

## triple-s

### Reimagining rural water services: the future agenda

An introduction to ten building blocks to support sustainable service delivery

Stef Smits and Harold Lockwood

#### POINTS FOR ACTION

→ In developing an ambitious vision for the future of rural water services, and anticipating current and future trends, we call for:

- Developing and modifying policy to recognise the segmentation of populations with different demands for services; from public or private utilities for small towns to basic service delivery models and self-supply in remote dispersed areas
- Professionalisation of the sector as a whole, including sector level regulation, advanced financing mechanisms and monitoring systems
- More realistic forecasting of life-cycle costs and an appropriate balance of investment between extending services and keeping existing services running and with an increasing role for public finance as countries transition from grant to loan financing
- Supporting professionals with skills development and incentives to remain in rural areas and a sector in which they can continue to learn

This briefing note introduces a package of ten 'building blocks' we have found to be critical in moving towards sustainable service delivery. It reviews progress in their adoption and then sets out an agenda for the coming five years for rural water sectors striving to ensure full coverage and sustainable services.

Developing a strategy to realise sustainable services at scale means addressing the building blocks in an integrated but sequenced way, whilst recognising the unique challenges and opportunities in every country.



Photo: Lokaalmondiaal

A new image of rural water is emerging – a higher quality of service, permanent in nature, well managed and properly regulated – and so is the path that can lead us there in the coming years. There are many examples of countries adopting or strengthening essential building blocks, such as **monitoring, support to service providers, and recognition of alternative models** to community management. These are described in the set of briefing notes in this series.

Alongside this good progress, we see several building blocks that have yet to be fully developed and applied in practice. As well as the general challenges of limited

government capacity at local level, we see specific gaps, including very limited adoption of **asset management** practices, failure to finance all **life-cycle costs**, and particularly replacement cost of existing infrastructure. Experience with **regulation** of rural water services is growing, but much work remains to be done.

This note considers the trends and drivers that are shaping rural water sectors and highlights areas where more support and development of the building blocks is needed both conceptually and in practice. We recognise that many of the trends identified in this note are long-term in nature, playing out across the next

**TABLE 1** BUILDING BLOCKS FOR SUSTAINABLE RURAL WATER SERVICES

	<p><b>Professionalisation of community management</b> Community management entities supported to move away from voluntary arrangements towards more professional service provision that is embedded in local and national policy, and legal and regulatory frameworks</p>
	<p><b>Recognition and promotion of alternative service provider options</b> A range of management options beyond community management, such as self-supply and public-private partnerships, formally recognised in sector policy and supported</p>
	<p><b>Monitoring service delivery and sustainability</b> Monitoring systems track indicators of infrastructure functionality, service provider performance, and levels of service delivered against nationally agreed norms and standards</p>
	<p><b>Harmonisation and coordination</b> Improved harmonisation and coordination among donors and government, and alignment of all actors (both government and non-government) with national policies and systems</p>
	<p><b>Support to service providers</b> Structured system of direct (post-construction) support provided to back up and monitor community management entities and other service providers</p>
	<p><b>Capacity support to local government</b> Ongoing capacity support provided to service authorities (typically local governments) to enable them to fulfil their role (planning, monitoring, regulation, etc.) in sustaining rural water services</p>
	<p><b>Learning and adaptive management</b> Learning and knowledge management supported at national and decentralised levels to enable the sector to adapt based on experience</p>
	<p><b>Asset management</b> Systematic planning, inventory updates, and financial forecasting for assets carried out, and asset ownership clearly defined</p>
	<p><b>Regulation of rural services and service providers</b> Regulation of the service delivered and service provider performance through mechanisms appropriate for small rural operators</p>
	<p><b>Financing to cover all life-cycle costs</b> Financial frameworks account for all life-cycle costs, especially major capital maintenance, support to service authorities and service providers, monitoring and regulation</p>

Source: Adapted from Lockwood and Smits, 2011.

decades, but we focus on actions that can be addressed within the medium term, of approximately five years, and thereby set out an agenda for the rural water sector up to 2020. In this, we focus mainly on the experience in some 13 countries that were the original focus of a study on supporting rural water, and that we believe are representative of a range of developmental contexts (Lockwood and Smits, 2011).

## DRIVERS OF CHANGE AND IMPLICATIONS FOR THE FUTURE OF RURAL WATER SERVICES

Various analyses elaborate how broad development trends are affecting water service delivery directly or indirectly (Carter and Lockwood, 2011; Smits et al., 2011a; Moriarty et al., 2013). Some of the more important drivers that shape the way water services delivery takes place are discussed below.

