



# PRO-WASH WEBINAR SERIES ON OPERATION AND MAINTENANCE (O&M) OF WASH INFRASTRUCTURE

JANUARY, 2021

## INTRODUCTION

Operation and maintenance (O&M) of an infrastructure asset includes regular maintenance, repairs, routine checks and adjustments, as well as the necessary financial, human, and institutional resources. In the past, the construction or installation of water, sanitation and hygiene (WASH) infrastructure sometimes took precedence over O&M considerations. Up-front capital costs were emphasized over longer-term O&M costs and requirements. Yet without O&M, infrastructure breaks down. Figures show that a large proportion of WASH infrastructure in developing countries fails after only a few years<sup>1</sup>. This represents a huge loss of value, and has concentrated attention on O&M and the cost-effective investment that it represents<sup>2</sup>.

O&M is now seen as integral to the design of WASH infrastructure, and recent work has focused on the different dimensions of O&M. There is no “one-size-fits-all” approach to O&M, since costs, responsibilities, spare parts, skills, accountability frameworks and technical requirements all depend on the type of infrastructure and its context. The growing influence of holistic approaches such as integrated water resources management (IWRM) in the WASH sector, alongside important sustainability considerations, underlines the need to understand O&M from a variety of perspectives.

## AIMS OF THE WEBINAR SERIES

- To share recent initiatives, advances and thinking around WASH infrastructure O&M in developing countries with PRO-WASH partners, associates, WASH specialists, and other interested parties;
- To give a voice to stakeholders in developing countries on the topic of O&M, and to stimulate discussion around innovative, locally-developed and sustainable solutions, as well as contemporary challenges;
- To discuss the various interlinked (systems) dimensions of O&M and its links with resilience and integrated water resource management (IWRM);
- To increase the availability and accessibility of O&M resources such as guidelines and training courses.

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<sup>1</sup> Research suggests non-functionality figures of between 30% and 40%. See Lockwood H 2019 [Sustaining Rural Water: A Comparative Study of Maintenance Models for Community-Managed Schemes](#)

<sup>2</sup> For example, it's estimated that a 3 to 5 fold increase in net value is realized when a suitable O&M program is implemented. See Whinnery J 2012 [A Well Construction Cost-Benefit Analysis \(CBA\): For Water Supply Well Guidelines for use in Developing Countries](#)

## FORMAT AND DATES

Eight webinars will be held, each focusing on a different aspect of O&M of WASH infrastructure. They will be divided into two blocks of four webinars each, the first in the spring and the second in the fall (autumn) of 2021. Each webinar will host an expert O&M practitioner or O&M project leader, who will make a twenty minute presentation. This will be followed by a discussion / questions and answers, open to all attendees. A PRO-WASH moderator will introduce the speaker, and manage the discussion. Each webinar will last for a maximum of one hour. Webinar recordings and summaries will be posted on-line. A PRO-WASH two-page learning brief will be produced at the end in English and French, summarizing the findings and outcomes of the webinar series, and including recommendations. Dates for the spring series are: **2 and 16 March**, and **6 and 20 April**; and for the fall series: **1 and 21 September**, and **5 and 19 October, 2021**. The start time for each webinar is 09:00 (EST).

