

**Consultant study to analyse options for ensuring drinking water quality at household level in rural Gambia**

- Terms of reference -

These terms of reference are for a consultant to provide remote and in-country inputs into a study on risks to, and approaches for, ensuring bacteriologically safe water at point of consumption, in rural Gambia. The study includes understanding current practices, risks and potential solutions, guiding a small-scale piloting of potential solutions, and providing suggestions as to how to take solutions that show signs of promise, to the next stage, including basic elements of a potential market-based approach. The consultant(s) will be experts in their field, and will work alongside and provide guidance to, UP Gambia's WASH team, who will undertake additional information collection on behalf of the consultant, and will implement the pilot and monitoring activities.

## **I. Background**

United Purpose (UP) is a UK-based international development charity with a goal to end extreme poverty and inequality and move people beyond aid. United Purpose is intervening in Health, WASH, Livelihoods, Environment, Energy, and Social Business. UP's WASH portfolio covers: 1) Development-focused WASH interventions in communities, schools and healthcare facilities, 2) Strengthening markets for WASH products and services, 3) Wider governance and WASH systems strengthening, 4) Humanitarian and resilience building interventions.

Whilst UP is not widely known in the WASH sector at the global level, we have reached over 5 million people with safe water supply, and a further 5 million have benefitted from our sanitation programs. United Purpose and Self Help Africa merged on August 2021 and became part of The [Gorta Group](#). The combined organisation employs over 900 people and works across 20 countries.

United Purpose has been present in The Gambia for 27 years, working on a range of development and humanitarian interventions in agricultural enterprise, nutrition, resilience and WASH. UP is currently conducting a programme aimed at ensuring a sustainable access to safe water delivered from wells and boreholes equipped with handpumps across the 6 regions of the country. The Gambian WASH team is composed of a program manager overseeing WASH projects, a dedicated WASH support officer, contracted maintenance technicians, and WASH partner regional officers in each of the six regions of the country.

A nationwide MICs assessment in 2018 in Gambia found that 66% of water sources in rural areas were contaminated with EColi, whilst this rose to 92% of samples from household water showing Ecoli<sup>1</sup>, highlighting the post-collection contamination risks. In Gambia, even water collected from so-called 'improved' rural water sources, may be contaminated, and practices in collection and transport back to the household can risk contamination. Those who do treat their household drinking water, tend to either boil (mainly using fire wood, which contributes to deforestation and global warming), or by straining water through a cloth, which may have limited actual positive impact on bacteriological water quality. Traditional practices in household water storage can also increase risks of contamination. Chlorination, despite being a potentially effective treatment option at source or at the household level, reportedly isn't widely popular, given beliefs around its health impacts, and also reservations on the taste of the treated water. There are also the potential

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<sup>1</sup> Multiple Indicator Cluster Survey 2018 – Gambia Bureau of Statistics with technical support of UNICEF [https://www.unicef.org/gambia/media/776/file/The\\_Gambia\\_Multiple\\_Indicator\\_Cluster\\_Survey\\_2018.pdf](https://www.unicef.org/gambia/media/776/file/The_Gambia_Multiple_Indicator_Cluster_Survey_2018.pdf)

challenges of supply chains, demand, and financing options for source or household water quality interventions.

As far as UP can ascertain from discussions with sector stakeholders, there has not been market analysis or pilots of any significant scale, to test approaches and appropriateness of household water treatment and storage technologies in the Gambia, nor to test approaches for ongoing chlorination of the water supply schemes.

UP is in the process of evolving its interventions and approaches for increasing and sustaining access to safe water in the Gambia, and has sourced funding to assist in undertaking small-scale studies and piloting to inform its evolution of approaches. UP is keen to define potentially viable approaches to ensure households in rural Gambia consume bacteriologically safe drinking water.

This consultant-led study will aim at understanding where contamination most occurs, and what options and approaches would be viable, and publicly tolerated, to ensure water at point of consumption is safe to drink. The study will look at the viability of different options (should it be technical solutions such as chlorine, filters or/and approaches for improved practices) and how to promote them, in order for UP to be able to implement a subsequent pilot phase, before upscaling.

## II. Scope and objectives of the assignment

**Overall, the study has four main components:**

- Understanding the challenges of ensuring safe water up to the household and developing concrete recommendations on technology options/products or improved practices that can ensure people drink safe water at point of consumption<sup>2</sup>.
- Defining and guiding a small-scale pilot testing of solutions (e.g. relevant products and related behaviour change activities);
- Provide provisional guidance as to approaches, features, behaviour change communication, that could be considered in the subsequent elaboration of a broader market-based approach for introducing and scaling the technology/product (if applicable) during a pilot phase;
- Summarising the findings and recommendations for next steps in an overall report, that UP will use to feed into an implementation phase proposal, and derive wider learning that can be shared with the wider WASH sector in Gambia and potentially beyond.