### Economic growth and demographic changes leading to differentiated demands for services

Many low-income countries are experiencing unprecedented levels of economic growth accompanied by similarly accelerating rates of urbanisation. One of the by-products of such growth is a more sharply differentiated demand for water services. On the one hand, we see that users in rural growth centres and small towns want services that are similar to those in urban areas. This means demand for piped supplies to the home and services that deliver more water, of better quality and with greater reliability.

In rural areas, there is also increasing demand for higher levels of services, both for domestic and small-scale productive needs, such as homestead gardens and livestock. As economies grow and there is more widespread cash circulation – increasingly in the form of e-money or mobile money – users are also willing to pay for these higher levels of service, as recent research from Burkina Faso indicates (Pezon, 2013). In fact, both in urban and rural areas, people are practising self-supply, for example by developing private wells or rainwater harvesting, to complement communal or formal utility supplies.

At the same time there is, and will remain for many years, a significant segment of the poorest households living in remote dispersed settlements for whom only the most basic levels of service are attainable in the medium-term future, often based on point supplies such as hand pumps.

The implication of these trends is that countries must develop differentiated strategies to meet the demands of these population groups. A blanket approach of



providing the entire rural population with a basic level of service, with only one management approach – often based on community voluntarism – will no longer suffice. Several countries are already moving in the direction of expanded service delivery models; for example, India and Uganda are both setting ambitious targets for extending piped supplies to their rural populations and Ethiopia is one of the countries that strongly promotes self-supply for dispersed rural populations to complement communal systems.

### Decentralisation: here to stay and presenting challenges and opportunities

Over the past several decades almost all countries have decentralised the responsibility for the delivery of social services, including water supply, to local government although clearly this is happening at different speeds, levels of intensity and with varying degrees of fiscal decentralisation. We have not observed any country that has re-centralised water supply and in countries with well-performing water supply sectors local governments are firmly in charge. We are therefore confident that decentralisation is here to stay.

In spite of this continued trend, the capacity of local governments to adequately fulfil their service authority role often remains limited. Efforts are being made through (vocational) training, capacity building programmes and mentoring to build capacity of local government staff. Still, in several of the countries that we studied in detail, fiscal decentralisation remains incomplete and the service authority role needs to be defined more clearly and operationalised. A recent review in Honduras emphasised the need to complete the decentralisation of rural water to municipalities and to clarify the role of municipalities in, amongst others,

**support to service providers** post-construction and strengthening the municipal platforms for oversight (CONASA/FOCARD, 2014).

More and sustained investment in **capacity support** for local government is needed. For the more (newly) skilled staff, the rural hinterlands remain unattractive and many choose to move to the cities. Supporting professionals with skills development and incentives to remain in rural areas can help counteract this trend.

More complex and demanding technical functions such as the management of large engineering programmes, or those that need certain economies of scale, are increasingly placed at higher institutional levels, such as a province or region. We have also observed bottom-up processes of aggregation, whereby local governments, through their own initiative, form associations to pool resources or to provide very specific technical expertise. Some countries in Latin America, such as Bolivia and Honduras, have good experiences with these associations of municipalities, or *mancomunidades*, but we do not see it happening as rapidly in some African countries where the trend under decentralisation is to create ever more districts for political reasons, thereby placing increasing strain on limited public capacity.

#### The changing nature of development aid

Foreign aid reached a record high of US\$134.8 billion in 2013, according to the OECD (2014), and this volume of aid is expected to remain more or less stable over the next few years. Nonetheless, there is much talk about the end of aid; the Ghanaian Government and its development partners, for example, have declared to strive towards an 'aid free' Ghana by 2020. So what is happening? Predicting the end of aid seems too far-fetched with even middle income countries such as Brazil, Nigeria, India and Pakistan, which are home to very large poor populations, continuing to receive aid,



Photo: PeterMcIntyre

albeit increasingly in the form of loans. As countries that are currently classified as low income move up the ladder to reach middle income status, it is expected that the volume of grant support will continue to reduce and loans will go up, with the potential risk that financing moves away from social sectors, such as water and sanitation, to economically more productive ones. For example, the multi-annual plans of Dutch bilateral aid to water in its partner countries show a move away from rural WASH to urban water and sewerage, and broader water resources management and irrigation (Netherlands Ministry of Foreign Affairs, 2014). Unless domestic budget allocations to rural water increase to compensate for this move, the already wide gap between rural and urban, in terms of both coverage and level of service, will increase (WHO/UNICEF, 2014; WHO/UNICEF, 2012).

