

TERMS OF REFERENCE:

Developing a water and sanitation - health impact estimation tool for outcome-based finance

BACKGROUND

Aqua for All is an international foundation that mobilises public and private capital to improve access to safe water and sanitation. It works with entrepreneurs, utilities, financial institutions and ecosystem actors to support sustainable and inclusive water and sanitation service delivery.

As Aqua for All increasingly applies Impact-Linked Finance, including [Social Impact Incentives \(SIINC\)](#), there is a need to better quantify and communicate the broader outcomes generated by water and sanitation enterprises. While outputs such as households reached, access to safe water, sanitation installations, service reliability, (menstrual) hygiene products or services¹ delivered, and water quality are often monitored, the resulting health outcomes are not yet quantified in a systematic, practical and transaction-relevant way.

While substantial evidence links water and sanitation interventions to improved health outcomes, practical methodologies and tools to apply this evidence in transaction design, impact monitoring and reporting remain limited.

This gap is particularly relevant for outcome-based finance mechanisms. In SIINC transactions for example, outcome payments are generally linked to metrics within the enterprise's sphere of influence, such as additional low-income households reached, improved service quality or sustained service use. Direct health outcomes are usually difficult, costly or impractical to quantify at transaction level.

The assignment will develop a methodology and tool that i) link verified water and sanitation outputs to estimated health outcomes; and (ii) enable assessment of health additionality within SIINC and other outcome-based finance mechanisms.

This assignment should result in an evidence-based, user-friendly methodology and calculation tool that can be used by Aqua for All and selected external partners (outcome funders or investors) to estimate, assess and report the health impacts from water and sanitation enterprises and interventions.

OBJECTIVES

Overall objective

The overall objective of this assignment is to develop an evidence-based and user-friendly methodology and (calculation) tool that enables Aqua for All and its partners to estimate, assess

¹ The primary focus of the assignment is on drinking water and sanitation services and associated health outcomes. Consultants may assess the relevance of menstrual health and hygiene (MHH) business models and advise whether these can be incorporated into the proposed framework, require a separate outcome pathway, or should remain outside the scope of the core methodology.

and report health outcomes associated with water and sanitation enterprise outputs, and to apply these estimates in the design, monitoring and reporting of SIINC and other outcome-based finance transactions.

The methodology and tool should support both:

- Ex-ante use, including transaction structuring, cost-benefit analysis, impact target-setting, and estimation of expected health outcomes and health additionality; and
- Ex-post use, including the estimation of health outcomes from verified water and sanitation outputs, assessment of health additionality associated with outcome-based incentives, and reporting of achieved health outcomes.

Specific objectives

The assignment should:

1. **Review and assess** existing evidence, methodologies, datasets and tools linking water and sanitation outputs to health outcomes.
2. **Develop a practical water and sanitation-health impact estimation methodology** that translates verified water and sanitation outputs into estimated health outcomes using transparent assumptions and evidence-based calculation factors.
3. **Develop guidance for assessing health additionality** within SIINC and other outcome-based finance mechanisms.
4. **Develop and test a user-friendly and future-proof tool** that can be applied for both ex-ante estimation and ex-post reporting.
5. **Validate the methodology and tool** using practical case examples and feedback from internal and external experts.
6. **Provide recommendations** for future use, maintenance/periodic updating and integration into existing systems and workflows.

Main research question

How can verified water and sanitation enterprise outputs be translated into credible health impact estimates, and how can these estimates be applied to assess and report health additionality in SIINC and other outcome-based finance transactions?

Key sub-questions

The research should address, at minimum, the following questions:

1. Evidence base: water and sanitation outputs and health outcomes

- What evidence exists linking water and sanitation outputs to health outcomes?
- Which health outcomes are most suitable for inclusion in a practical impact estimation tool?
- How do water and sanitation-health relationships vary by geography, population group, intervention type, service level and baseline conditions?

2. Additionality and SIINC applicability

- How can health impacts be incorporated into SIINC and other outcome-based finance structures?

- Which water and sanitation-related metrics are most appropriate as proxies for health impact and health additionality?

3. Tool design and calculation methodology

- Which existing tools, datasets, calculation factors and assumptions should inform the development of Aqua for All's tool?
- What minimum data requirements and technical format are most appropriate? And what are the advantages, limitations and risks of the technical options, including long-term maintenance and updating requirements?

TARGET AUDIENCE

The **primary audience** is Aqua for All and other outcome funders or investors applying SIINC and other outcome-based finance mechanisms. The methodology and tool are intended primarily to support transaction design, monitoring, evaluation, and reporting within these mechanisms. Therefore, it should be technically robust, while remaining practical for repeated use in transaction design, portfolio management, knowledge sharing and reporting.

