



## Sustainable services for whom?

Ensuring rural water service delivery supports equality



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**Photo (cover):** A community water committee and users convene in Nepal (ISF-UTS/Jeremy Kohlitz)

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## Definitions

**Basic (water) service:** Drinking water from an improved source, provided collection time is not more than 30 minutes for a roundtrip including queuing (WHO/UNICEF, 2019).

**Disadvantaged individuals and groups:** People who may be discriminated against, experience inequalities, or are otherwise vulnerable or stigmatised (de Albuquerque, 2014). A range of interacting factors can contribute to disadvantage including those related to poverty, physical or mental health challenges, limited social capital, geographical challenges, and marginalisation, discrimination and powerlessness (House et al., 2017).

**Equality:** Equality refers to the legally binding obligation to ensure that everyone can enjoy her or his rights equally. Equality does not imply treating people who are unequal equally; it does not indicate identical treatment in all cases (de Albuquerque, 2014).

**Inclusion:** Inclusion is both a process and an outcome. It recognises the dignity, diversity, autonomy and worth of all people, and describes the realisation of all people's rights to access life opportunities on an equal basis with others. It involves intentional actions including identification and removal of barriers that hinder full and effective participation and inclusion in society and seeks to redress disadvantages encountered by specific groups (Water for Women Fund, 2018).

**Safely managed water service:** Water services via an improved water source that 1) are located within the dwelling, yard or plot, 2) provide sufficient water when needed, and 3) are free from contamination (WHO/UNICEF, 2019).

**Service authority:** The institution(s) with the legal mandate to ensure that water services are planned and delivered (Lockwood et al., 2018).

**Service delivery model:** The combination of a management model at a service delivery level and the necessary vertical legal, policy, institutional, regulatory and financing frameworks that support these management structures and allow them to function effectively (World Bank, 2017a).

**Service provider:** The actor that is responsible for performing day-to-day operations of a rural water supply scheme or an aspect of the operation of the scheme (Lockwood et al., 2018).

**Sustainability<sup>1</sup> of water services:** Water services that are continuous over time and which meet agreed service levels (World Bank, 2017a).

<sup>1</sup> Sustainability has many meanings, including those that posit sustainable services must, by definition, be equitable. In this paper, we use a definition of sustainability that does not necessarily include equality to distinguish between concepts and practices that focus on supporting ongoing functionality and those that explicitly address equality



## 1 Introduction

Innovations in rural water service delivery are required to achieve universal and equitable water access. Rural water services must not only be operationally sustainable, but also accessible to all. Water services also need to progressively provide a higher level of service toward meeting the Sustainable Development Goal (SDG) criteria for “safely managed” water access for all people (Box 1).

To-date, much of the discourse on service delivery innovation in rural water supply has focused on operational sustainability rather than equality. A sizable proportion of rural water systems do not function as per their design parameters or fail to meet the demands of a growing and aspiring population, hence the justified attention on functionality. However, relatively little attention has been given to the implications of service delivery innovations for achieving equality in service provision, or how innovations can be designed specifically to achieve equality.

This learning paper examines implications of the latest thinking on rural water sustainability for achieving equality in rural water service provision, drawing on recent literature on sustainable and equitable water service delivery and experiences on the ground. Specifically,

the lessons and insights in this paper are drawn from a week-long learning event hosted by SNV in 2018, contributions to a related online discussion forum, and a synthesis of leading sector literature and case studies documented in this literature.

We consider equality in terms of equal service outcomes and equal influence on decision-making processes. We also focus on equality within a localised area (e.g., a community or small town) rather than across a region or country to fill the gap in attention on intra-community inequalities.

This paper also proposes generic steps that policymakers and practitioners may consider when designing, weighing up, promoting or evolving different service delivery models to ensure services are not only operationally sustainable but are also inclusive and provide adequate service levels for all.



Photo: Collecting water at communal water point in West Timor, Indonesia (ISF-UTS/Juliet Willetts).

### Box 1: SDGs and equitable water services

#### **SDG target 1.4: Achieving universal access to basic services**

By 2030, ensure all men and women, in particular the poor and vulnerable, have equal rights to economic resources, as well as access to basic services...

