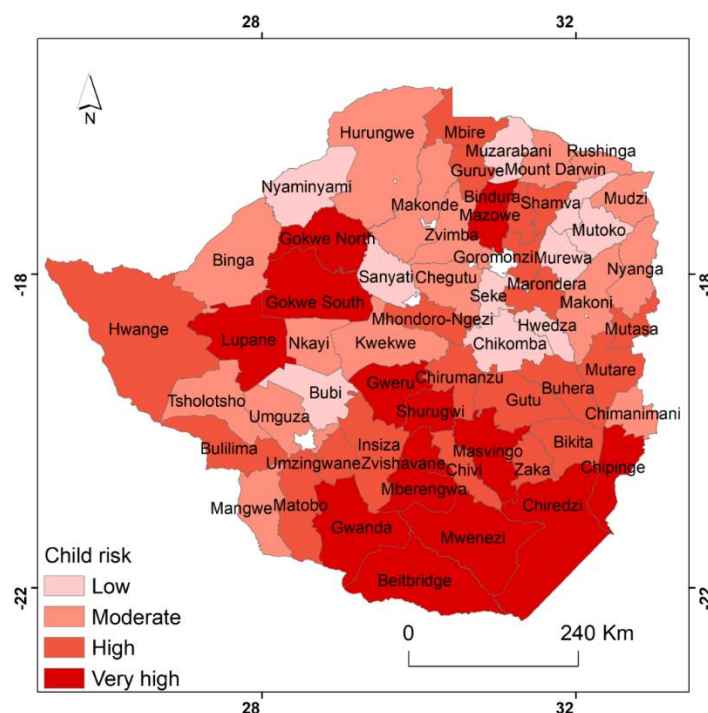
Figure 1: Spatial distribution of Child-centred risk across the country (Child risk was calculated by integrating multiple hazards, vulnerability, exposure, climate change and adaptive capacity)

Table 1. Draft Sampling Framework for data collection detailing locations for programs to be sampled to evaluate climate resilience

Location	Hazards	Partner	Rural	Urban	Inst.	Project
Group 1: Northen - Midlands						
Gorkwe South	Droughts, Floods, Heatwave,	UNICEF	X		X	Solarization of Boreholes; 32 small pipes water schemes(PWS) have been rehabilitated and powered by solar pumps.
		UNICEF	X			Rural WASH Programming
		UNICEF			X	WASH in institutions
		Gov.		X		Urban WASH
	Droughts	Gov.	X			Presidential rural borehole drilling program.
	Droughts, Floods	UNICEF	X			Community Risk Assessments for flood and drought
Group 2: Eastern Masvingo and Eastern and Central - Manicaland						
Chipinge	Cyclone	UNICEF/ GOV.	X		X	Cyclone Freddy Response (Rural WASH Programming including Bush pumps, Blair latrines)
		UNICEF	X			Community Risk Assessments for flood and drought
		Gov.		X		Small town urban WASH and waste water treatment
Alternatives:						
Chirdedzi	Floods, Wildfires, Cyclones	UNICEF	X			Community Risk Assessments for flood and drought
		Gov.		X		Small town urban WASH and waste water treatment
	Cyclones	UNICEF	X		X	Cyclone Idai Response
Gwanda Alternatives (Matobo or Beitbridge)	Drought, Floods, wildfires	UNICEF	X		X	Rural WASH Management Information Systems (RWIMS)
		UNICEF	X		X	El Nino South Response since 2022
		UNICEF	X		X	Flash Flood response
		Gov.		X		Small town urban WASH and waste water treatment

Field Data Collection: The consultant's role in this task is to perform field visits (some independently and some accompanied by UNICEF staff and Government), conduct data-gathering activities, treat and analyze the gathered information, and prepare a report. The fieldwork is to be completed based on the locations the sampling framework in Table 1. It is anticipated that the field work would complete 2 sets of fieldwork in 2 different districts for a week in each district. The program would sample a range of activities to ensure a diversity of WASH systems. The number of data collection points are detailed in Table 2.

Table 2. Field Work Sampling Size. This is based on 1 community per day with visits to multiple infrastructure services.

