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Concept Note

Sustainable WASH Systems Learning Partnership

# Professionalized Maintenance for Rural Water Service Provision: Toward a Common Language and Vision

March 2021

## Purpose

The purpose of this brief is three-fold: to propose a common umbrella term for improved maintenance of rural water services, to outline and define maintenance characteristics, and to consider the implications from a system-based perspective for supporting the emergence and growth of such maintenance approaches. This note draws from lessons generated by the Sustainable WASH Systems Learning Partnership (SWS) funded by the United States Agency for International Development (USAID),[1] along with the efforts of governments and other organizations active in promoting improved maintenance.

**Professionalized maintenance** involves trained personnel working within clear legal, policy, contractual, and accountability frameworks, who are monitored and evaluated against performance indicators and with agreed financing arrangements and transparent, regulated pricing structures to carry out repairs and support services for rural water infrastructure.

## Background

The 2030 Sustainable Development Goals (SDGs) set ambitious targets to provide safely managed water for all. We are at a pivotal point toward both closing the water access gap, and, ensuring that such services are maintained adequately. Despite years of major capital investments by governments, donors, and NGOs, continuity and quality of water services experienced by rural populations around the globe remain largely poor.

Currently, water maintenance in rural regions is not uniform. Maintenance functions, whether performed well or poorly, are a feature of different management arrangements from self-supply and community management to rural utility operators. In some cases, maintenance functions are codified within written agreements. In many instances, however, they tend to be informal, poorly addressed, and not implemented systematically. Improving maintenance provision is increasingly recognized as a critical element to achieve better and more sustainable WASH outcomes, along with increasing economies of scale and more structured support for the sector.

Over the past four years, SWS has focused on better understanding WASH maintenance approaches and the system conditions required to set them in place. To

1 SWS works with partners in Ethiopia, Kenya, and Uganda to research and learn about systems-based approaches to improve the sustainability of WASH. Learn more here: https://www.globalwaters.org/sws.

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accomplish this we have worked with central and local governments and partners, including Whave (Uganda), FundiFix (Kenya), IRC (Ethiopia and Uganda), and other initiatives working on maintenance in different contexts. Although it is difficult to isolate maintenance functions from broader aspects of operations and management, this learning effort is focused on understanding the barriers and opportunities to improving maintenance of rural water, and how to make these services more effective and scalable from a systems perspective.

## Defining Terms: Professionalized Maintenance

SWS partners have used several approaches and descriptors to maintenance. More broadly, we see different terms or labels being used to capture water maintenance activities. Often, these terms are used loosely and even interchangeably. They include periodic, preventative, preventive and/or corrective maintenance, reactive, effective maintenance, guaranteed maintenance services, or scheduled maintenance, among others.

To arrive at some consistency in the sector by building common language and definitions around maintenance provision, we propose the term **professionalized maintenance**. It is recognized that this is one element, albeit a crucial one, to professionalize WASH service delivery more broadly and that some of the characteristics as set out below may apply to wider elements of rural water provision.

The concept of professionalized maintenance can be used within different institutional stakeholder contexts (e.g., private sector, public entities, social enterprises, or NGOs, whether operating at national or decentralized levels) and is not necessarily synonymous with profit generation. Maintenance is provided for a range of water supply technologies in a variety of contexts, from stable and advanced sectors to fragile states with weak institutions where existing maintenance policies may not be enforced. As such, maintenance provision currently faces significant challenges, and the goals set out below are therefore intended to be aspirational. We propose that maintenance provision is considered professionalized when it meets the following:

1. The share of risks and responsibilities of capital and other forms of maintenance accorded to all parties, and the ability to delegate functions related to maintenance, are clearly defined between the owner of the underlying asset, the water operator (if appropriate), the maintenance provider, customers, and government in law and/or by contract as needed.
2. The maintenance provider is constituted as a legal entity with the ability to contract with customers, government, and/or other public bodies (e.g., legal community entities, institutions such as schools).
3. The provider is registered with a relevant sector authority (e.g., national or local government or regulatory body) and formally mandated to provide such services under existing policy or innovations promoted by the sector.
4. The provider operates within a defined geographic and/or administrative boundary that is formally recognized as a service area and is described as such by the relevant sector authority. To encourage competition, more than one provider may be approved to operate in a single concessionary area and across different types of customers (e.g., communities, institutions, etc.).
5. The maintenance provider roles, activities, and outcomes to be delivered are formalized through written contracts, which are reviewed and updated on a regular basis. Contracts provide for regular performance monitoring and include accountability clauses, for both providers and customers, with appropriate channels for complaints to be raised.
6. Contracts for maintenance provision are structured around performance-based targets and include measurable indicators; such performance indicators can include the level of service provided, downtime, repair time, tariff collection ratios, etc., and may be linked to incentive payments or financial penalties for the provider.
7. Maintenance provider performance, adherence to contracts, and the responsibilities of customers to pay for services is subject to oversight by local or deconcentrated offices of government, or ideally an independent regulator.
8. Fees paid by customers for maintenance services are transparent and subject to price regulation, accounting for local economics (and where market forces do not operate effectively), which will ideally be set by an independent regulatory body.
9. Where tariff revenues alone cannot meet the costs of service provision, a subsidy mechanism is in place and the funding sources (e.g., public, donor, private capital) are transparent and have adequate governance oversight.
10. Maintenance providers receive continual training financed internally, by a government agency, or through associations or professional membership bodies. Other parties, such as community customers, also receive support and are incentivized to fulfill obligations.