#### **SDG target 6.1: Achieving safe water for all**

By 2030, achieve universal and equitable access to safe and affordable drinking water for all

## 2 Background: Towards more sustainable and equitable water services

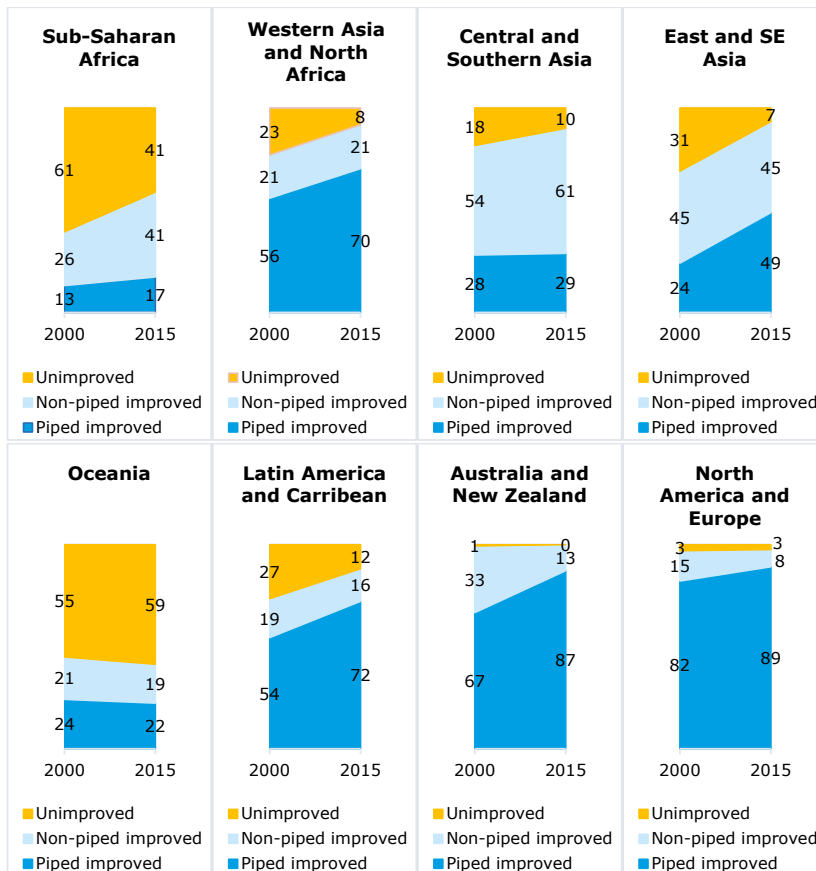
### 2.1 Persistent challenges

There has been substantial progress in expanding access to improved water sources in rural areas in recent decades (Figure 1), but the progress has been uneven and rural water systems are commonly beset with functionality issues which limit service levels. During the Millennium Development Goal era from 2000 and 2015, access to improved water sources rose in rural areas globally from 72% to 86%, an increase equivalent to 555 million people. However, the gap in access to basic water services between the richest and poorest quintiles in rural areas increased over this same period in a large proportion of countries (Figure 2).

Gains in increased coverage of improved water sources in rural areas are threatened by inadequate operation and maintenance of water supply infrastructure. This is evidenced by high failure rates for water services across many low- and middle-income countries: more than 600,000 handpumps are non-functional across rural areas of Africa, Asia and the Pacific (Foster et al., 2019) and small rural piped systems also suffer from frequent breakdowns (Banks and Furey, 2016).

Many more water supplies are still functioning but provide sub-standard service in terms of water quality, reliability, availability or quantity.

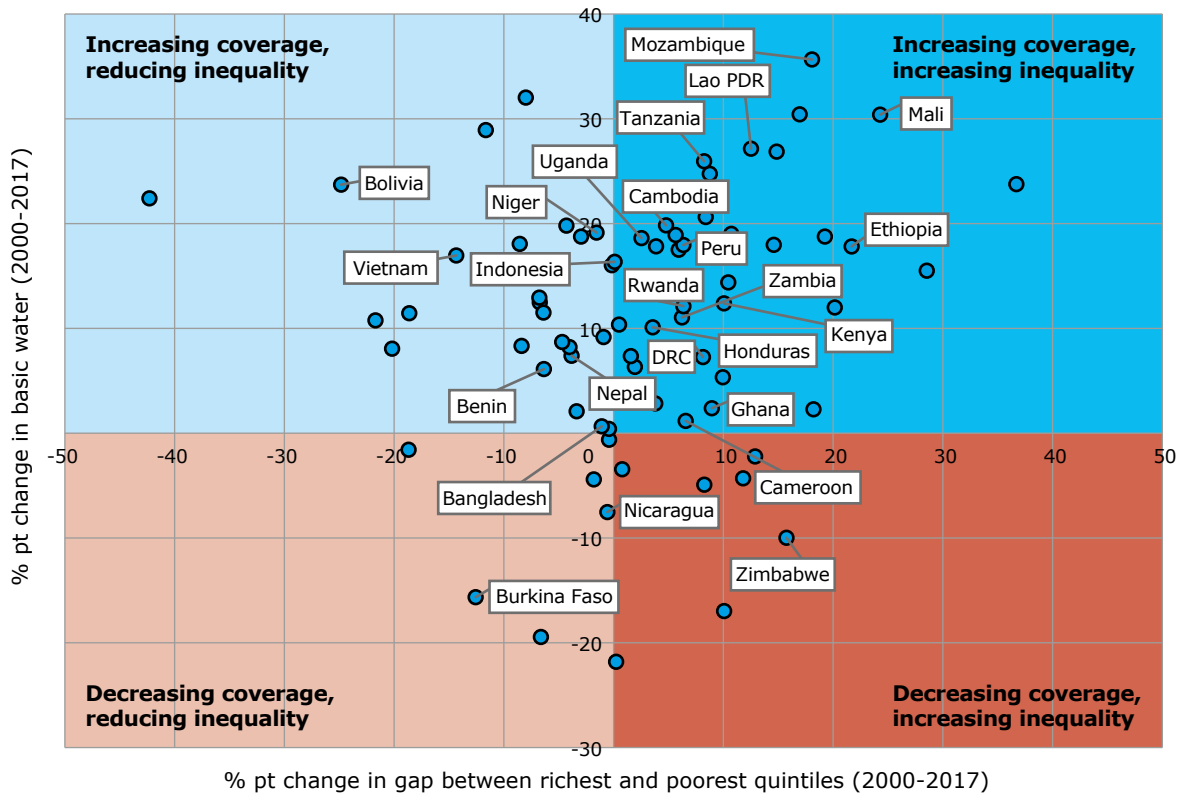
**Figure 1: Drinking water sources for rural population, 2000-2015**



