
Sustainability and Rural Water Development

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EXECUTIVE SUMMARY

The persistent cycle of poverty and lack of access to safe water jeopardizes all other interventions aimed at bringing people out of extreme poverty, and rural water supply remains one of the most challenging barriers to achieving universal coverage of safe water.

Only 55% of those living in rural areas enjoy the highest level of drinking water service, compared to 85% of their urban counterparts.

While many rural communities gained access to a source of safe water over the past few decades, many of those water points failed, wasting billions of dollars and years of effort. The sustainability of rural water supply became a central concern, and even recent estimates put water point non-functionality at 44% in some areas.

One of the core strategies of sustainability is community ownership, where water point users are empowered to maintain and repair water points with locally available resources. This community management model relies primarily on small, local representative groups of men and women designated as water committees. Water committees are trained by NGO staff and are accountable for the continued functionality of a water point. However, not all water committees are created equal, and effective water committees share several common characteristics.

Lifewater recently completed research on the sustainability of its water points in rural Uganda over the past eight years and found 92% functionality. The programs yielding these results invested heavily in the engagement and training of water committees, suggesting that water committees are stronger with more training, and strong water committees are able to overcome many other variables that could jeopardize the long-term sustainability of a community's water point.

Six Characteristics of an Effective Water Committee

Understands its responsibility to the users/community

Represents the community

Understands the water point itself and how to prolong functionality

Establishes savings to pay for the long-term costs

Maintains relationships with local officials and professionals

Meets regularly

The following questions may help evaluate a rural water development program to determine whether the program employs strategies that lead to sustainable improvements and lasting results.

- How many of the water points you worked on in the past (1/5/10 years) are working right now?
 - What strategies are you using to improve sustainability of the water points you install?
 - When a water point fails, how does it fail?
 - What are the essential functions of the water committees you train?
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Sustainability and rural water development

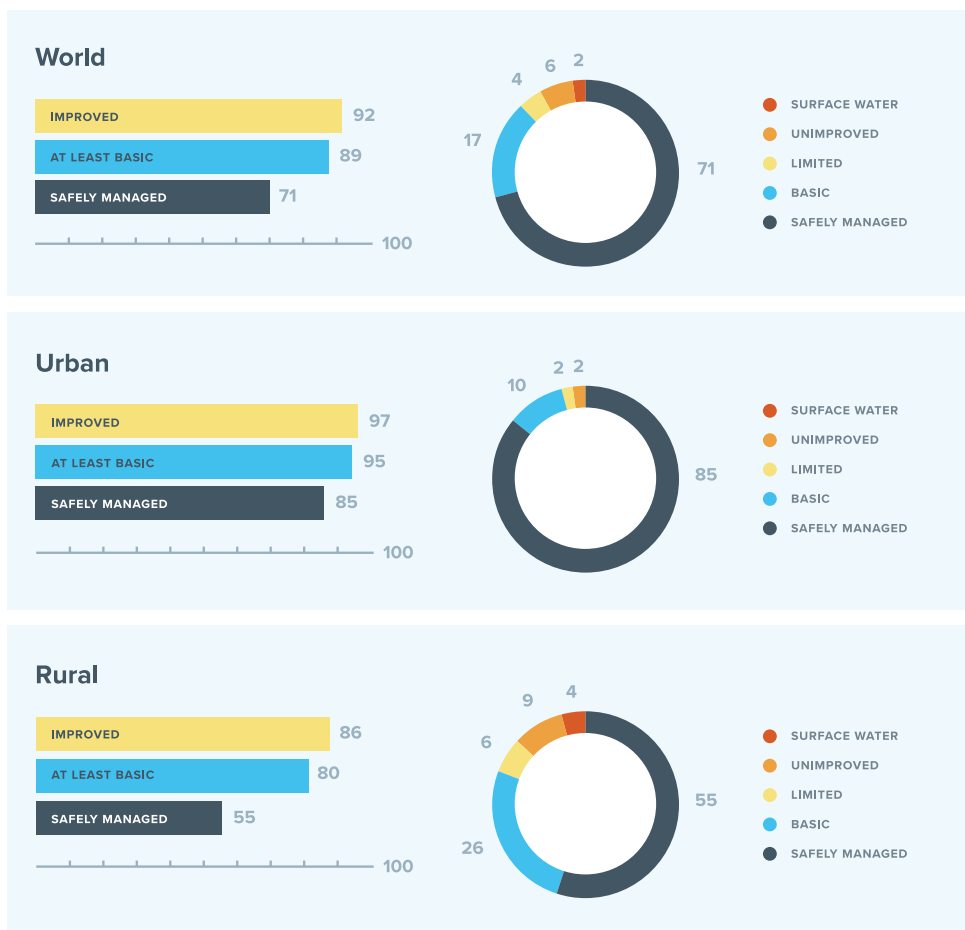
The persistent cycle of poverty and lack of access to safe water jeopardizes all other interventions aimed at bringing people out of extreme poverty, and rural water supply remains one of the most challenging barriers to achieving universal coverage of safe water.