#### Understanding the full costs of service delivery...and sharing the bill

A fourth trend refers to an increase in understanding of the full costs of service delivery. Triggered, amongst other factors, by the approach and results of the WASHCost programme (Burr and Fonseca, 2013), a number of organisations and governments have started tracking the full costs of water supplies, both the initial investments but also recurrent costs. This work has revealed that two types of costs in particular are neglected: the costs of capital maintenance (i.e. the replacement of existing infrastructure; Fonseca et al., 2013), and the costs of providing recurrent **direct support** to service providers (Smits et al., 2011b).

With the increased understanding of true life-cycle costs have come more realistic expectations among sector organisations of how these costs can be met through a mix of user fees, private investments, aid funding and public financing. There is growing recognition among sector professionals that it is simply not realistic to expect all recurrent costs to be covered from tariffs. Even in the USA and many European countries such as France and the Netherlands the full depreciation costs of assets are not included in user tariffs. Yet these costs need to be covered from some source if services are to be sustainable.

There is an emerging consensus that there will be a greater role for public finance in covering a significant part of replacement costs, alongside a larger share of the costs of direct support to service providers (Hall and Lobina, 2010).

This is also due to more realism about the limited role of the private sector as an investor in rural water supply. The limits of (international) private finance were made apparent for the urban sector during the privatisation



Photo: Lokaalmondiaal

debate in the 1990s and early 2000s. Rural water supply in most countries presents an even more challenging market opportunity for private investors, with high risks and low rates of return, and therefore the subsector has seen few private investors – at most the private sector plays a role as provider of goods and services, not as an investor.

So that leaves the sector with a need to share the costs between users, service providers and the public sector, for which we expect more complex financial mechanisms and products to be developed. A recent review of financial products carried out in Central America highlights the emergence of more innovative financial instruments, including revolving funds, bonds, insurance mechanisms and inventory finance (Absolute Options and CRS, 2014). We expect various experiments and pilots with these mechanisms in the coming years and once these more advanced financial products become more commonplace in rural water sectors, financial regulation must also follow.

### Water scarcity

A final trend that will continue to drive the rural water sector is water scarcity. As economies and populations grow, water resources will be developed further and inevitably discharge and environmental pollution will become more widespread. The rate and extent at which this happens is subject to debate and various scenarios have been developed using different assumptions, particularly on how water management in agriculture, as biggest consumer, will evolve<sup>1</sup>.

Whatever specific scenario plays out, water scarcity is likely to become an ever bigger factor affecting sustainability of services. In places of physical scarcity, such as parts of the Middle East and South and East Asia, this is manifesting itself for example in water sources for domestic supplies being affected by overuse for

agriculture, or being polluted by urban pollution.

## SECTOR TRENDS AND PROGRESS TOWARDS THE SUSTAINABILITY BUILDING BLOCKS

These global drivers and trends shaping rural water are far-reaching and dynamic and largely unavoidable, but we believe that national sectors can anticipate some of them and lay the groundwork to benefit from positive effects. We already see this happening in some reforming sectors with the strengthening of a number of building blocks. Based on this experience we can identify a number of broad scenarios with respect to the uptake of the service delivery building blocks:

### Application of building blocks at scale across multiple countries

- **Monitoring service delivery** has perhaps seen the most progress over the last five years, with a number of countries, for example Ghana, Honduras, Uganda and Ethiopia, taking steps to go beyond monitoring coverage to also monitoring aspects of service delivery. These changes have been driven by concerns over sustainability and developments in ICT and the increasing ease of data collection and transfer.

### Application of building blocks on a limited basis

- There is now a generally accepted understanding across the sector that **professionalisation of community management** is needed, and in fact in many countries a range of more or less professionalised management arrangements can be found. But as Adank and Kufuor (2013) make clear in their assessment of the different models for small town water supply in Ghana, these often lack formalisation and embedding in sector policy. The same goes for **direct support** and **alternative service provision options**, such as self-supply. In Ethiopia, for example, self-supply is recognised as an important option for rural water and is central in some government WASH programmes, but it is still lacking a clear description of the roles of the different stakeholders in this service delivery model.
- Arguably the building blocks on **capacity support** and **learning and adaptive management** also fall in this category and a large number of examples of application of these building blocks exist, but again, all too often these still happen in a 'projectised' manner. For example, Technical Support Units have been successfully established to support district governments in Uganda, but these are still temporary entities and need to be formalised into permanent

<sup>1</sup> See for example Molden, D. (ed.), 2007. *Water for food, water for life: A comprehensive assessment of water management in Agriculture*. London: Earthscan.

sector institutions.