Source: WHO/UNICEF. Joint Monitoring Programme for Water Supply, Sanitation and Hygiene. Geneva, Joint Monitoring Programme, 2015. Available at: <https://washdata.org/data#/>

<sup>2</sup> 16 illustrative case studies across 13 countries are available at <https://www.inclusivewash.org.au/case-studies/>

**Figure 2: Changes in basic water coverage and inequalities between richest and poorest in rural areas, by country, 2000-2017 (%)**



Source: Adapted from WHO/UNICEF. Progress on household drinking water, sanitation and hygiene, 2000-2017: Special focus on inequalities, Geneva, WHO/UNICEF, 2019.

Meanwhile, disadvantaged individuals and groups often receive lower service levels than others in their own community and are excluded from decision-making processes. Publicly available disaggregated monitoring data on water access for disadvantaged groups aside from the poorest is lacking, but anecdotal and case study evidence abounds.<sup>2</sup> For example, CBM and SNV research on rural water access in Nepal shows that in communities covered by a functioning improved water supply, people with disabilities often are unable to get water when needed or meaningfully participate in village- and ward-level meetings on water (SNV Nepal and CBM Australia, 2019).

## 2.2 Rural water management models and equality

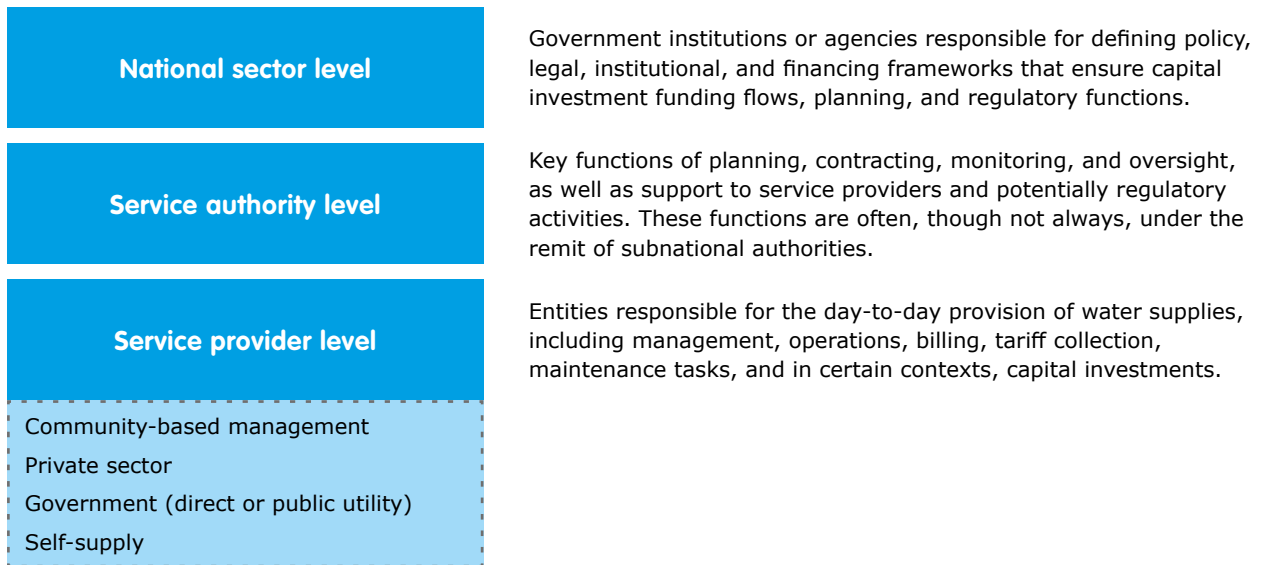
The increased attention of the global WASH sector on long-term service delivery has driven increased scrutiny of rural water service delivery models. Rural water service delivery models are often classified across four broad management models - private sector, government,

community-based and self-supply - each of which operates under a service authority and a national-level actors (World Bank, 2017a) (Figure 3).