While many rural communities gained access to a source of safe water over the past few decades, usually with the assistance of local government or outside organizations, many of those water points failed, wasting billions of dollars and years of effort. While some water points failed for reasons beyond local control, many water points could have been fixed or rehabilitated with locally available tools and resources.

Organizations and governments responded to this sustainability problem by implementing strategies that increase a community's sense of ownership of a safe water source as well as strategies that increase local capacity to maintain and repair the mechanisms that help people access safe water. One of the more widely-used strategies is to build and train a small, local representative group tasked with maintaining the safe water point, called "community management" or a "water committee."

This paper explores the problem of rural water supply in terms of global poverty and identifies many of the factors leading to failed and unsustainable rural water development projects. It then identifies strategies that are currently working and shows how Lifewater's program results support continued investments in water committees as an effective strategy for sustainability of rural water points. Finally, this paper offers questions that help to determine whether a rural water point has the necessary

1 Population using drinking water sources meeting SDG criteria for safely managed services, global, rural, and urban 2015



Source: Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines. Geneva: World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), 2017, 23.

ingredients for long-term functionality.

Why is rural water supply important?

Billions of people gained access to safe water in the past few decades, but 844 million still lack access to a source of safe water near their home or school.¹ Rural inhabitants make up a disproportional number of those who remain without safe water, falling well below the global average.

While 71% of the world has a safely managed water source, only 55% of those living in rural areas enjoy the highest level of drinking water service, compared to 85% of their urban counterparts. Even when basic services are included, about one in five rural dwellers still lacks any nearby source of safe water,

¹ Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines. Geneva: World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), 2017, 3

whereas one in 20 urban dwellers experience this lack. Rural communities are more likely to collect water far from home and more likely to collect unsafe surface water, including water from lakes, ponds, rivers, and streams.²

Rural water supply is a significant barrier to achieving universal safe water coverage. More people are moving to cities, where it is easier to reach the highest level of water service – where there are reliable sources free from contamination available on the premises. Rural communities, however, are more remote, spread out, and sparsely populated. Reaching the inhabitants of some of the world’s more remote places can be difficult, time-consuming, and expensive.

Only by pursuing strategies that specifically target these rural communities will universal safe water coverage be achieved. Moreover, there is significant overlap between the rural populations without safe water and populations living with persistent extreme poverty. More than half of the people without basic drinking water live in Sub-Saharan Africa.³ There are 10 countries in the world where more than 20% of the population is without basic water service, and eight of those 10 countries are in Sub-Saharan Africa. Several of these countries have less than 50% coverage.⁴

Universal safe water coverage is one of the Sustainable Development Goals⁵ seeking to eradicate extreme poverty, and it is a necessary step in achieving the vision that every child has safe water and the opportunity to live free from preventable, water-borne disease.⁶

Rural drinking water service levels

The WHO/UNICEF Joint Monitoring Programme (JMP), which reports regularly on safe water coverage, recently released a breakdown of drinking water service levels that offers a more detailed look at how people are accessing safe water.