Secondary audiences may include other water and sanitation enterprises, donors, development finance institutions, sector organisations, and international organisations interested in the relationship between water and sanitation and health, as Aqua for All intends to make the final methodology and tool publicly available under a Creative Commons licence to support broader sector learning and application. Consultants are encouraged to discuss how any proprietary contributions could be reflected in such an arrangement. However, all intellectual property rights relating to the final deliverables will remain with Aqua for All.

WORK PLAN

The assignment is expected to be structured around four main phases.

Phase 1: Evidence and tool mapping

- Review evidence linking water and sanitation outputs to health outcomes.
- Map existing tools, methodologies and datasets.
- Assess suitability for outcome-based finance applications.

Phase 2: Methodology and additionality framework development

- Develop the water and sanitation-health estimation methodology².
- Develop guidance for assessing health additionality.
- Define assumptions, data requirements and confidence levels.

² Where supported by sufficiently strong evidence, the consultant may develop health-impact conversion factors. For example, if a transaction verifies that 1,000 households were additionally reached because of the incentive, the tool may apply a context-appropriate factor to estimate associated diarrhoea cases avoided per household-year.

The methodology should address **evidence strength** (how strong is the evidence that a type of water and sanitation intervention leads to a health outcome), **attribution** (to what extent can the estimated health outcome reasonably be linked to the enterprise/intervention), **additionality** (to what extent did the SIINC or outcome-based incentive generate additional reach, quality improvement or sustained service use, i.e. lead to impact that would not have happened without the incentive) and **verification feasibility** (what can be directly monitored versus modelled or estimated), and provide guidance for communicating the resulting estimates responsibly.

Phase 3: Tool development and internal testing

(The last two phases could be done by a different consultant if needed)

- Develop and test a future proof and adaptable prototype tool.
- Pilot using sample cases from Aqua for All-supported enterprises

Phase 4: Validation and finalisation

- Validate methodology and tool with internal and external experts.
- Finalise methodology, tool and guidance documents.

BUDGET AND DELIVERABLES

Consultants are requested to submit a financial proposal, including a detailed Level of Effort (LoE) indicating the number of days and daily rates per role, as well as any travel, workshop, software, data and other costs required to complete the assignment. The budget should be structured by phase and deliverable.

The final budget will be agreed during the contracting stage and should align with the proposed methodology, team composition, validation approach, and technical format of the tool.

Expected deliverables

The consultant is expected to deliver the following outputs:

1. Inception report
2. Evidence review and methodology/tool landscape assessment
3. Draft methodology and prototype tool
4. Validation and testing report
5. Final methodology, tool and user guide
6. Optional: Executive summary and external-facing communication package

Indicative timeline

The assignment is expected to take approximately four to five months. Indicative timeline:

- Consultant selection and contracting: end of October 2026
- Inception report: mid-November 2026
- Evidence review and landscape assessment: end of November 2026
- Draft methodology and prototype tool: mid-January 2027
- Testing and validation report: End of January 2027
- Final methodology, tool and user guide: Mid-February 2027

CONSULTANT PROFILE

Given the interdisciplinary nature of the assignment, proposals from small teams or consortia are encouraged. The assignment requires a combination of water and sanitation-health research expertise, quantitative modelling, tool development and familiarity with impact measurement or outcome-based finance.

The consultant team should ideally include:

1. **Senior water and sanitation-health research specialist**
Demonstrated expertise in water and sanitation, health and impact measurement, including experience translating research and evidence into practical tools and decision-making frameworks.
2. **Data and tool development specialist**
Demonstrated experience in quantitative modelling, data analysis and user-friendly tool development, preferably using platforms such as Airtable, mWater or Power BI.
3. **Optional: Outcome-based finance or SIINC specialist**
Experience with results-based or outcome-based financing, SIINCs, additionality assessments and/or impact verification.

PROPOSAL SUBMISSION REQUIREMENTS

Interested consultants or consultant teams should submit:

- A technical proposal responding to the ToR
- Proposed methodology and workplan
- Proposed timeline by phase and deliverable
- Team composition and CVs of proposed team members
- Examples of relevant previous work
- Detailed financial proposal, including daily rates, estimated days per team member and any additional costs

The proposal should be submitted by **Monday 26 October, COB CET** to ILF@aquaforall.org with the subject line: water and sanitation-health research & tool development.

Possible questions need to be submitted by Monday 19 October the latest and will be answered by Aqua for All on Wednesday 21 October.

PROPOSAL EVALUATION

Proposals will be assessed based on:

- understanding of the assignment
- methodological quality
- relevant water and sanitation-health expertise
- tool development capability
- experience with impact measurement and finance
- value for money
- quality and practicality of the proposed approach