The service authority plays a critical role in ensuring that service equality is supported. As elaborated later in this paper, all management models have potential to reproduce inequalities. The service authority must implement mechanisms to incentivise service providers to deliver equal services and hold them accountable. Policy, legal, institutional, and financing frameworks in turn are necessary for guiding and enabling service authorities in this regard. However, in practice, regulations for accountability in rural water service delivery are often weak or non-existent.

The management models, focused on the main service delivery actor, in Figure 3 should be considered simplifications - in practice, management models often combine private, government, and community actors in a variety of ways, and numerous sub-variants of these

**Figure 3: Service delivery model comprising rural water management models operating under a service authority and national actors**



Source: Adapted from World Bank. Sustainability Assessment of Rural Water Service Delivery Models: Findings of a Multi-Country Review. Washington DC, World Bank, 2017a.

models exist. For example, public-private partnerships in which local government carries out some management functions and delegates others, such as operation and maintenance, to a private actor are used in Niger and Madagascar (Lockwood et al., 2018). However, most models have a dominant actor that leads day-to-day management, and these models provide a simple and useful framing for the analysis of sustainability and equality implications of rural water management. Each of the models and their respective challenges in supporting equality are introduced below. For more in-depth discussion on the sustainability of services associated with these models, see World Bank (2017a).

### 2.2.1 Community-based management

Community-based management continues to be the dominant management model in rural low and middle income countries despite intensifying criticisms relating to sustainability (Chowns, 2015; Whaley and Cleaver, 2017). In its most basic form, management responsibilities lie exclusively with users via a community organisation such as a water committee. Typically, upfront capital costs of infrastructure are funded by government or NGOs, but it is often unclear who will fund larger rehabilitation expenses. Ownership of the

assets is either handed over to the community or left undetermined. Regulation and monitoring of community managed services is usually limited or non-existent. However, community-based management models that include post-construction support and financial subsidies from external sources (sometimes called a “community management plus” approach) have shown improvements in sustainability (Hutchings et al., 2015).

Without oversight from government or civil society organisations, community-based management models tend to replicate existing hierarchies and inequalities in communities. Social norms may lead to the exclusion of certain groups from community decision-making on rural water management, or even accessing water points. For example, in Nepal people have been excluded from local water committees on the basis of gender, age, and disability status, and denied access to communal water taps on the basis of caste (Sarwar and Mason, 2017).

NGO or government water supply implementation projects that do not actively account for community power dynamics may inadvertently only engage community elites in design and management training, which can lead to water supplies that provide higher levels



## Box 2: Elite capture of a piped water supply in rural Vietnam

In rural Vietnam, a state program developed a gravity-fed communal piped water supply to provide improved water access to everyone in a village. The project was implemented through political leaders in district and village committees. Without mechanisms to ensure services would be delivered equitably, community elites leveraged their power to secure a higher level of services for themselves. First, elite community members used their influence to ensure communal tap stands and storage tanks were sited on or near their compounds. Later, elites established 'illegal' connections to feed their fish ponds and gardens which contributed to water shortages in the system. Poorer community members, who were reliant on elites for work, loans, and food, refrained from making direct complaints about illegal connections. Finally, many elites had alternative sources of water in the form of household wells, and were less motivated to make repairs to the communal supply, to the detriment of poorer households who only had access to surface water as an alternative.

This experience challenges the assumption that a community-scale piped water scheme provides the same level of service for all. More explicit inclusion of disadvantaged people in choosing the sites of infrastructure, an option to have choices of decentralised water supply technologies for different groups, and a plan to provide water for productive uses, not just domestic uses, may have assisted the program to produce more equitable benefits.

Source: Van Koppen, B., Rojas, V. C., and Skielboe, T. 'Project politics, priorities and participation in rural water schemes' *Water Alternatives*, vol. 5, no. 1, 2012, p. 37.

of service to elite groups to the neglect of less powerful groups (Van Koppen et al., 2012) (Box 2).