Previously, the JMP reported on “improved” water sources, including any access to water from a protected source – everything from protected springs and wells shared by the community to water piped into homes. In order to hone in on water development projects that bring the most benefit to stakeholders, “improved” now includes three different levels of water service: “safely managed,” “basic,” and “limited.”⁷

“Safely managed” includes water that is free from contamination, available when needed, and accessible on the premises. “Basic” includes water from an improved source that is collectible in less than thirty minutes. “Limited” service is water from an improved source,

² Ibid., 23.

³ Ibid., 3.

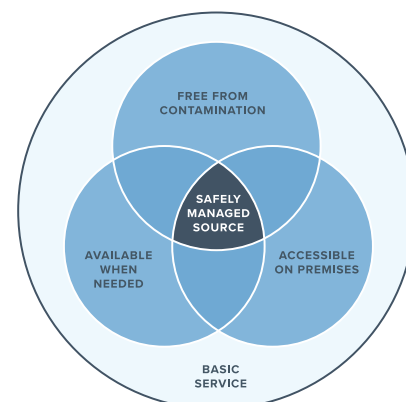
⁴ Ibid., 11.

⁵ SDG Global Target 6.1 is “By 2030, achieve universal and equitable access to safe and affordable drinking water for all.”

⁶ Safe water is essential to eradicating water-borne disease, but it is not sufficient in itself. Improved sanitation and hygiene are both necessary to effectively address water-borne illnesses and improve long-term health, but discussion on this topic is beyond the scope of this paper. For more discussion on the importance of WASH (water access, sanitation, and hygiene) together, see “WASH: A High Value Kingdom Investment,” Ashe Institute: Lifewater International (2014), available at <https://lifewater.org/resource/wash-high-value-kingdom-investment/>.

⁷ WHO and UNICEF, *Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines*.

2 Rural drinking water service levels



SERVICE LEVEL

Safely Managed

Drinking water from an improved water source that is located on premises, available when needed and free from faecal and priority chemical contamination

Basic

Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing

Limited

Drinking water from an improved source for which collection time exceeds 30 minutes round trip, including queuing

Unimproved

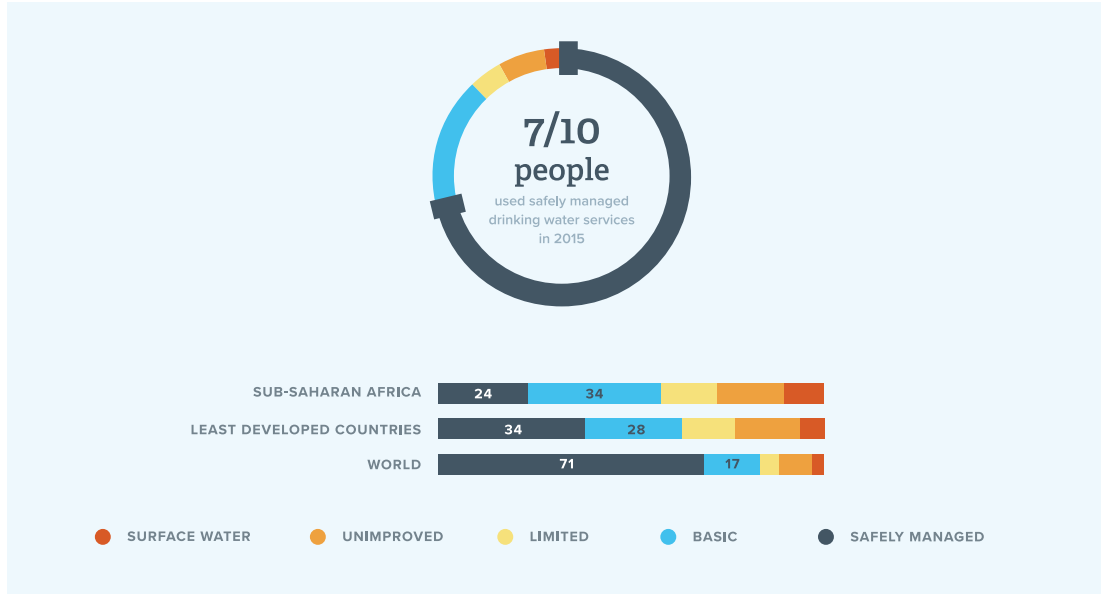
Drinking water from an unprotected dug well or unprotected spring

Surface Water

Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal

Note: Improved sources include: piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water.

