

# Access to Water and Sanitation in Sub-Saharan Africa



**A Way Forward for German Development Cooperation and its Partners Based on  
a Review of Two Decades of Involvement in Urban Water Sector Reforms in Africa**

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The research required for this report was carried out by a team of independent consultants. The views of the author do not necessarily reflect the views of GIZ.

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This study was commissioned by GIZ at a time when the water sector in Africa was at the crossroads. Having committed roughly EUR 1.6 billion in support over the past ten years, the German Federal Ministry for Economic Cooperation and Development (BMZ) published a new water strategy in 2017. Realizing the human rights to water and sanitation, based on the principle of 'leaving no one behind' (LNOB) and the SDGs, became a central goal of German development cooperation. In view of international commitments to greater aid effectiveness, it was timely for one of the major donors to the Sub-Saharan water sector to review its implementation strategies.

During the MDG period, many countries in the region had implemented far-reaching water sector reforms, some with German support. By 2015, the number of people living in towns and cities who were receiving piped water services had increased significantly. Progress was outpaced by rapid urbanisation, however, and access to piped water declined from 63% to 56% in the region, and the MDG for water was missed. While Africa's urban population and hence demand for water continues to grow at unprecedented levels, the bar has been raised even higher under the SDG framework: governments now aim for universal access to "safely managed water services" with higher service levels.

In line with the principles set out in the Paris-Accra-Busan Declarations - ownership, harmonisation of development partners, results, and mutual accountability - the review covers the water sector reforms in Burkina Faso, Kenya, Tanzania, Uganda and Zambia. It draws evidence-based lessons with respect to the effectiveness of the complex reforms in these countries and seeks to provide recommendations regarding the effective implementation of the BMZ strategy by looking at two critical questions: How can the achievement of high levels of coverage with public water services be accelerated? And: Do current approaches of implementation (modes of delivery) need to be adjusted, and if so, where and how? The review consists of a separate synthesis report (Part I) built on separate country case studies covering the five long-standing partner countries of German cooperation. Key narratives emerging from the analysis in the synthesis report are elaborated in the present briefing document (Part II).

Overall, the review conveys a positive message: the experience from the five African countries shows that sector reforms contribute to reaching a high level of access to piped water. Even in countries with a challenging governance context, high poverty levels and water scarcity, favourable framework conditions create the opportunity for commercial utilities to thrive and become eligible for commercial loans, whilst enabling pro-poor service extensions in urban areas. There are top-performing utilities in each of the five countries covering their operational costs (OCCR >1) and achieving high coverage levels (ca. 90%). Some important findings may deserve greater attention from sector institutions, development partners as well as German cooperation in future:

-  The potential for self-financing of the sector in poor countries is not yet fully exploited. In order to increase the effectiveness and levels of investment, the overall efficacy of the financing framework should be enhanced. More specifically, this requires improving professionalism, transparency and accountability of sector financing. Annual investments of US\$ 10 per person living in urban areas in urban water infrastructure (backbone and last mile) appear to be a minimum amount to achieve substantial coverage increases.
-  Good governance at the utility level is a crucial precondition for higher utility and sector performance. A more competitive allocation of financing can set incentives for governance, adequate tariff levels and performance improvements. This would necessitate a more flexible and concerted approach of development partners.
-  Accelerating access to piped water for underserved people requires more efficient use of scarce grant finance to subsidise expansion of services to the poor. Existing pro-poor policies need to be translated into practice through implementation concepts for low-cost technologies and dedicated financing mechanisms. 10% to 15% of sector investments should be earmarked for the "last mile", i.e. service extensions into underserved areas.

- ✚ Sector information systems need to be improved in order to provide a more accurate picture of the current status of services and access trends. Regulatory authorities play a key role in improving data and reporting.
- ✚ With respect to sanitation, declining coverage of sewerage services emphasises the need to accelerate more appropriate on-site sanitation services. This will require more coherent frameworks for the entire sanitation chain, concepts for sludge management, increased investment and improved monitoring.