- Another building block that would fit here is the financing of **life-cycle costs**. Whilst it is true that costing of services is now more widespread, the translation of the findings of such exercises into clearer financial frameworks and financial instruments to cover the recurrent costs still lags behind.

### Lack of practical application

- Although **regulation** is now increasingly applied in urban areas and thinking has gone into its adaptation to rural areas, with the exception of a very few countries, it is not commonly practised.

### Lack of development

- Finally there are the building blocks that need further conceptual development, such as **asset management** for rural infrastructure. In the rural water sector in developing countries this is not commonly practised, even though sectors face similar challenges to water service providers in the developed world, including financing capital maintenance expenditures and carrying out the required operational activities (e.g. inevitable minor preventative maintenance, major replacements, rehabilitation, commissioning of infrastructure) to maintain appropriate service levels. Even in resource constrained environments, it is possible to apply simplified asset management principles and practices for rural water supply.

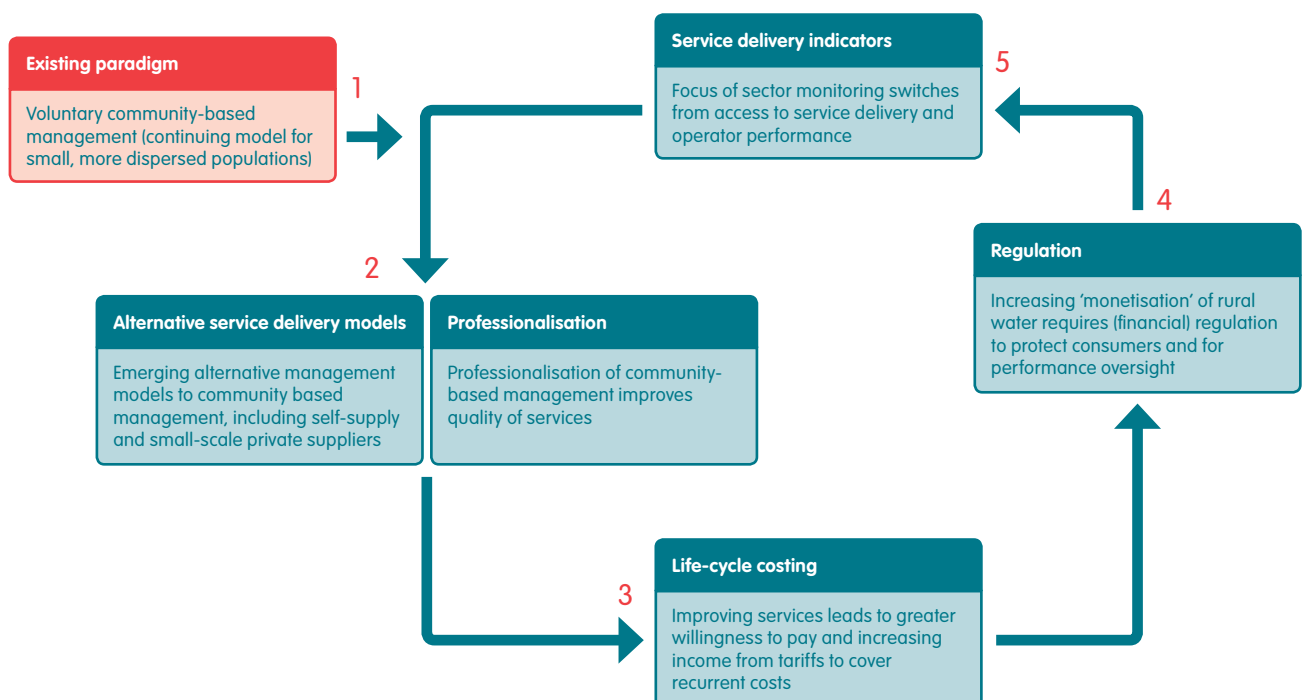
### Take up and sequencing of a service delivery approach across countries

Whilst ideally the different building blocks are addressed in an integrated manner, we have observed variations in the sequencing and the speed and depth at which they are applied, depending on country context and overall sector development.

Firstly, in those countries where rural water coverage is relatively low and where ODA remains the mainstay of financing for the sector, some basic building blocks are being developed, most commonly by differentiating service delivery models to different segments of the rural population, setting up programmes for direct and capacity support, and setting up systems to monitor services. Ethiopia offers a good example of progress in this category. It has recognised and supported a self-supply model for service delivery under its Growth and Transformation Plan. It has taken steps towards improving harmonisation through the Joint Sector Review process, the One WASH national programme and associated national WASH inventory. And, in the national WASH inventory, it has incorporated some indicators to track delivery of services, rather than just the physical presence of facilities.