### 2.2.2 Private sector

Private sector service delivery in particular are increasingly seen as an alternative or complement to community-based models (Gero et al., 2014). The aim of private sector service delivery is not only to bring greater professionalism, but also a commercial logic which, with the right conditions, could drive service level improvements. Commercially-oriented water service provision also can bring a more stringent approach to revenue collection and financial sustainability. Private sector service providers may take the form of micro-entrepreneurs, small and medium enterprises, or a large-scale utility. Private sector service providers may or may not own water assets and are usually funded by tariffs, sometimes with the support of government subsidies.

The commercial logic of private sector service providers may skew their decisions and priorities towards a more 'commercially attractive' or lower-risk customer base that excludes the poorest (World Bank, 2017a). Moreover, piped water service provision is often monopolistic and regulation that might otherwise protect customers is largely absent from rural areas of low- and middle-income countries. For example,

research in rural Vietnam demonstrates that poor households often receive lower service coverage from, and pay higher fees to, privately operated piped water supplies than non-poor households (Grant et al., 2016; Carrard et al., 2019). Further, women and disadvantaged groups often have less influence on decision-making in service delivery under private sector models due to norms around who should run a water enterprise. For example, women in Southeast Asia are underrepresented in WASH entrepreneurship and face additional challenges to men such as lower access to financing (Leahy et al., 2017).

### 2.2.3 Government direct service provision or public utility

Government service delivery allocates the majority of day-to-day management and operational responsibilities to local or sub-national government actors, or a government corporate entity. This could be in the form of a publicly-owned utility covering a rural town or multiple communities, or local government departments or village governments that manage more discrete, community-scale water supplies. The service provider is usually funded by a combination of government taxes, water service tariffs, and monetary transfers from other organisations. The infrastructure is usually (although not necessarily) owned by government. If services are monitored or

regulated, it is usually also through government. In theory, the State (acting as service authority) can more easily mandate that government-managed water supplies provide equal levels of service compared to other service providers. For example, a State-mandate that water services are affordable to the poorest customers and that minimum standards must be met for everyone. However, local governments continue to be beset with low human resource capacity and weak financing which hinders their ability to deliver adequate water services (Boulenouar, 2015), let alone address inequalities, especially in more remote rural areas. The department of government that has service authority responsibilities may either be distant from the department with service provider responsibilities, resulting in poor coordination and regulation, or may be one and the same, with associated conflict of interest.

### 2.2.4 Self-supply

Self-supply models are present where a household or a small group of households invest in, maintain, and partially or wholly meet their water needs through a household-

scale water supply such as a private well or a domestic rainwater harvesting system. Under international human rights law, self-supply is a norm for enjoying the right to water which obligates the State to ensure that self-supply users consume safe water and do not over-exploit water resources (Grönwall and Danert, 2020). However, in practice self-supply systems are typically unregulated and unmonitored. The sustainability of self-supply systems and their potential for supporting safely managed water outcomes are sparsely studied, so little is known about the levels of service they provide across different user groups.<sup>3</sup>

Although direct evidence is limited, unregulated self-supply models are theoretically problematic in terms of equitable service. Self-supply models are generally more favourable for wealthier households that can afford to construct and maintain good quality systems. The highly decentralised and sometimes informal nature of self-supply water systems also present challenges for monitoring, making it difficult to identify disadvantaged users that may require support.



Photo: Scheme map of private piped water service provider, Mekong, Vietnam (ISF-UTS/Juliet Willetts).

<sup>3</sup> Findings from ongoing ISF-UTS research about the equality implications of self-supply water systems will appear on <https://waterforwomen.uts.edu.au/>

**Table 1: Summary of service delivery actors and examples of opportunities and challenges for equality in water service delivery**

Service delivery actor	Description	Challenges for equality	Opportunities to support equality
Community management	Water supply is managed primarily by users living within the community, although support may be provided by external actors	<ul style="list-style-type: none"> <li>• Management structures may mirror traditional roles and power relations, resulting in limited opportunities for women and marginalised groups to influence decision making</li> <li>• Intra-community power dynamics can create unequal levels of water access across households</li> </ul>	<ul style="list-style-type: none"> <li>• Challenge social norms that exclude certain groups from leadership and decision-making roles</li> <li>• Ensure implementers consult a range of community groups to design a water supply that reaches all, and provide a mechanism for making complaints to the service authority if service levels are not being met</li> </ul>
Private sector	A private entrepreneur or business manages, or provides critical management functions for, the water supply following commercial principles	<ul style="list-style-type: none"> <li>• Poor communities and households may not be serviced because service providers see them as less profitable customers</li> <li>• Communities distant from urban centres may be systematically excluded from services due to location and service providers seeking economy of scale of service</li> <li>• Potential for private service delivery to be dominated by traditionally powerful groups</li> </ul>	<ul style="list-style-type: none"> <li>• Mandate or provide incentives to private providers to deliver services to poorer households and communities</li> <li>• Establish a tariff scheme that subsidises services to poorer customers while also recovering costs</li> <li>• Promote participation in entrepreneurial opportunities (appropriately supported) for women and marginalised groups</li> </ul>
Government	Water supply is managed primarily by mandated government actors via a publicly owned utility or local departments	<ul style="list-style-type: none"> <li>• Limited resources for reaching rural areas far from urban centres</li> <li>• Limited resources for ensuring services are adequate for all</li> </ul>	<ul style="list-style-type: none"> <li>• Mandate government service providers to target under-served areas, and mobilise subsidies or cross-subsidy mechanisms to ensure everyone is reached</li> </ul>
Self-supply	A single household or small group of households manage a water supply that only services the household(s) that manage it	<ul style="list-style-type: none"> <li>• Favours wealthier households that can afford their own high quality water supplies</li> <li>• Generally more difficult to monitor and target support than water supplies under other models</li> </ul>	<ul style="list-style-type: none"> <li>• Develop stronger policy direction on how government can support self-supply, for example by subsidising self-supply for unserved households and regulating private borehole drillers</li> </ul>