In addition, the research process and discussions of earlier drafts of the reports gave rise to a number of new questions and thematic areas for investigation which were beyond the scope of the review:

Due to rapid urbanisation, the number of people in urban areas without access to water and sanitation services continues to rise. In the conclusions of the report, the relevance of stronger pro-poor orientation of service providers, financing institutions and regulators for reaching universal access might still be underestimated. A more detailed analysis of the impact of pro-poor instruments on the improvement of access in some of the surveyed countries is recommended.

The study has shown that access figures from sector information systems can deviate considerably and irreconcilably from those derived from JMP household surveys. Both monitoring systems have weaknesses in certain areas. In the context of the requirements of human rights to water and sanitation, for instance, neighbourhood resales and informal service provision should not be considered access. In some countries, deviations resulted from different definitions of “urban areas” used in sector monitoring and by JMP. For the purposes of this study, conclusions were drawn from the data as it was reported. No attempts were made to adjust the data as this would require more in-depth research.

There is a need to differentiate between the performance of a (national) utility and the performance of the water sector as a whole to better validate the resilience of the sector and to capture the fiscal risks for governments generated by the sector. The issue here is the impact of the water sector on the debt of the country as a whole. Country debt results when water and sanitation infrastructure is funded through loans taken out by the government, but not repaid through revenues generated from the use of this infrastructure.

Good governance is difficult to measure and its complexity extends beyond the scope of this study. For instance, while a high degree of autonomy of utility management could be an indication of good governance, it could equally create new governance challenges. There is a risk that powerful utilities could become “a state within the state”, working against necessary reform steps, regulation or transparency in the sector.

As GIZ seeks to engage in dialogue with national sector institutions, development partners and the public in order to validate the findings and recommendations of the review, the members of the Steering Committee of the study hope that it will inform the decisions that are critical for continued progress towards universal coverage.

GIZ Competence Center Water, Wastewater, Solid Waste

Eschborn, January 2019

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## GLOSSARY

<b>AFD</b>	Agence Française de Développement
<b>BMZ</b>	Federal Ministry for Economic Cooperation and Development (Germany)
<b>CEO</b>	Chief Executive Officer
<b>DTF</b>	Devolution Trust Fund (Zambia)
<b>GDC</b>	German Development Cooperation
<b>GDP</b>	Gross Domestic Product
<b>GIZ</b>	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
<b>GTZ</b>	Deutsche Gesellschaft für Technische Zusammenarbeit (now GIZ)
<b>IBNET</b>	International Benchmarking Network for Water and Sanitation Utilities
<b>JMP</b>	Joint Monitoring Programme
<b>lcd</b>	Litres per person per day
<b>NGOs</b>	Nongovernmental organisations
<b>NRW</b>	Non-revenue water
<b>NWSC</b>	National Water and Sewerage Corporation (Uganda)
<b>OCCR</b>	Operating cost coverage ratio
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>ONEA</b>	L'Office National de l'Eau et de l'Assainissement (Burkina Faso)
<b>PPP</b>	Purchasing power parity
<b>SDE</b>	Senegalese Des Eaux (Senegal)
<b>SDG</b>	Sustainable Development Goals
<b>SSA</b>	Sub-Saharan Africa
<b>Tanesco</b>	Tanzania Electric Supply Company
<b>Unicef</b>	United Nations Children's Fund
<b>WASREB</b>	Water Services Regulatory Board (Kenya)
<b>wgi</b>	World Governance Indicators
<b>WHO</b>	World Health Organisation
<b>WSP</b>	World Bank Water and Sanitation Program
<b>WSPs</b>	Water and sanitation service providers
<b>WSTF</b>	Water Sector Trust Fund (Kenya)

## EXECUTIVE SUMMARY

**The situation of water and sanitation in Sub-Saharan Africa is becoming increasingly precarious.** Ongoing unprecedented urbanisation and steady economic growth have led to soaring demand while climate change is putting a squeeze on raw water availability. The urban population is expected to increase fourfold, to 1.3 billion, by 2050. Only 56% of city-dwellers have access to piped water, down from 67% in 2003, and just 11% to a sewer connection. Failure to address the service provision challenge in the urban setting risks threatening social stability and economic development, and may cause further migration within and out of Africa.