## SPRING SERIES WEBINARS

<p><b>March 2</b></p>	<p><b>LoWASH, Ethiopia</b></p> <p>The USAID-funded Lowland WASH Activity in Ethiopia has recently produced engineering design guidelines for WASH infrastructure, with the objective of improving construction quality and making routine O&amp;M simpler and cheaper. This webinar will explore the links between construction standards and O&amp;M approaches, present some of the advances that the USAID Lowland WASH Activity and its partners have made, and describe proposed next steps for the project.</p> <p>Speaker: Petros Birhane, Chief of Party, USAID Lowland WASH Activity.</p>
<p><b>March 16</b></p>	<p><b>Groundwater Management Institute, Southern African Development Community (SADC)</b></p> <p>The SADC Groundwater Management Institute has developed a new O&amp;M manual and training course for groundwater installations across southern and central Africa. This webinar introduces this work, focusing on the practical obstacles to rolling out O&amp;M training in the region, and making region-specific O&amp;M resources more widely available.</p> <p>Speaker: Kevin Pietersen, L2K2 Consultants (Pty) Ltd / University of the Western Cape.</p>
<p><b>April 6</b></p>	<p><b>Chris Hani District Municipality, South Africa</b></p> <p>Success with hybrid models of O&amp;M provision in the largely rural and impoverished Chris Hani municipality have lessons for the tradeoff between technical and institutional complexity in O&amp;M, as well as financial sustainability and the role of the private sector. The work has implications for financial and institutional constraints in similar settings elsewhere in Africa.</p> <p>Speaker: James Gibson, water services engineer, IRC associate in the Hague.</p>
<p><b>April 20</b></p>	<p><b>Nobo Jatra, Bangladesh</b></p> <p>Nobo Jatra – New Beginning is a seven-year (2015-2022) USAID Bureau of Humanitarian Assistance funded project led by World Vision in Bangladesh. Nobo Jatra’s goal is to improve gender-equitable food security, nutrition and resilience in southern Bangladesh. This webinar will explore lessons from this project’s successes with the O&amp;M of reverse-osmosis water treatment plants, and financial / institutional sustainability.</p> <p>Speaker: Saeqah Kabir or Rakesh Katal, Nobo Jatra.</p>

## FALL SERIES WEBINARS

<p><b>September 1</b></p>	<p><b>UPGRO</b></p> <p>UPGRO Hidden Crisis (2015-2020) was an interdisciplinary research program examining water point functionality in Ethiopia, Uganda and Malawi. The main focus was rural groundwater supplies, examining both the extent and reasons for poor functionality through extensive field campaigns. This webinar will share knowledge regarding the advances and innovations in this area achieved by the project</p> <p>Speaker: Alan MacDonald, British Geological Survey.</p>
<p><b>September 21</b></p>	<p><b>Uptime Consortium</b></p> <p>Uptime is a global consortium (including FundiFix, Water for Good, Water Mission, Whave, UDUMA and Oxford University) working to deliver drinking water services to millions of rural people through long-term, performance-based funding to achieve Sustainable Development Goal 6.1. Uptime’s work in making rural water services in Africa more reliable through concessionary funding and local revenue generation has shown promising results in the area of rural water scheme O&amp;M, and ongoing functionality.</p> <p>Speaker: Duncan McNicholl, Uptime Consortium.</p>
<p><b>October 5</b></p>	<p><b>US Agency for International Development</b></p> <p>USAID is deeply engaged with questions of professionalization, accountability, private-sector engagement, and the ultimate role of regulators in WASH service delivery in emerging economies. This webinar will highlight USAID’s perspective and current thinking on O&amp;M, and the implications for USAID partners, award holders and in-country specialist Development Food Security Activities (DFSAs).</p> <p>Speaker: Liz Jordan, Water and Sanitation specialist, Center for Water Security, Sanitation and Hygiene, USAID.</p>
<p><b>October 19</b></p>	<p><b>Wrap-up panel discussion</b></p> <p>This panel discussion will bring together the webinar series speakers, as well as other O&amp;M practitioners, stakeholders, and interested parties. It will take the form of a 30 minute Q&amp;A panel session with a PRO-WASH moderator, followed by questions.</p>

## FOLLOW-UP

The feedback and discussions from the webinars, as well as input from partners and DFSAs, will be used to identify training and capacity building needs around the subject of O&M of WASH infrastructure. For example, it is envisaged that a mix of webinars and hands on/practice sessions could then be launched, drawing on the content and guided by the facilitators, and tailored to the contexts and problems identified. The summary learning brief will highlight some recent advances in the field of O&M and WASH infrastructure.