



CONSULTANCY - TERMS OF REFERENCE

Title: Assessment and development of Urban Wastewater Treatment Innovation Solution

Division: UNICEF Office of Innovation, Sustainable WASH Hub, Copenhagen, Denmark

Duration: Six months

Duty Station: Remote

Advertising summary

The vision of the UNICEF Sustainable WASH Innovation Hub (WASH Hub) is to be a global home for building, accelerating and scaling transformational climate resilient solutions for a WASH secure future of universal and equitable access to services, addressing the full ambition of the SDG6.

The WASH Hub sources, pilots and scales transformational climate-resilient solutions that respond to key programmatic challenges that, if solved, will unlock faster progress for a water secure future for children and young people. Solutions are selected based on their potential to accelerate results for children across multiple countries and regions. One of the solutions in the portfolio, Urban Wetlands Wastewater Treatment, is a nature-based WASH innovation aiming to provide sustainable, cheaper, climate-resilient wastewater treatment services.

The Consultant will support the WASH Hub by documenting the experience of the UNICEF teams currently implementing Urban Wetlands Wastewater Treatment with the objective of optimizing the approach for impactful scaling both within Bangladesh and into other countries in a range of regions and national contexts.

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](#)

UNICEF works in some of the world's toughest places, to reach the world's most disadvantaged children. To save their lives. To defend their rights. To help them fulfill their potential.

Across 190 countries and territories, we work for every child, everywhere, every day, to build a better world for everyone.

And we never give up.

For every child...innovate

UNICEF has a 70-year history of innovating for children. We believe that new approaches, partnerships and technologies that support realizing children's rights are critical to improving their lives. The **Office of Innovation** is a creative, interactive, and agile team in UNICEF. We sit at a unique intersection, where an organization that works on huge global issues meets the start-up thinking, the technology, and the partners that turn this energy into scalable solutions.

The **Sustainable WASH Innovation Hub**, based in Copenhagen, Denmark, aims to source, pilot and scale transformational and frontier climate resilient innovations that respond to key programmatic challenges that, if solved, will unlock faster progress for a water secure future for children and young people. With our partners, the WASH Hub works to identify proven solutions that can be implemented at national scale in multiple countries – taking the ideas that help thousands in one country and bringing them to dozens of countries across multiple regions, impacting the lives of millions of children.

One of the key global challenges that the Hub aims to address through scaling innovative solutions is tackling climate change impacts on WASH services and delivery access. The Urban Waste Water Treatment (UWWT) is one currently in the WASH innovation portfolio which have been identified as potentially transformational in addressing this issue.

The solution incorporates two approaches one being fully nature-based WASH providing sustainable, cheaper, climate-resilient wastewater treatment services via small, constructed wetlands. The other leverages a specially designed tank with partitions for biological processes and chlorine disinfection. The low-cost, modular nature of these technologies also makes them adaptable to various urban and rural contexts. Over the next few years, the Hub

is looking to support scaling into suitable high-density urban lower income areas in numerous African and Asian countries.

How can you make a difference?

Over a period of six months, the consultant will:

1. Conduct an assessment of UWWT, documenting the technical nature of the solution, the WASH and environmental outcomes delivered and the potential or existing challenges that have to be overcome.
2. Conduct a desk review of potential comparable urban and nature-based approaches to wastewater treatment, identifying the relative value of the UWWT approach in different development and humanitarian contexts.
3. Prepare a report on the applicability of the solution across different contexts, identifying prerequisites for the success of the application of the solution, and key factors critical to scaling up the approach.
4. Based on in-country observation and stakeholder engagement, provide technical support to UNICEF (both UNICEF country offices currently implementing the solutions and the WASH Hub) on optimizing the solution design.
5. Provide relevant advice and insights to potential other UNICEF country offices in adopting and rolling out the solution.
6. Identify priority countries for scaling the approach.
7. Act as solution focal point for the Hub, coordinating an internal advisory group and inputting into portfolio management processes as required.

Your main responsibilities will be:

Inception phase

- Together with the WASH Hub and based on the methodology proposed in the bid, the consultant will prepare a detailed **Inception Report (Deliverable A)** that outlines a finalised methodology, evaluation protocols for different phases of work and the timetable for country visits (as applicable).

In-country observation and support

- The consultant will observe project implementation against an agreed protocol devised as part of the Inception report and document the process for learning and to be used to develop replication toolkits for other interested country offices.
- Based on this observation and engagement the consultant will provide technical support to UNICEF (both UNICEF country offices and the WASH Hub) on optimizing the existing solutions for application beyond current implementing countries/regions – including challenges to be considered if replicated elsewhere, materials, layout and other considerations to scale the innovation in other contexts. The advice and insight will be presented in **Deliverable B: Observation report** and in **Deliverable C:**

Observation presentation.

Report on the applicability of the design across different contexts

- Based on the review, the consultant will prepare a draft report – **Deliverable D: Draft report** – on the applicability of the design across different contexts, taking into account other climate conditions, community context, supply chains and any other relevant factors and priority countries for scaling the approach.
- The consultant will identify prerequisites for the success of the application of the technology/approach, including the regulatory environment, particularly with regards to multi-regional scale.
- After feedback from UNICEF and other relevant stakeholders, the consultant will finalise the report as **Deliverable E**.