**Although the challenges are formidable, there is good news.** The experience of water sector reforms in Africa shows that it is possible to reach a high level of access in urban areas that satisfies the requirements of human rights, even in poor countries. Water sector reforms have successfully slowed the decline in water coverage.

This independent review, commissioned by GIZ, examines the outcomes of urban water sector reforms and investments in Burkina Faso, Kenya, Tanzania, Uganda and Zambia from 2005 to 2015. It seeks to establish the determining factors for improvements in sector performance and coverage in the urban setting by analysing four dimensions of sector development: 1) financing, 2) pro-poor orientation, 3) sector governance, and 4) sector data quality and reporting. The review offers useful lessons that are applicable in the wider Sub-Saharan Africa context.

### Elements of water sector reforms

Reforms in the five countries started in the 1990s, and it took between five and ten years to achieve the first substantial results. Reforms were used as an entry point for the restructuring of two prominent public national water service providers, ONEA in Burkina Faso and NWSC in Uganda. In the other three countries, reforms started with the design of a new institutional framework, which included the creation of regulatory authorities. Key elements of every reform comprised the professionalisation of utilities (corporatisation), the introduction of regulatory tools, and - in some cases - the professionalisation of funds mobilisation and investment management. The reforms were driven by four objectives: (i) to increase **access** to water and sanitation by improving utility performance, (ii) to reach an operating **cost coverage** ratio (OCCR)<sup>1</sup> of larger than 1.0 for the utilities, (iii) to improve **maintenance** and (iv) to increase **investments** and the efficient use of funds.

### Outcomes of water sector reforms

With respect to financial performance and access, the reform efforts in the five countries show mixed results. Utilities such as Nyeri (Kenya), ONEA and NWSC, with an OCCR in the range of 1.2-1.4, achieved a higher access rate (78%-91%). Burkina Faso reached the highest level of urban per capita investment (>2.5 times the investment level per urban resident in Zambia), followed by Uganda. It should be noted that Burkina Faso and Uganda are the two poorest of the five countries.

**Financing:** The review indicates that it is possible for well-performing utilities to achieve both the social goal of greatly increased access and the commercial goal of OCCR larger than 1.0. The following rules of thumb summarise other findings: (i) an average tariff of less than **US\$ 1 per m<sup>3</sup>** (5 US cents for 50 litres) is certainly too low to meet today's challenges in the sector. (ii) Investments of approx. **US\$ 10 per person living in urban areas per year for water** appear to be a minimum requirement if a substantial increase in urban coverage is to be achieved. Countries able to ensure the effective use of investments in the sector seem to be more likely to attract financing from development partners than countries who have less effective conditions.

1) OCCR is defined as the ratio of billing revenue to operating costs. For example, an OCCR of 1.25 indicates that 20% of revenues could be set aside as a contribution to investments (25/(100+25)).





**Pro-poor orientation:** Despite considerable investments, access in Tanzania lags behind other countries, mainly because of an inadequate pro-poor orientation of the investment programme. Better-performing utilities elsewhere are scaling up low-cost technology such as water kiosks, as successfully promoted via the pro-poor basket funds in Kenya and Zambia<sup>2</sup>. Generally, countries with a higher share of public outlets have achieved higher coverage.