Secondly, there are countries that have medium to high levels of coverage (approximately between 65% and 85%), but are caught between the need to continue expanding services (often to the most vulnerable and hardest to reach) and at the same time to sustain and

FIGURE 1 VIRTUOUS CYCLE OF IMPROVED SERVICE DELIVERY



improve existing services. Here we typically see the adoption of more professionalised service delivery models, local governments fulfilling their service authority functions and continuous monitoring of service delivery. In these contexts a clear and realistic financing framework for the sector is indispensable to adequately manage replacement and support costs. For many of these sectors the main challenge is the transition from a dependency on (grant) aid to loans and the concurrent growing role for public finance.

Lastly, for countries with only a small percentage of their population not covered, the obvious challenge is in reaching the 'last mile' and addressing capital replacement of aging infrastructure. These countries typically are also developing the more advanced elements of a service delivery approach such as establishment of asset management systems, having fully-functional and comprehensive service delivery monitoring, advanced financing mechanisms and regulation of services in rural areas. In these contexts,

the development of comprehensive water security strategies is also indispensable.

This progression is in many ways a logical one – countries struggling with low coverage would not necessarily adopt regulation as the first step – but we also observe the inter-related nature of these building blocks (see figure 1). For example, once services become more professionalised, service delivery will become more monetised and less dependent on voluntarism. With that follows the need to have clear roles and mechanisms for tariff setting, balanced with other sources of financing. This process is usually guided by rules set by a regulator. This, in turn, also requires improved service delivery monitoring to assess whether services meet standards. We therefore believe that once progress is made with one or two of the basic building blocks, a sector may end up in a virtuous cycle of development that is more conducive to service delivery overall. However, that does require that a sector is willing to operate on many fronts concurrently.

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## Reimagining the future of rural water services

For many years the enduring images of rural water have been those of women or children walking huge distances to fetch water at some dusty hand pump, voluntary committees sitting under a tree or community members struggling with a hand pump repair. But a new reality is emerging and we are starting to see more piped systems, small water treatment plants, the water committee meeting in its office with computers and smart phones and someone texting a plumber when a pipe breaks or sending a complaint to the regulator by SMS. This is the future of rural water services in many countries in the global South.

Of course this future will not arrive overnight and will depend on broader socio-economic development, but there are opportunities to accelerate positive trends and counteract potential risks. For national governments, development partners – both financiers and implementers – and other stakeholders this requires:

- Building a strong vision for the sector and for rural water services under leadership of the government, as the one ultimately responsible for delivering that vision, but with involvement of all stakeholder groups.
- Developing or modifying policy to recognise the segmentation of the rural population, from those requiring much higher service levels to those in remote and dispersed settlements that will follow the most basic service delivery models.
- Considering not only professionalisation of service delivery on the ground, but also of the sector as a whole, including sector-level regulation, advanced financing mechanisms and monitoring systems.
- Making more realistic forecasts of both the amount of financing required to meet all life-cycle costs, as well as the balance of funding sources between tariffs, transfers of aid and public finance delivered through re-distributed taxation; such planning should preempt the transition from grant to loan financing.
- Supporting professionals with skills development and incentives to stay working in rural areas.
- Providing an environment in which learning is valued and can contribute to the further development of the sector.

The realisation of this vision will take place in the context of rural water sectors, which are messy, complex systems requiring action at many different levels and entry points, including political, institutional, legal, technical and financial. We hope that the building blocks set out in this series will provide both inspiration and concrete examples of how to move forward, recognising that each country and rural water sector must find the balance and sequence that suits its own context.

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### About IRC

IRC is an international think-and-do tank that works with governments, NGOs, businesses and people around the world to find long-term solutions to the global crisis in water, sanitation and hygiene services. At the heart of its mission is the aim to move from short-term interventions to sustainable water, sanitation and hygiene services.

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### About the Building Blocks for Sustainability series

This briefing series was developed under IRC's Triple-S project. It is

intended as a resource for people who make decisions about rural water supply – financing, policy and programme design and implementation. It outlines the basic building blocks for sustainable delivery of water services – such as indicators and targets, aid harmonisation, and professionalisation of community management – and provides evidence and examples from actual practice.

For more publications in this series, go to: [www.ircwash.org/buildingblockbriefings](http://www.ircwash.org/buildingblockbriefings)

### About this Brief

This brief was authored by Stef Smits (IRC) and Harold Lockwood (Aquaconsult). It draws primarily on the studies of the rural water supply sector in 13 countries carried out under Triple-S (Lockwood and Smits, 2011) and further work of Triple-S in Ghana, Uganda, and internationally.

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