## Strengthening WASH Systems to Support Professionalized Maintenance

The reality of ideal maintenance provision in many countries is still a long way off. We realize that provider capacity may be limited. We also realize existing water supply infrastructure is often poor to begin with and markets for maintenance services can be limited and are rarely commercially viable. Also, customers may not always be willing to pay for a service. In addition, current sector policies do not always incentivize maintenance, public investment is inadequate, regulation and oversight are often weak, and practical challenges exist—such as obtaining spare parts. Finally, government lack of accountability to fully address maintenance challenges creates a vacuum often filled by NGOs and aid programs. This scenario tends to fragment efforts away from comprehensive and lasting solutions.

Despite these challenges, progress is being made toward satisfying several of the above characteristics as maintenance approaches move along a continuum, from ad hoc and loosely organized responses to more formalized and structured arrangements that are delivering improved outcomes in terms of service levels and reliability. SWS partners and other organizations can provide pointers as to how professionalized maintenance can be better supported by strengthening key elements of the WASH system. These lessons include the ideal operational scale, the critical role of decentralized local government, and the importance of strengthening regulatory policies and ensuring their application. Adequate public financing for long-term indirect costs, including subsidies for maintenance, is also crucial for ensuring that where good policies exist on paper, these are put into practice.

We have also found that the behaviors and incentives of system actors are critical enablers—or barriers—to supporting professionalized maintenance. One key insight is that to function well, all actors in the system must meet minimum obligations and work collectively. This holds true for not only maintenance providers and service consumers, but (local) governments, politicians, NGOs, charities, research projects, and aid programs. Generating positive political support and working with these external actors to ensure their valued support aligns, rather than undermines, efforts at establishing and scaling maintenance efforts is also critical. Differing perspectives and trust are important dimensions in the dynamic between system actors, especially where there are socio-cultural expectations around the role of the state, wariness of private providers, and questions about payment for water and the exclusion of marginalized groups. Seasonality and availability of alternative, often unsafe, water sources for part of the year can be important behavioural drivers. Coordinated approaches (e.g., regular multi-stakeholder meetings) are instrumental to identify and address some of these expectations to overcome barriers to acceptance of professionalized maintenance services at local level.


PHOTO CREDIT: WHAVE

Technicians rehabilitate a community hand pump in Uganda.

## Acknowledgements

This note is based on learning generated by SWS. It was drafted by Harold Lockwood of Aguaconsult UK and has benefited from review and inputs of the following: Cliff Nyaga of FundiFix, Kenya; Stef Smits of IRC, the Netherlands and Lemessa Mekonta of IRC, Ethiopia; Adam Harvey, Elizabeth Buhungiro, and Joel Mukanga of Whave, Uganda; Prof. Robert Hope of Oxford University, UK; Sean Furey of The Rural Water Supply Network, Switzerland; Duncan McNicholl of Uptime Consortium, Tanzania; Vincent Casey of WaterAid, UK; and Susanna Smets of the World Bank, USA.

**About the Sustainable WASH Systems Learning Partnership:** The Sustainable WASH Systems Learning Partnership is a global United States Agency for International Development (USAID) cooperative agreement to identify locally-driven solutions to the challenge of developing robust local systems capable of sustaining water, sanitation, and hygiene (WASH) service delivery. This report is made possible by the generous support of the American people through USAID under the terms of the Cooperative Agreement AID-OAA-A-16-00075. The contents are the responsibility of the Sustainable WASH Systems Learning Partnership and do not necessarily reflect the views of USAID or the United States Government. For more information, visit www.globalwaters.org/SWS, or contact Elizabeth Jordan (EJordan@usaid.gov).