**Sector governance:** The analysis indicates that corporate **governance is the key differentiating factor** between well-performing and poorly performing utilities, and it appears to be **crucial for securing financial sustainability over a longer period**. In the past, development partners did not pay enough attention to governance, across the sector and particularly at the utility level. An enabling framework and regulation help to improve water governance but need to be combined with good leadership. Good governance also embraces accountability and requires audits (externally verified) and sound information systems.

According to the review, there is **no single preferred institutional structure**. Success is possible for national, regional or local level utilities, with or without a regulator and with or without a national professional financing/investment agency. However, an independent regulator has an important role to play where operations have been decentralised. Where only one national utility exists, regulatory functions can be performed through other arrangements and actors.

**Sector data and reporting:** Good sector information systems matter: without validated data on access to services, it is difficult to measure improvements and target investments. Despite substantial improvements in sector reporting, more regular surveys are needed to verify and improve the currently available data.

## Implications for consideration by development partners

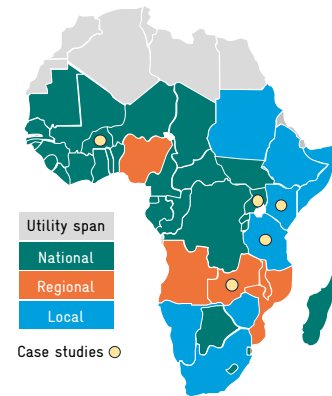
-  **Good governance:** Financing agencies should incentivise credible commitments to **good governance** and improved performance by allocating funds more competitively. This implies that the development partners' investment strategies and modes of delivery need to be adjusted and require better coordination between financial and technical cooperation. Clustering of small providers into fewer and larger providers around well-performing utilities should be promoted in order to expand the reach of good governance.
-  **Financing and tariffs:** The framework conditions for sector financing including **professional and autonomous institutions responsible for sector investment** on a national level should be strengthened (through technical cooperation). The target operating cost-coverage ratio should be in the range of 1.2-1.5. Inadequately low tariff levels are a major reason for poor service and low coverage and hurt the poor the most. Tariff indexing (Uganda) or multi-stakeholder supervision mechanisms (Burkina Faso) can prevent persistent political interference.
-  **Pro-poor orientation:** Scarce grant funding and subsidies should be targeted towards extending services to the poor. The **subsidy model should be redesigned** in a way that makes it both more progressive (benefitting those without any service first) and sustainable. Backbone infrastructure should be financed through loans and go hand in hand with socially balanced tariff increases for consumers with access to a connection. Splitting sector funding into 10-15% for last mile (grants targeted at the underserved poor and low-cost technology) and 85-90% for first mile investments (loans for the main system) is recommended.
-  **Sector reporting:** Development partners need to work with governments, regulators and utilities on consistent **reporting systems that cover all urban areas**.

2) Water Services Trust Fund (Kenya) and Devolution Trust Fund (Zambia).

Figure 1: Case study countries

## 1.1 Purpose

The key purpose of this document is to set out what it will take to substantially and sustainably improve access to water in Africa's urban areas based on a review of urban water sector reforms in several African countries in the last two decades as reported in "Access to Water and Sanitation in Sub-Saharan Africa: A Review of Sector Reforms and Investments" (GIZ, May 2018), and to set out the implications of this for African governments, development partners and, more specifically, for German Development Cooperation (GDC). The lessons set out here, while learnt in the context of development in Sub-Saharan Africa (Figure 1), are also applicable to developing countries more broadly.



Source: Author.