Sampling Tool	Group 1	Group 2
Number of days collecting	5	5
Additional Travel time	1	1
Communities	5	5
Infrastructure Survey (multiple systems possible in one community)		
Urban Systems	8 systems	8 systems
Rural System	10 system	10 system
WASH in Institutions	5 systems	5 systems
Stakeholder Interviews		
Project Manager (UNICEF or Government project focal points)	2 staff	2 staff
District Government Staff	3 staff	3 staff
Service Providers	3 providers	3 providers
Communities	5 communities	5 communities

The consultant is responsible for all costs associated with the fieldwork (transport, accommodation, printing, and equipment).

Number of days for the consultant: 20 days (2 weeks of field work)

Phase II: Reporting, Analysis, and Development of Recommendations

The consultant will complete a comprehensive report presenting the main findings from the fieldwork. The report will include the following section

- **Field Data Summary:** The findings from the stakeholder and community interviews will be triangulated to respond to a series of topline questions linked to climate resilience. The indicators to be address as summarised in Table 3. This section will be structured based on regional and geographic differences. Rural and Urban differences should be recorded separately and key difference or notable points from particular projects are to be highlighted but the focus of the report will be around the different regions (how hazards impact communities in the different locations and their adaptation measures.

Table 2. Indicators to be reviewed based on stakeholder interviews

Diagnostic and Program Design
Risks, Vulnerabilities, and Impacts
- What are the specific risks, vulnerabilities, and impacts associated with climate variability and change?   - What were the impacts of past climate events, and how frequently did they occur?   - What were the primary WASH system failures during these events?   - Which communities are most vulnerable, and where are the hotspots?
Risk Assessment and Mapping
- Has a comprehensive risk assessment been completed for the WASH sector, including risks, vulnerabilities, and climate impacts?   - Were communities involved in the risk assessment process?
Climate Adaptation
- To what extent does the climate risk analysis inform the project's design?   - How has the project been adapted to address identified climate risks?
Climate Mitigation
- Is there knowledge of the WASH sector's contribution to GHG emissions, and is there a baseline that can guide the design of mitigation activities?   - Does the project include activities aimed at reducing GHG emissions, directly or indirectly?
Output and Outcomes
Intervention:
- What measures have been taken to improve the security of water resources for WASH services?   - What specific actions have been implemented to reduce GHG emissions?
Outputs and Outcomes
- How has the infrastructure been adapted, and what systems were introduced to address climate risks? How will it respond to future stresses and shocks?   - What is the impact on ecosystem resilience?   - What is the impact on community resilience?   - What were the results of the implemented activities? Were they effective, and did they achieve the desired outcomes, including the reduction of GHG emissions?

- **WASH System Resilience:** The data will be analysed and presented in a scoring format for the selected WASH systems, as shown in Table 4. Each value will be scored and justified, providing a clear assessment of the resilience of each WASH system. The final output will be a WASH service score for each of the relevant hazards. The report will be structured by WASH systems using the same headings as the infrastructure assessment. Any regional differences will be highlighted.

Table 3 Example WASH System Exposure scoring (expected output from Survey)

Hazard	WASH System	Score	Justification
Flood	Anaerobic Baffled Reactor (ABR)	Medium Resilience	The structural integrity of the ABR is resilient to floods, though inlet pipes may be disturbed if not buried. A risk for floods is inundation/increased flow into chambers reducing retention time and treatment effectiveness. It could also "blow" manholes and lead to pollution.
Fire Weather	Anaerobic Baffled Reactor (ABR)	High Resilience	Fires are likely to have a low impact on the main ABR structure as it is concrete and buried. However, fires may impact any exposed inlet pipes, though if they are exposed they would also be easy/fast to repair.
Severe Wind	Anaerobic Baffled Reactor (ABR)	High Resilience	Winds are considered low risk for the ABR. The main risk from winds is additional debris that may enter the system though this is unlikely as entry points for debris are inside dwellings and into the toilet.
Droughts	Anaerobic Baffled Reactor (ABR)	Medium Resilience	Droughts may reduce the water available for flushing needed to move faecal/sewage into the ABR. Droughts would likely not impact the treatment efficacy as it would lead to increased residence time in the treatment train. Droughts would also reduce the dilution at any discharge points/waters

- **Program Recommendations:** The consultant will triangulate the collected data to develop a set of programmatic recommendations for each WASH system. These recommendations will highlight key vulnerabilities and propose adaptations for infrastructure, community programming, ecosystem adaptations, service providers, and government interventions. Where necessary the program recommendations section will make specific recommendations for particular locations or projects. This section should be structured around the different programs, identifying any general recommendations.