Relevant advice and insights to other UNICEF country offices

- Based on the earlier findings and on the final report (**Deliverable E**) with the WASH Hub, the consultant will prepare a consultation schedule (**Deliverable F**), identifying potential follow up countries.
- The consultant will prepare a webinar on the findings and recommendations from the existing projects and desk work – **Deliverable G**.
- With the WASH Hub, the consultant will conduct introductory calls to interested UNICEF country offices, and
 - Develop country specific concept notes for replication (**Deliverable H**)
 - Support toolkit for scaling development through detailed debrief and sharing of notes and insights (**Deliverable I**)

Description of assignment

	Tasks	Deliverables/Outputs	Delivery deadline	% of payment
1	With UNICEF WASH Hub and country offices, finalize the proposed methodology, evaluation protocols, including a timetable for potential field visits.	A: Concise Inception Report	31/03/25	10%
2	In country observation of UWWT, engagement with UNICEF and other project stakeholders	B: Observation report, providing advice and insight on the existing project and lessons learnt summary C: Observation presentation	28/04/25	25%

3	Desk review of urban waste water approaches with a focus on Nature Based Technologies	D: Report on existing urban wastewater approaches and how nature-based approaches to wastewater treatment compare to the applicability of the solution designs across different contexts	30/05/25	20%
5	Final report	E: Final report on further applicability of UWWT, incorporating UNICEF feedback	30/06/25	20%
6	Follow up with other UNICEF country offices	F: Agreed consultation timetable with at least 5 UNICEF country offices G: General webinar for UNICEF country offices H: 3 Country specific concept notes for scaling I: Recorded detailed debrief and folder of notes	31/07/25	20%
7	Project management	J: Facilitate solution advisory group meetings K: Develop solution roadmap outlining key project milestones and deliverables for the Hub going forward L: Input into internal reporting/knowledge management processes as required	31/08/25	5%

To qualify as an advocate for every child you will have...

- An advanced university degree (Master's or higher) in a field relevant to sanitation technology e.g. public health, civil, mechanical or chemical engineering or other relevant field.

**A first University Degree in a relevant field combined with 2 additional years of professional experience may be accepted in lieu of an Advanced University Degree.*

- A minimum of 8 years of relevant professional experience in sanitation technology and approaches with experience in development contexts.
- Technical background in sanitation and biological processes involved in waste water treatment technologies
- Demonstrable experience of developing technologies with users' experience and inputs in mind, experience of applying social engineering and Human Centered Design approaches
- Demonstrable knowledge of nature-based WASH solutions is required.
- LMIC work experience and familiarity with general WASH related matters is considered essential,
- Experience of remote /isolated /limited access contexts is desirable.
- Demonstrated familiarity with UNICEF's programming is desirable.
- Familiarity with emergency is considered an asset.
- Fluency in English is required. Knowledge of another official UN language (Arabic, Chinese, French, Russian or Spanish) or a local language is an asset.

Travel:

The consultant is expected to travel as per below:

- One working week Dhaka, Bangladesh
- One working week Kampala, Uganda
- One working week Dakar, Senegal
- One working week Copenhagen, Denmark

Note: Actual locations and duration may change.

These travels should be included in the consultant's bid (details on financial and technical proposals further below).

- The consultant is responsible for arranging his/her own travel, including visa and travel insurance.

Payment details and further considerations

- € Payment of professional fees will be based on the 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.

How to apply:

- € Interested applicant is required to submit a financial proposal with all-inclusive fee. Please see the financial proposal template.
- € Financial proposal must include travel costs (economy class) and daily subsistence allowance, if travel is required as per TOR and any other estimated costs: visa, travel/health insurance.

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☒ Interested applicant is required to submit a technical proposal. Please see instructions below:

The Technical Proposals will be evaluated against the following:		
REF	CATEGORY	POINTS
1.	Experience of the consultant <ul style="list-style-type: none"> • Evidenced experience of working on sanitation technologies and/or nature-based solutions in the WASH sector • Strong experience in implementing and/or assessing WASH programming in urban development contexts • Strong knowledge of applied research in nature-based technologies/approaches • Proven record in providing quality results within limited timeframe. 	45
2.	Proposed Methodology and Approach <ul style="list-style-type: none"> • Detailed proposal with main tasks, report structure and key outputs identified to deliver within a tight timeframe. • Vision and sound methodology of achieving key outputs. • Realistic, timed and costed plan of action. • Experience of developing technology appropriateness assessments and or scalability assessments highly desirable 	35
Total Technical (max 80)		
Only Proposals which receive a minimum of 50 points will be considered further.		
3.	Financial proposal	20
Total Financial (max 20)		
Total Overall (max 100)		

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For every Child, you demonstrate...

UNICEF's values of Care, Respect, Integrity, Trust, Accountability, and Sustainability ([CRITAS](#)).

To view our competency framework, please visit [here](#).

UNICEF is here to serve the world's most disadvantaged children and our global workforce must reflect the diversity of those children. The UNICEF family is committed to include everyone, irrespective of their race/ethnicity, age, disability, gender identity, sexual orientation, religion, nationality, socio-economic background, or any other personal characteristic.

UNICEF offers reasonable accommodation for consultants/individual contractors 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

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in case you need reasonable accommodation during the selection process and afterwards in your assignment.

UNICEF has a zero-tolerance policy on conduct that is incompatible with the aims and objectives of the United Nations and UNICEF, including sexual exploitation and abuse, sexual harassment, abuse of authority and discrimination. UNICEF also adheres to strict child safeguarding principles. All selected candidates will be expected to adhere to these standards and principles and will therefore undergo rigorous reference and background checks. Background checks will include the verification of academic credential(s) and employment history. Selected candidates may be required to provide additional information to conduct a background check.

Remarks:

Only shortlisted candidates will be contacted and advance to the next stage of the selection process.

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 to ensure that the visa (applicable) and health insurance 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.