Note: Across the four rural water supply management models, the service authority is responsible for ensuring actions to support equality, and may be the most appropriate entity to carry these out. However, other actors (e.g., from service providers or development agencies) could also carry these out depending on the context.

## 3 Service delivery innovation and equality in the rural water sector

In recent years, innovations in rural water service delivery models have emerged in low- and middle-income countries. For example, there is evidence of improved operational performance amongst private service providers arising from innovations in monitoring, maintenance contracts, and institutional arrangements (McNicholl et al., 2019). There is also increasing recognition of self-supply as a legitimate form of water service delivery. "Professionalisation" of community-based water committees and linking these groups more closely with external support agencies, usually local government, that can provide financial support and technical advice is seen to improve sustainability over earlier forms of informal community-based management (Hutchings, 2015; Hutchings, 2017).

In contrast, evidence on how emerging service delivery innovations impact the equality of rural water services remains scant. Reviews of management innovations have tended to focus on operational and financial sustainability outcomes rather than equality outcomes. One reason for this may be that innovations are

usually evaluated at a system-level (i.e., across an entire water service modality) instead of a user-level where service outcomes can be disaggregated.

Despite the limited systematic documentation, there are many potential options for supporting equitable service level outcomes in an area and inclusion in decision-making for rural water. In this section, we share five generic steps for supporting equality that will be applicable to most rural water service delivery models.

### 3.1 Monitor equality of water services on an ongoing basis

The Human Rights to Water and Sanitation framework requires the State to ensure that monitoring of access to water services for all is carried out, including monitoring inequalities (de Albuquerque, 2014). Monitoring mechanisms often assume that the presence of a water supply in a community means everyone receives an equal level of service from it, but this is not always the case. One way to assess the standard of service that different households



Photo: SNV staff and partners conduct formative research in Sarlahi, Nepal to uncover potential barriers to water service access (SNV in Nepal).



are receiving is through household surveys. For example, surveys could be designed to gather basic data on within-scheme inequalities in levels of service. Surveys may be conducted by the service authority or service provider. NGOs and governments can support the development of simple monitoring and evaluation indicators for equality to be measured in the surveys. Surveys of the service providers could also be used to assess gender and social inclusion amongst water managers and operators.

Monitoring data makes it possible for governments to make evidence-based decisions about where to invest resources. Box 3 refers to an example of how district governments in Nepal made investment decisions based on monitoring

data that was eventually collected by water user committees who are the water supply managers for their communities.

### 3.2 Commit financing to ensure that services are affordable for all

Management model innovation is often underpinned by the logic that operational improvements will bolster users' willingness-to-pay. However, in some instances, the introduction of new or increased users fees to cover the costs of management innovations have led users to shift to using alternative unimproved water sources (Box 4).

#### Box 3: Strengthening government to monitor rural water services in Nepal

In rural Nepal, community piped water schemes are typically managed by water user committees. National statistics indicate that only about 25% of these schemes are functional and potentially disadvantaged groups tend to be the first ones to face the challenges emerging from the poor/no service.

SNV Nepal identified a critical set of "functionality" and "sustainability" indicators (including on gender and socially inclusive management) based on collection and analysis of data on variables associated with sustained, functioning water services. SNV then supported local government to collect data on the indicators. Local government used the data to target their limited resources for improvement of schemes that performed better on the sustainability indicators (since they already have the capacity to put government resources to proper use for improving their services), develop a capacity building plan to support all schemes to reach the minimum level of service, and identify un-reached areas.

Eventually water user committee were also supported to do "self-assessments" based on the functionality and sustainability indicators and report them to local government.