## 1.2 Why this matters

Water and sanitation are basic human rights, yet in Sub-Saharan Africa, 42% of people are without a basic water supply and 72% without basic sanitation.<sup>3</sup> In urban areas, only 56% of the population have access to a piped water supply (down from 67% fifteen years previously), and just 11% to a sewer connection.<sup>4</sup> At the same time, the region is urbanising rapidly – its urban population is expected to increase from 345 million in 2014 to 1.3 billion people by 2050.<sup>5</sup> Consequently, **there is a large and growing demand for services and a widening financing gap. Investments will have to be increased at least threefold to meet the Sustainable Development Goals for water and sanitation in Sub-Saharan Africa.**<sup>6</sup>

Africa will undergo both a demographic and economic transformation over the next thirty years.<sup>7</sup> There are significant opportunities for economic growth. But in order to achieve this potential, the transition to a predominantly urban population will need to be skilfully managed.<sup>8</sup> This will require improvements in education, health, water, sanitation and other services. **Failure to address these challenges poses significant risks, including increased pressures on migration out of Africa.**<sup>9</sup> Water has ready been identified by the World Economic Forum as one of the highest global risks.<sup>10</sup> The economic costs in terms of limited access and lost economic opportunities of inadequate water are very significant.<sup>11</sup>

## 1.3 There is good news

Although the challenges are great, there is good news. The experience with sector reforms in Africa over the last twenty years has shown that it is possible for well-managed urban water utilities to be created and sustained in challenging circumstances in low-income countries. These utilities are able to extend the piped water network to the large majority of people living in the cities they serve. This is possible even in the context of rapid urban growth. The required investments are also largely financeable.

3) Progress on Drinking Water, Sanitation and Hygiene 2017 (Joint Monitoring Programme, WHO/Unicef 2017).

4) Ibid. The percentage access to a sewer connection has also declined.

5) World Urbanisation Prospects 2014 (United Nations 2014).

6) "The higher performance benchmarks of SDG 6 will need an investment estimated at \$1.7 trillion in the next 15 years, which is three times historic levels - a difficult gap for many World Bank client countries to address, given the sector's poor cost recovery record, dependence on public funds, and low and uncertain fiscal transfers." (World Bank 2017).

7) See, for example, "Rethinking Africa's structural transformation: The rise of new industries." (John Page, [www.brookings.edu/research/rethinking-africas-structural-transformation](http://www.brookings.edu/research/rethinking-africas-structural-transformation), January 11, 2018).

8) Op-Ed: The Future of African Economic Growth (Mills and Herbst, 12 March 2018, Daily Maverick).

9) [www.enca.com/africa/african-migrants-to-europe-whatever-the-risk](http://www.enca.com/africa/african-migrants-to-europe-whatever-the-risk), June 2017.

10) [www.weforum.org/agenda/2018/01/why-the-answer-to-water-insecurity-is-working-together](http://www.weforum.org/agenda/2018/01/why-the-answer-to-water-insecurity-is-working-together) (January 2018).

11) "18 African countries lose around US\$5.5 billion every year due to poor sanitation, with annual economic losses between 1% and 2.5% of GDP" (Economic Impacts of Poor Sanitation in Africa, WSP World Bank 2012).

## 1.4 The GDC strategy is appropriate but its effectiveness can be increased

**The review of the urban water sector reforms in five African countries confirmed that GDC's water strategy<sup>12</sup>, summarised below, is appropriate.<sup>13</sup>**

The GDC is committed to expanding Germany's engagement with water supply and sanitation, wastewater management and climate-smart water resources management, and aligning this with the needs of partner countries and particularly disadvantaged groups.

GDC believes that realising the **human rights to water supply and sanitation** is key to sustainable development and poverty reduction because these help give people prospects, create options for them to act and guarantee their participation in basic public service.

GDC recognises that **good governance, pro-poor policy, capable and legitimate institutions** at all levels with well-trained **professional personnel, financing systems that are not susceptible to corruption**, and efficient and **effective public financial management**, are important factors in providing access to water supply and sanitation for all.

GDC further recognises that **effective providers not only ensure sustainable operation, but also are able to extend their services to those who have previously been served either inadequately or not at all**. They create access to water for all on a sustainable and non-discriminatory basis. These providers must be sustainably financed – with **fees that recover costs** and take into account the ability of low-income households to pay. Supervision and transparency in financial and technical performance are important and help to fight corruption.