Number of days for the consultant: 10 days

Services are expected to start by in April 2025. The duration of this contract will be until 31st December 2025 (project length expected to be completed earlier but allowing for any delays). Field Work is to be completed in April 2025.

Deliverables

During the assignment, reports will be drafted containing information on all proposed activities. The estimated number of days for each task is detailed in the annex. The following outputs will be presented, which the consultant will support:

1. **Deliverable 1: Inception report**: To be completed those details the finalized sampling frame, the field tools, any potential limitations. To include a description of the field activities proposed (locations visited, number of sites, and people interviewed)
2. **Deliverable 2: Final Report**: Final report summarizing WASH climate exposures and recommendations, including:
   a. Field report detailing the activities conducted, including: locations visited, number of sites, and people interviewed. It will provide clear transparency on the methods and procedures followed, without presenting the results or data analysis
   b. Summary of stakeholder and community interviews triangulating the data for the core indicators. The table will cover the indicators in Table 3. To be structured based on geographic location.
   c. WASH System Resilience scores with justifications (as per Table 4). This is to provided for each of the WASH systems for the different hazards. Consolidating WASH systems that can be and highlighting regional differences. Scores for Urban, Rural and Institutions should be provided separately.
   d. Program Recommendations highlighting vulnerabilities and adaptations for infrastructure, community, ecosystem, service providers, and government. To be structured based on programs.
3. **Deliverable 3. PowerPoint Summary**: The consultant will prepare a slide deck for a 15 min and a longer 45 minutes presentation to summarise the findings. The presentation is expected to respect PowerPoint good practice[2]

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[2] Ten simple rules for effective presentation slides - PMC

Award criteria

The assignment will be carried out during 2025, from April to May 2025 for approximately 30 working days.

The contract will be awarded based on the following criteria:

70% - Technical expertise, according to the requirements of the tender, including the required experience, technical skills and knowledge and language skills outlined above.

30% - Financial proposal, based on the price per day offered.

Tendering

The tender proposal **must** contain the following information:

- 1-2 page letter that summarizes the experience of the candidate related to the services procured. To explicitly address the candidate experience in the proposed geographic locations and their knowledge of the existing programs that could be sampled to provide a good distribution of programs.
- A full CV containing relevant references, and specifying name and contact information
- Name and contact of at least 2 referents for the experiences mentioned in the CV. IVL reserves the right to contact these referents for confirmation of the contents of the CV and their appreciation of the candidate.
- Budget for project, with breakdown of tasks and detailed budget for Field work. Including Car hire and accommodation. Should include daily hire fee. All costs should be in USD. The finaical offer should include the Invoicing addresses and Company information including organization and VAT-number
- The tenderer should confirm in the proposal that s/he is legally registered as a consultant in Zimbabwe and will be able to submit invoices.
    - Any other appendices the consultant sees as relevant to the application.

The tender must be submitted to the following email address: tom.heath@siwi.org. All tenders should have been received the tender by 23rd March 2024. The subject of the email should be *"Consultancy Proposal Zimbabwe Field Collection – Name"*

Annex 1: Timeline and workplan

For each activity, the following timeline and dedication (stated in days) is an estimate:

Item	Estimated Days	April W1-2	April W3-4	May W1-2	May W3-4	June W1-2
Phase I. Refine the Survey Tools and Targeting matrix						
Refine and Prepare Survey Tools	2	▓				
Inception Report	2	▓	▓			
Field Data Collection	16		▓	▓		
Phase II: Reporting						
Draft Report	7				▓	
Final report	2				▓	
Share Presentation	1				▓	
Total	30					