The study will focus on the Central River Region where the conditions of access to water are the worst of the country.

## III. Activities

The consultant(s) will undertake desk reviews, meetings, workshops, site and community visits during field trip, including small qualitative in-country information collection. The consultant(s) will coordinate with the UP Gambia team, whose role will be to assist in collecting information and undertaking surveys and tests, in addition to facilitating the in-country visit(s) of the consultant. The consultant(s) will provide guidance to the UP Gambia team in the data they should collect to support and feed into this study.

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<sup>2</sup> Depending of the conditions of access to water of communities, we will consider technologies including 1. household water treatment, 2. at-source, in-line chlorination of solar piped water schemes, 3. Alternative options (chlorination for handpump water sources for example by in-line chlorine dosers), in addition to looking at products and approaches for transporting and storing water, and means to preserve the quality of water at source (e.g. wells, boreholes)

Bidders are also welcome to propose alternative or additional options for conducting tests and surveys like linking with Gambian universities or MSc students, although there will be budget and time limitations to consider, as the budget for field-level data collection is limited.

**Review of current and past experiences, evidence and approaches to ensuring bacteriologically safe water quality in rural Gambia (and bringing learning from comparable contexts elsewhere):**

- Undertaking an initial desk review from literature from Gambia and elsewhere in comparable contexts, to better understand post-collection contamination risks, and to identify options to improve water quality (at source or at household level), and experiences with these (particularly at source chlorinators, and household water treatment of various arrangements, such as liquid chlorine and filters - safe storage including adaptation of traditional storage containers)
- Undertaking in-country meetings and potentially small workshops<sup>3</sup> with key sector stakeholders, to identify existing information and initiatives on water quality within the country, and understand learning and good practice that have arisen from these.

**Reviewing existing knowledge, attitudes and practices relating to water quality, water quality sampling, and identifying common contamination risks in the Central River Region (CRR)**

- During the consultant's in-country visit, undertaking some community-level visits, focus group discussions, and field observation, to have a first rapid understanding of existing practices of communities, habits that are contributing to water contamination, and perceptions and practices on water transport storage and treatment.

This quick overview will be completed by surveys at a larger scale conducted by the Gambian team (or students if relevant) under the guidance of the consultant(s):

- Providing guidance to the local team for questions and data collection methodologies, focus group discussions, that they will use on a wider number of households/communities.
- Providing guidance to the local team to undertake water quality sampling of water sources, and at different stages along the safe water chain (collection, transport, storage), to help define where bacteriological contamination may be occurring<sup>4</sup>.

**Identifying potentially relevant approaches and technologies and proposing guidance for initial user testing/piloting and monitoring to determine appropriateness, uptake and effectiveness:**

- Identifying and advising on products, primarily (but not necessarily exclusively) those available on the local market, and that UP can use in community consultations and preliminary field testing.
- Defining the approach for the (local Gambia team-led) testing/piloting phase, including the technology(s) to introduce, targeting/selection criteria, behaviour change messaging, and approach to monitoring (questions/indicators to be tracked), and discussion/orientation of the team on this
- Periodic check-in's with the UPG team in their monitoring, data analysis / review of the findings on adoption and impact on water quality.
- Review of the data and learning generated from this small-scale user testing phase

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<sup>3</sup> Workshops costs would be covered by UP and the team will provide support for organisation and invitations

<sup>4</sup> The Gambia UP team will separately purchase pool testers and portable microbiological tester kit and will be trained internally by UP Global support team.

Therefore, the local team, under the consultant guidance, will:

- Organize focus group discussions to introduce products to communities, allow taste testing, and understand perceptions of the various products or approaches, and willingness to pay for them (could possibly be done during the initial focus group discussions to understand current practises)
- Install / distribute products that have been identified as relevant to a small number of communities, train on their usage, and (where applicable) provision of a stock of consumables (e.g. chlorine) for their functionality over a multi-months testing period. The UPG would then channel information to the consultant.
- Monitor the uptake by households, impact on water quality, and collate feedback from the households and broader community as to these products or treatment approaches. This would include water quality testing, household surveys and focus group discussions.