Source:Source: Rural Water Supply Network (RWSN) Week 3 E-Discussion on Inclusive Rural Water Supply Management Innovation, 4 December 2018

#### Box 4: Effect of implementation of 'pay-as-you-go' water use on access for the poor in Kenya

Along the south coast of Kenya in Kwale County a large-scale deployment of Afridev hand-pumps took place, with 550+ water points installed from 1983 to 1995. At the outset, community-based committees were established and were encouraged to collect monthly fees. By 2013, a proportion of these communities adopted a form of 'delegated management', whereby paid individuals would assume responsibility for day-to-day management of the water point and collect payments from water users on a 'pay-as-you-go' basis (typically Ksh2 per 20L bucket). In return they would draw a salary based on a proportion of the water sales.

A study (Foster and Hope, 2017) of these water points found they were repaired more quickly than the water points managed by a committee in a more conventional way (i.e., monthly fees paid to a committee treasurer, operation and maintenance overseen by a committee working on a voluntary basis).

On the other hand, payment obligations were more rigidly enforced (and the unit cost of water was higher to cover the manager's salary) which led to a higher proportion of water users in the service area preferring to use an unimproved water source. This deterrent effect was not specific to the poorest households and was apparent for even the wealthier households.

Source: Rural Water Supply Network (RWSN) Week 1 E-Discussion on Inclusive Rural Water Supply Management Innovation, 19 November 2018



A key question is how to target subsidies or other financing mechanisms to support households most in need. First, households requiring subsidies need to be identified. Second, there needs to be a mechanism for directing the financial support accordingly. Household-level cross-subsidies are not uncommon for piped schemes (see e.g., Carrard et al 2019), though for communal water points such cross-subsidies have tended to be a more informal mechanism (Carter et al., 2010).

There are many strategies for making water services more affordable to poor and disadvantaged groups, and the best strategy depends on a range of contextual factors (Hutton and Andres, 2018).

UDUMA in Mali provides an instructive example of how households in need of financial support can be identified by a handpump maintenance provider in partnership with local government (Box 5).

### 3.3 Proactively meet the needs of people with different physical, sensory and cognitive abilities

There are many barriers that can prevent people with different physical, sensory or cognitive abilities (relating to disability, ageing, pregnancy, etc.) from accessing functional water supplies. Barriers may be physical (e.g., difficulty in operating handpumps), social/attitudinal (e.g., family members with disabilities not permitted to travel to public waterpoints), and related to body function (e.g., people with restricted growth or joint pain only able to carry small volumes of water) (White et al., 2016).

Consequently, these people may receive lower levels of service than others in their community or household. They may also become dependent on others for water access which can lead to a deterioration of their health and hygiene, and put them in a position to be financially or sexually exploited (World Bank, 2017b).

#### Box 5: Monitoring innovations to improve sustainability and track inclusive access: the case of UDUMA, Sikasso region, Mali

In the Sikasso region in Mali, there is a heavy dependence on handpumps managed by community-based water committees. Historically a high proportion of these systems have fallen into disrepair. To address this problem, a consortium of organisations have come together to put in place a new approach to handpump operation and maintenance. The programme - known as UDUMA - is being progressively rolled out to 1,400 handpumps serving 560,000 people across 30 communes.

UDUMA works by equipping each handpump with a meter and a data logger in order to record the volume of water consumed. The data is transmitted to a server via the mobile network. An electronic payment system is also in place, with each household having a smart card which can be topped up at a local kiosk or by mobile money. Local authorities committed to directing a subsidy to the smart cards of these households to ensure water would be affordable. Three percent of the revenue collected by the service is directed towards local authorities in order to fund this subsidy scheme. The amount allocated for this pro-poor support amounts to ~US\$34,000 per year.

UDUMA involves a network of private handpump mechanics contracted by the municipal government to do repairs and community-based handpump caretakers who attend the pump during operating hours in order to monitor use and debit payments from users. All handpump caretakers, which is a paid position, are women.

The digital payment system put in place by UDUMA allows for water consumption via handpumps and associated payments to be monitored at the household-level, making it possible to verify whether poor households are receiving sufficient quantities to meet their daily needs and that the pro-poor subsidies are having their desired effect of securing inclusive water services.

Source: ISF-UTS and SNV, Gender and Social inclusion in Rural Water Supply Management Models. Report from SNV Learning Event Kisumu, Kenya, SNV, 25-27 September 2018. Unpublished.



Photo: Private rural water service provider, Mekong, Viet Nam (ISF-UTS/Juliet Willetts).

Management innovations can play an important role in facilitating the meaningful participation of people with disabilities to ensure barriers are identified and overcome. Wilbur et al. (2018), drawing on de Albuquerque (2014), summarise the following essential elements for meaningful participation:

- Involve disadvantaged people in setting out the terms of engagement.
- Create space for participation; enable people to access the participatory process by addressing barriers (such as language, meeting venues, time, and information). Raise awareness among others of the value of their participation.
- Guarantee free and safe participation.
- Ensure access to information in a form and language they can understand.
- Provide a real opportunity to influence decision-making and make sure people understand the process.