Source: *Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines*. Geneva: World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF), 2017, 8.



Source: *Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines*. Geneva: World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), 2017, 3.

but more than 30 minutes away, which reflects the time burden of collection, carried mostly by women and children. Ultimately, water development programs that move people up the service ladder are doing more to alleviate poverty and eradicate water-borne disease.

In rural areas, only 55% of the population has a safely managed source of water. An additional 26% has basic service, leaving nearly one in five with little or no access to safe water.⁸ The situation is more acute in Sub-Saharan Africa, where less than a quarter of the population has a safely managed source of safe water. An additional third has basic water services, leaving more than 40% of people with little or no safe water.

Rural Water Points

The factors leading to such low levels of safely managed (and even basic) water services in rural areas are related to the remoteness and widely dispersed populations of many areas. In urban and surrounding areas, where people are living close together, there is more water piped into homes, often from municipal systems. Four in five urban dwellers have piped water, and over one billion people gained access to a piped water source in the past 15 years.⁹ People in urban areas also have more reliable access to bottled water or water delivered by truck.

By contrast, rural water points are often shared with the community and require some walking, waiting, and carrying. Safe water sources often look like wells capped with a hand pump, protected springs, and collection tanks (cisterns and rainwater). While these water points provide reliable sources of water free from contamination, there may not be enough water points in a region for the population it should sustain, and people travel long distances and/or wait in

long lines to access these water points. Thus, even though safe water is available, it often comes with a time burden that brings it below a “basic” level of service.

Why is sustainability in rural water supply important?

Sustainability in this context is the ability of a water point to function as a source of safe water continuously and indefinitely. Development theorists and practitioners study the necessity, nature, and amount of continued external investments, which is discussed below, but the goal of sustainability remains consistent: to ensure people have the safe water they need with minimal disruption. “Functionality” is used to describe the ability of a water point to deliver safe water, so maximizing functionality over the long term is the goal of sustainability.

Sustainability is important because it is necessary to realize the full benefits of an intervention. Safe water is a constant necessity; even short disruptions to safe water supply can be harmful. Without safe water, rural populations, which are disproportionately poor, remain stuck in a cycle of illness and poverty. More than three out of four people in the world

⁸ Ibid., 23.

⁹ Ibid., 12.

classified as “extremely poor” live in rural areas.¹⁰ When taking a multi-dimensional look at poverty, 85% of the poor are rural dwellers.¹¹ Lack of access to basic services like safe water and sanitation contribute to a disease burden that keeps children out of education and adults out of productive labor, continuing the cycle.

The cycle of water-borne disease and poverty not only carries great human cost, but also great economic and social costs. Diarrhea is a leading cause of death for children under five, and lack of safe water, sanitation, and hygiene contributes to nearly 10% of the global disease burden.¹² Illness and the loss of school days and work days lead to lower family incomes and increased spending on treatments. Women and girls are particularly affected because the task of collecting water and caring for sick family members falls primarily on them. Furthermore, lack of safe water can lead to unstable populations (farming and herding communities must move to find water) and even civil unrest or violence.

With a sustainable source of safe water, children can grow up healthy and educated. Their parents can work both in and out of the home, and save more of their income that they used to spend on medicine. Girls can stay in school, and women can engage in more community leadership. Households can work together and live in more permanent, peaceful communities. Because of their extreme poverty and relatively low levels of access to safe water, rural communities stand to gain the most from reliable, functional safe water sources close to home.

Rural water point sustainability so far

Data on the sustainability of rural water points is sparse. Global evaluations are underway but incomplete. While data exists for some countries, comprehensive statements and comparisons of long-term water point functionality are not yet possible. The

lack of available data is the result of many factors, including: the lack of effective record-keeping and coordination on rural water points installed in the past, the lack of national studies available from many countries (particularly those with low rural water coverage rates), and the expense of long-term studies.

Nevertheless, some data points emerged which paint a disappointing picture. For many years, “securing the long-term sustainability of supplies took second place to achieving the targets for coverage.”¹³ While billions of people received safe water for the first time at some point in the past 25 years, many of them no longer use that source of safe water because it stopped functioning properly or is contaminated. Many water points were not sustainable, and new external investment was necessary to reestablish access to safe water.