**(Rapidly and provisionally) reviewing supply chains, and potential implementation modalities (and costs) for the provision and ongoing management of water quality products or services:**

- For products and approaches that are identified as potentially viable and effective, undertaking a rapid review of what options there are for ongoing supply, and potentially even local manufacture (e.g. for filters), and assessing potential costs, supply chains and current capacities for the production and/or supply of such products.
- Rapidly reviewing and developing provisional ideas as to how the implementation of recommended approaches could be done, by who, and the roles of different stakeholders in this. For example, for household water treatment products, who would do the marketing and sales and ensure local supply chains? Who would ensure consistent supply of chlorine, and monitoring and oversight of the service?
- Identifying, based on current capacities, what capacity building would be required for such stakeholders, and broader actions needed to operationalise the approach into something that could be implemented at scale across the targeted communities in future.
- Based on qualitative and secondary data, establish a basic and provisional assessment and calculation of upfront and ongoing costs for setting up and sustaining the approach in the broader target communities, and defining potential income streams for this (from users, government, and potential targeted subsidies)

**Providing guidance for a BCC approach for building demand for, and consistent use of, treated water:**

- Based on the desk review, surveys and feedbacks of user testing experiences, provide further recommendations to help shape the design of a Behaviour Change Communication approach for target communities, based on messaging to reduce post-collection contamination risks, and increase adoption and demand for chlorinated water or other household treatment products. This would include who should be targeted, with which messages and demand building activities, and how to effectively convey these.

#### **IV. Deliverables**

The specific deliverables of this study will include:

- An inception report from the consultant with findings from the desk review, in-country survey (data collection led by UPG team at their cost), stakeholder consultations and in-country visit,
- An interim report defining the next stage for the user testing phase.
- A final and summative study report, completed with the findings from the user testing phase and basic market based approach review, that then provides summative findings, and costed-recommendations that help define our future work in this area.

## V. Practicalities

The primary contact with the consultant(s) will be the UP Gambia WASH project manager. He will assist in organising meetings, identifying and contacting stakeholders, inputting into and agreeing on guidance for the team-led data collection activities and communities with whom to survey/test solutions, and who may engage additional persons to assist in the team-led data collection activities. A dedicated WASH officer will provide support to conduct surveys during consultant(s) field visit, and will conduct water quality testing and extend field data collection for observations on a longer period and a larger number of households through remote instructions of the consultant(s).

The UP Global WASH Technical Officer will provide ongoing oversight across the consulting assignment and study, to ensure smooth implementation. Both project manager and Global advisors will review deliverables, and will have periodic calls with the consultant over the duration of the assignment.

The consultant will pay and organise international travel and will pay for meals and accommodation, and the consultant will invoice these costs based on actual incurred costs (or per diem based on agreed limit), within a total agreed budget.

The UP Gambia team will organise and cover the costs of local transport and can assist in the local booking of accommodation of the consultant. The team will assist in quantitative data collection, water analysis, awareness campaign (small sample sizes) with guidance of the consultant. The team will assist in organisation of meetings, workshops.

## VI. Timeframes / expected Level of Effort

The consulting assignment is expected to commence from around end of October 2023 to run through to February 2024. The precise timing of kick-off and the intensive (e.g. in-country) phase of the assignment can be discussed with the shortlisted consultant(s).

Depending on fee rates, UP estimates the approximate order-of-magnitude duration of the assignment to be approximately **25 consulting days in total**, including preparation, desk review, in country visits, remote support and reporting.

## VII. Required competencies of the consultant(s)

UP is open to propositions from individual consultants, or consultancy organisations, academic or research institutions, NGOs etc.

Competencies expected include:

- Significant experience and international exposure and expertise in rural drinking water quality in low-income contexts comparable to Gambia, considering risks to contamination and approaches to improve water quality
- A clear understanding of a range of water treatment technologies and options for water treatment, including at household level, relevant to low-income contexts
- Experience in Behaviour Change Communication.
- Experience in designing and conducting or guiding quantitative and qualitative studies; meeting deadlines and responding to requests and feedback provided in a timely and appropriate manner.
- Ability to provide strategic recommendations to key stakeholders.
- Fluency in written and spoken English
- Knowledge of The Gambia context appreciated but not essential, and willingness/ability to travel to Gambia.

## VIII. How to apply

The consultant(s) should submit their application by email to [buba.sey@united-purpose.org](mailto:buba.sey@united-purpose.org) CC to [rugie.jallow@united-purpose.org](mailto:rugie.jallow@united-purpose.org) ; [joseph.kiambuthi@united-purpose.org](mailto:joseph.kiambuthi@united-purpose.org) not later than **3<sup>rd</sup> October, 2022 at 12:00 Hrs UK time.**

Applications to include

- CVs, If multiple, then defining who would do what aspects of the assignment (if institutions, information on the institution not only the individuals)
- Financial offer/quote stating daily fee rate and estimation of consulting days (and stating any potentially applicable tax/VAT)
- 1-2 page cover letter including (but not limited to):
  - a brief overview of relevant experience, and skillsets relevant to this ToR
  - any comment on the ToR or provisional ideas on how it would be completed
  - an indication of the consultant(s) availability within the defined assignment period
  - Hyperlink to (or annex) of examples of past work (such as a relevant report)

Interviews or further information will be sought from the shortlisted candidates during the selection process.