Communities, local governments, and private operators often do not have the experience, knowledge and tools to ensure the above elements are achieved safely for people with disabilities, so the engagement of Disabled People's Organisations are critical for support.

### 3.4 Put in place contractual and regulatory safeguards, and support social accountability

As the duty-bearer of the human right to water, governments are ultimately responsible for ensuring universal access to an adequate water service level within their jurisdiction. From an operational standpoint, private sector service providers are often incentivised and held to account by way of performance-based contracts which are tied to achievement of certain operational performance indicators (Lockwood, 2019). This same sort of contractual mechanism can be used to incentivise service providers to deliver equitable services if relevant data are collected.

However, in dispersed rural areas of low- and middle-income countries, regulatory arrangements for water services are typically weak or non-existent (Lockwood, 2019). Social accountability mechanisms, whereby citizens are provided with the necessary tools and knowledge to hold the State accountable for ensuring their needs are met, are a potential pathway to filling gaps in regulatory oversight (Naughton et al., 2018). Social accountability mechanisms can and should be designed to be inclusive of the voices

of different users on advocating for their rights to adequate water services (Winterford et al., 2020).

### 3.5 More effectively address inclusion of women as rural water managers

The value of including women in water service management has been espoused by the WASH sector for many years, but a more nuanced understanding of what women's inclusion in rural water service delivery means and how to achieve it is needed. A common instrumentalist interpretation of the value of women's inclusion in decision-making is that their insights will lead to a more functional and efficient water service (Soeters, 2019).

While there may be truth to this, it overlooks the opportunity for WASH to be an entry point to challenge unequal power relations and, if applied uncritically, can create burdensome obligations for women and even further entrench power of men over women (Soeters, 2019).

Therefore, it is important to remove the social, political, and economic barriers that inhibit women from naturally acting as service providers or influencing water management decisions.

Water management interventions that seek to include women should look beyond mandating their equal representation amongst water committees and other service providers, and include mechanisms to address gendered barriers that women face.

Box 6 refers to a case in Cambodia where women benefitted from the role as rural piped-water entrepreneurs, but also encountered gendered barriers.

#### Box 6: Women's experience with management of rural piped-water enterprises in Cambodia

Privately managed water supply schemes in rural Cambodia serve over one million people. Several international NGOs, the Cambodian government and country NGOs have worked to finance and support these small-scale piped-water systems. This model has largely emerged in the wake of non-functional community-managed systems and gaps in government services.

Aside from being a possible pathway to increasing service levels in rural areas, these piped-water enterprises can also be a means for strengthening the agency of women. Women in rural Cambodia that manage private piped water schemes reported that being a water entrepreneur gave them increased (financial) independence, confidence, and access to business training opportunities offered by an association or the government. However, the women water entrepreneurs also encounter gendered barriers that limit them from travelling far from home, or during the night, to attend meetings or respond to operational difficulties with their water schemes. Specific funding, training, and community education opportunities could address particular issues that different groups of providers face.

Source: Grant, M., Soeters, S., Bunthoeun, I. V., and Willetts, J. 'Rural Piped-Water Enterprises in Cambodia: A Pathway to Women's Empowerment?' *Water*, vol. 11, no. 12, 2019, p. 2541.



## 4 Concluding remarks

There is growing interest and experimentation with service delivery innovations for improving the sustainability of rural water service delivery in low- and middle-income countries, but comparatively less attention on what these innovations mean for equality.

While there is emerging evidence of positive impacts of new management models on operational outcomes, less is known about how innovations influence inclusion and inequalities. Service providers, governments, and development actors must take steps to ensure operational improvements also improve the equality of outcomes and not detract from them. Furthermore, innovations that focus on improving equality of services where sustainability is already strong deserve more consideration in research, policy, and practice.

There are many potential pathways to improving equality in rural water services in terms of supporting equal service levels in an area and in terms of equal decision-making. This paper

highlighted five general steps that can be considered in most rural water service delivery models:

1. monitoring equality of water services on an ongoing basis,
2. committing financing to ensure that services are affordable for all,
3. responding to the needs of people with disabilities,
4. putting in place contractual and regulatory safeguards, and supporting social accountability, and
5. re-thinking inclusion of women as rural water managers.

The body of evidence on the operational impact of new management models will undoubtedly continue to grow. Documenting equality impacts and extracting the lessons from both successes and failures will be critical for the attainment of sustainable and inclusive water services for all.



Photo: Behavioural change communications on water supply with mothers' group (SNV in Nepal).

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