A recent study of eleven countries, most of them in Sub-Saharan Africa, concluded that only 78% of the rural water points were functional. The same study determined that 15% of water points failed within the first year, and 25% within four years.¹⁴ One organization’s study found that nearly one in three (32%) of its water infrastructure projects completed in Mozambique in the last decade were only partially functional or non-functional.¹⁵ Another study found functionality of rural water points in some regions of Malawi at 64-70%.¹⁶ In Ethiopia, 26% of hand pumps and piped water schemes were found non-functional.¹⁷ Beyond the empirical data, practitioners of rural water development recognize a strong demand for repairs to previously installed hand pumps across many countries and regions.

What factors influence sustainability?

Several factors influence how long a water point will function after the initial intervention. Several factors also influence whether and how long until a water point will return to functional status after a breakdown. Some of these factors are consistent across all water

¹⁰ Olinto et al., *The State of the Poor: Where Are The Poor, Where Is Extreme Poverty Harder to End, and What Is the Current Profile of the World’s Poor?*, *Economic Premise*, World Bank Note Series No. 125, October 2013, available at worldbank.org/economicpremise (accessed 10/3/17).

¹¹ Alkire et al., *Poverty in Rural and Urban Areas: Direct Comparisons Using the Global MPI 2014*, Oxford Poverty and Human Development Initiative, June 2014, available at ophi.org.uk (accessed 10/2/17).

¹² *Mortality and burden of disease from water and sanitation*, World Health Organization Global Health Observatory data, available at http://www.who.int/gho/phe/water_sanitation/burden/en/index2.html (accessed 10/3/17).

¹³ Luke Whaley and Francis Cleaver, “Can ‘functionality’ save the community management of rural water supply?”, *Water Resources and Rural Development* 9 (2017) 57.

¹⁴ Banks, B. & S. G. Furey, “What’s Working, Where, and for How Long. A 2016 Water Point Update to the RWSN (2009) statistics,” *Rural Water Supply Network* (2016), available at <http://www.rural-water-supply.net/en/resources/details/203>.

¹⁵ Results are from both urban and rural regions. Ruth Hinds and Alves Nhaurire, “Monitoring and sustaining services – lessons learned from WaterAid’s post-implementation monitoring surveys and the use of information and communications technology,” *WaterAid*, 2013, available at <http://www.rural-water-supply.net/en/resources/details/724>.

¹⁶ Ellie Chowns, “Is Community Management an Efficient and Effective Model of Public Service Delivery? Lessons from the Rural Water Supply Sector in Malawi,” *Public Administration and Development* 35, at 267 (2015).

¹⁷ World Bank, 2017. “Sustainability Assess of Rural Water Service Delivery Models: Findings of a Multi-Country Review.” World Bank, Washington DC, at 25.

points, like mechanical and environmental breakdown over time. In rural areas, where cisterns, protected springs and wells with hand pumps are widely used, the mechanisms of pumping and storing break down over time. Weathering, erosion, and general wear crack metal, concrete, and plastic alike. Changing climates and environmental factors like drought and flooding compromise the availability and safety of water.

Sustainability also rests on a number of variables that can be assessed and addressed before, during, and after the installation of a water point.¹⁸ Some variables depend on external circumstances, like the availability of spare parts and repair professionals, but many of these variables depend on human behaviors, like how the water point is used and whether water point users save money in anticipation of repairs.

At the time of installation, water points that are well-constructed and use better-quality materials last longer before a breakdown, although they may be more expensive. Regardless of initial quality, however, wells and hand pumps at many rural water points will have parts that need repair eventually. Metal or plastic pipes wear down, crack, and leak. Hand pump handles and moving parts can break from misuse and overuse. The concrete used to protect natural springs or support cisterns will crack. Plastic storage tanks can also wear down or leak. To make a water point sustainable, a plan for maintenance and repair needs to exist even before the water point is installed.

Some repairs can be done by non-specialized members of the community with locally available materials, especially if community members are included in the construction process and have a better understanding of the water point itself. Many repairs, however, require specialized knowledge and parts. For these repairs to happen quickly (ideally within a few days), there needs to be a qualified repair person in the region, a supply chain for replacement parts for the water point, sufficient money to pay for both the parts and labor of the repair, and a connection between

the community and the people who can repair it. All of these requirements are more difficult to meet in rural and remote areas.

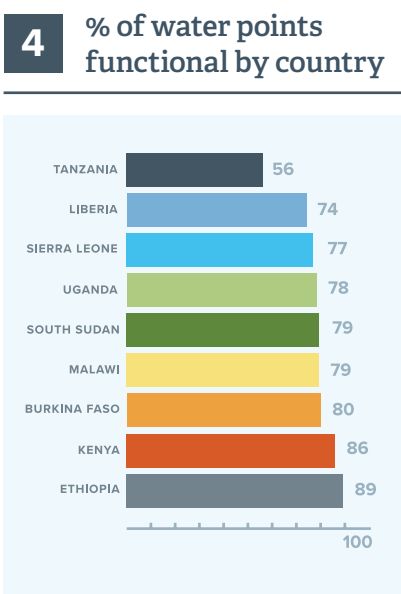
What is working and not working to address these factors?

In the last few decades of the twentieth century, donors working to help poor, rural communities get safe water intervened in ways that failed to prepare communities to realize lasting benefits. As described above, many water points failed within months or years.

Some water points failed because they were damaged by animals or ill-meaning neighbors. (Some were intentionally destroyed during violent conflict.) Some experienced predictable breakdown and were never repaired because the community did not understand who should or could repair it. Some water points were installed in areas that became inaccessible or uninhabited.

Most of these failures could be interpreted as the result of insufficient collaboration between the donor and the community. “Parachuting” into an area to drill wells and then quickly moving on to another community, although providing immediate relief, did not end in long-term health or alleviation of poverty. This model of short-term, limited engagement when installing a water point resulted in communities who experienced disempowerment, dependency, and continued water-borne disease. External donors, especially non-governmental organizations, needed a new strategy.

Relying on the national and local government alone, with the assumption that it will correct the problem of insufficient collaboration or provide lasting engagement, can compromise coverage and sustainability. Practically, in many of the countries where water coverage is low, the ability of the government to take on the task of providing water to remote, rural communities is limited because of a lack of human or financial resources. Often, when governments focus on providing water, urban communities are the priority target because they are more densely populated



Source: Banks, B. & S. G. Furey, “What’s Working, Where, and for How Long. A 2016 Water Point Update to the RWSN (2009) statistics,” Rural Water Supply Network (2016).

¹⁸ Several tools seek to help organizations and governments determine and assess the conditions that may be conducive to sustainability in the WASH sectors. The variety of tools available and what they attempt to measure speaks to the plethora of variables and the lack of an established hierarchy among the variables. See, for example, Schweitzer et al, *Mapping of Water, Sanitation, and Hygiene Sustainability Tools, Working Paper 10* (Netherlands: IRC, 2014), available at <https://www.ircwash.org/resources/mapping-water-sanitation-and-hygiene-sustainability-tools>

and the per capita cost of providing safe water is lower.¹⁹

Private companies providing safe water may provide the capital needed for either large or small-scale projects, and the demand for safe water is perpetual. In many countries, corporations have the opportunity to provide water and charge users. In urban and peri-urban areas, providing safe water can be profitable to large and small businesses alike, from city-wide water treatment and infrastructure projects to small trucks delivering water bottles. However, relying on market forces alone to achieve universal coverage of safe water also leaves people out. Remote, rural areas are generally poorer and cost more to serve. Corporations have no obligation to serve communities that are not profitable, and many rural communities are not able to access safe water this way.

Those working to help rural communities get a sustainable source of safe water often piece together strategies that borrow from the strengths of many stakeholders: the community itself, the local government and civic structures, and local professionals or entrepreneurs.²⁰ Specifically, the inclusion of local government officials, local tradespeople, schools, and religious leaders before and during the installation of a water point helps to create an environment conducive to the maintenance of a safe water source. By ensuring the community using a water point has access to the people and tools to help address problems quickly, many of the variables work in favor of long-term sustainability even before the water point is installed.

Specifically, the establishment of local water committees emerged as an effective way to give rural communities the organization and voice it needs to work collectively to maintain a safe water source over time. Water committees are groups of local individuals who have the authority and responsibility to protect and maintain a source of safe water. Organizations utilizing water committees employ different strategies, but some strategies are proving to be more effective in achieving long-term functionality of a safe water source.²¹

Water Committees

Water committees are a key component of long-term sustainability

in the context of rural water development, but some function more effectively than others. What are some of the common characteristics of effective committees? The following list describes several essential attributes Lifewater found to apply across a broad spectrum of cultural and social environments around the world.

An effective water committee:

- 1 Understands its responsibility to the users/community.** *Members of the water committees are selected by the community. They are publicly accountable to the community for the function of the water point. The community recognizes the authority and legitimacy of the committee.*
- 2 Represents the community.** *Water committees must be committed to the well-being of all users. Membership must be half women. Ideally, membership would also include representation from vulnerable groups like the elderly or disabled.*
- 3 Understands the water point itself and how to prolong functionality.** *Water committees will know how to protect the water point from damage and misuse, and identify when it is not working properly. Some members may be trained in common repairs.*
- 4 Establishes savings to pay for the long-term costs.** *Water committees set fees and establish collection methods for water point users. Members know the long-term costs for maintaining a functioning water point. Water committees establish a savings account and maintain it transparently.*
- 5 Maintains relationships with local officials and professionals.** *Water committees connect with the people who can help them address problems quickly. Ideally, water committees are connected to each other in order to share knowledge and advocate for themselves with a stronger voice.*
- 6 Meets regularly.** *Water committees meet to identify and address issues quickly. Ideally, water committees interact with experts regularly to learn more, periodically test for water quality, and receive encouragement.*

These are the common attributes of effective water committees, but many of these characteristics would overlap with an effective

¹⁹ Additionally, the level of quality water service is higher in urban areas; 85% of urban dwellers have safely managed water, compared to 55% of their rural counterparts. WHO and UNICEF, *Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines*, 23.

²⁰ A recent report from the World Bank offered "Ten Building Blocks for Sustainable Service Provision," which are the results of data collected from 13 countries in 2009-2010 by the Triple-S project. The building blocks reflect a strong interdependence between several actors, including communities, service providers, and local government. World Bank, 2017. "Sustainability Assess of Rural Water Service Delivery Models: Findings of a Multi-Country Review." World Bank, Washington DC, at 15.

²¹ For a review of the literature about changing strategies for water committees from both practice-based and theoretical perspectives, see Luke Whaley and Francis Cleaver, "Can 'functionality' save the community management of rural water supply?," *Water Resources and Rural Development* 9 (2017) 56-66.

community-based management strategy in other development contexts. Therefore, when organizations help to establish and train water committees, they are also establishing models that could render development efforts in other areas, such as education, more sustainable as well.²²

Lifewater Results

Lifewater monitors the functionality of a water point over time to determine what strategies for long-term sustainability work and how to improve. Recently, Lifewater completed a study of their hand pump installations or repairs in northern Uganda from 2009-2015.²³ During this program, Lifewater employed a robust strategy of forming and training local water committees with the above characteristics. In 2016-2017, researchers inspected a sample of 72 water points, mainly located in communities and primary schools, by visiting the well and interviewing members of the community at each site.

At the time of the study, 92% of the water points installed and repaired still had water flowing, indicating a high rate of sustainability that could be credited to effective water committees.

The high rate of functional water points found in this study does not indicate that all the water points (and water committees) were in perfect working condition. Roughly one third needed minor repairs or routine maintenance, such as improved fencing or drainage. Nearly 15% still functioned but required major (professional) repairs, such as a cracked apron around the pump, which could lead to contamination. However, additional evidence suggests that the vast majority of water committees functioned effectively. A full 88% of the water points inspected had already experienced some repair, and 88% of those were repaired by funds provided by the water committee. Community members reported an active water committee in 98% of the communities evaluated, and 86% regularly paid fees for water usage.

Other factors also contributed to the improved sustainability of rural water points evaluated in the study. The Ugandan government mandates community management of rural water

supplies, holds water committee members accountable for performance of their duties, and supports a network of certified hand pump mechanics. Like any repair industry, however, workmanship and pricing structures vary widely. Hand pump mechanics also report a weak supply chain of quality spare parts. Despite this, a high rate of functionality up to eight years after installation supports the primacy of effective water committees in determining sustainability.

Lifewater continues to learn from this and other program evaluations. In the past two years, Lifewater programs included extensive training for water committees by local staff members using standardized, contextualized curriculum. Water committees are required for each repaired water point as part of a regional program, even if the water point was originally installed by another entity. Staff now follow up with each water committee monthly for years after a water point is installed and check water quality every six to twelve months, reporting lab results to government officials.²⁴ Additionally, because Lifewater works in the same region for several years, staff connect water committees to each other in order to learn from each other, encourage each other, and effectively advocate for their respective communities together.

The results of Lifewater's recent study in Uganda encourage continued use of water committees as a means of community management. They suggest that effective water committees lead to greater sustainability in rural water development and enable communities to overcome disadvantages in other areas as well. Ongoing monitoring in other countries indicate the same.

²² For more discussion on the importance of water committees in forming platforms for future community-based development, see "How to Identify High-Quality WASH Programs," Ashe Institute: Lifewater International (2015), available at <https://lifewater.org/resource/wash-program-practices/>.

²³ Water points were installed or repaired with Lifewater's local partner, Divine Waters Uganda. Repairs include wells and hand pumps that were installed by others. Since 2015, Lifewater has worked in Uganda exclusively through its local field offices and staff.

²⁴ Some research suggests that even trained water committees need continued external support to remain effective. One author warned that "local ownership" can be "a means of offloading responsibility... a convenient fig leaf for abdication of responsibility by those with power and resources." Ellie Chowns, "Is Community Management an Efficient and Effective Model of Public Service Delivery? Lessons from the Rural Water Supply Sector in Malawi," *Public Administration and Development* 35, 263-276 (2015). See also UNC Water Institute, WaSH Policy Research Digest Issue #6 (Aug 2017): Community Management, available at <http://waterinstitute.unc.edu/wash-policy-research-digest/>.

Appendix: Evaluating a Rural Water Development Program

When evaluating a rural water development program to determine whether the program employs the strategies that lead to sustainable improvements and lasting results, asking the right questions helps. Below are some questions and explanations that could guide a helpful interaction about sustainability.

1 How many of the water points you worked on in the past (one/five/ten years) are working right now? How do you know?

This question helps to determine whether an organization evaluates the long-term functionality of its work. With this knowledge, service can continually improve. The answers may indicate the nature and degree of continued involvement with target communities included in a program. As a general rule, more and longer evaluation and support lead to improved functionality over time. Long-term data about water point functionality remains extremely rare.

2 What strategies are you using to improve sustainability of the water points you install?

This question indicates whether and how a program prioritizes the several variables that affect sustainability. It may lead to a discussion about how the strategies are evaluated and which ones an organization considers most effective and/or efficient. Strategies should be the result of empirical data, theoretical consideration, and shared best practices. Programs that ignore the interconnection of several stakeholders and variables have a lower chance of creating sustainable impact.

3 When a water point fails, how does it fail?

This question also leads to insight on whether and how an organization monitors the outcomes of its work and its ability to make adjustments to program activities when needed. It may also indicate whether the program helps to establish the conditions necessary for success, and what variables are outside the scope of its work. If most water points are failing for related reasons, an organization should be able to report how it programmatically addresses these issues.

4 What are the essential functions of the water committees you train?

Water committees are an effective model of rural community-led water management and a key factor in sustainability, but not all water committees are effective. The answer to this question reveals how much an organization invests in this strategy. It helps to gauge what degree of responsibility is placed on water committees and how they are equipped to perform their duties. The essential functions should include the characteristics listed above, a recognition that water committees play an important role in connecting water point users with the resources to maintain long-term functionality, and an understanding that water committees have limited power to maintain a safe water source without continued support from local government and professionals.