In urban areas, households aspire to **pipled water supply** to the premises but shared taps or water kiosks play an important transitional role in increasing access. The **safe management of faecal matter** is also critical.

Inadequate water supply and sanitation, as well as the overexploitation and contamination of water resources, is often caused by **weak governance and corruption**. A well-organised sector policy, legal frameworks offering certainty, and capable and transparent institutions on all levels are key prerequisites for sustained investment. GDC will systematically support partner institutions with **institutional and human capacity development** at the national, regional and local levels. Good governance in the water sector requires a **clear division of roles and functions** between the institutions that make policy, regulate the sector and deliver services.

GDC practice over the last two decades has been well-aligned with this strategy (GIZ, 2018). This briefing document focuses on the key areas where **shifts in emphasis and approach could result in greater impact** compared to that already achieved. In particular, attention is given to utility performance, governance and the use of finance to create stronger incentives for improved governance and utility performance.

12) BMZ (2017).

13) GIZ (2018).

## 2 UTILITY PERFORMANCE AND GOVERNANCE

### 2.1 Poor utility performance hurts the poor the most

The large majority of public utilities in sub-Saharan Africa (and many others) fall into a low-level equilibrium trap. Tariffs are often kept low for political reasons and the utility is starved of resources.<sup>14</sup> Even if tariffs are set at a reasonable level, resources are wasted through high levels of inefficiency because the utility is also a source of patronage through staff appointments and extractive procurement practices. **Consequently, services are unreliable and there is little expansion of the network.**

**This situation hurts the poor the most, who must rely on expensive water from informal vendors, paying a large multiple of the utility tariff for water that is often of dubious quality.**<sup>15</sup> These utilities are unable to access loan finance and must rely on unreliable and unsustainable transfers from government and, more typically, development partners.<sup>16</sup>

### 2.2 Breaking out of the low-level equilibrium trap: what is possible

**The good news is that it is possible to break out of this trap, even in countries with a low level of economic development and within a generally difficult political-economy environment** (Table 1).

Table 1:  
Performance of  
well-performing  
urban water  
utilities compared  
to median  
performance  
in Sub-Saharan  
Africa

Utility (country)	SDE (Senegal)	Nyeri (Kenya)	ONEA (Burkina Faso)	NWSC (Uganda)	Median (SSA <sup>1</sup> )
Access to piped water	97%	91%	90%	78%	68%
Hours of supply	24	24	23	18	18
Operating cost coverage ratio	1.39	1.39	1.18	1.28	0.93
Cash collection efficiency	98%	-100%	97%	-100%	91%
Nonrevenue water	20%	18%	18%	28%	38%
Staff productivity <sup>2</sup>	3	3	4	6	10

Sources: Case studies, Heymans et al (2016) and IBNET (for median data). The IBNET database may not be representative of all African utilities as it relies on voluntary reporting. Consequently, the median for all utilities is likely to be lower than that for utilities reporting performance data.

Notes: <sup>1</sup>SSA = sub-Saharan Africa. <sup>2</sup>Staff per 1000 connections. <sup>3</sup>60% of 212 reporting utilities in 2014 reported an OCCR of < 1.

These countries are among the poorest countries globally and are countries with low World Governance Indicator scores (Figure 2). **Whilst these utilities are by no means perfect, and still have considerable scope for improvement, they are significantly better than their peers.** They have high levels of access to piped water in their service

14) "Governments are generally politically averse to allowing public utilities to pass the full cost of service on to consumers. ... Many [low- and middle-income countries] have been unwilling to use tariffs as an economic instrument to promote cost recovery and demand orientation, and this has been a key constraint to financial viability in client WSS sectors. ... Egypt, India, Indonesia, Nigeria, and Pakistan are examples of large LMICs with tariffs so low that utilities are unable to cover even operating costs. Under these circumstances, WSS utilities fail to meet minimum performance benchmarks in nonrevenue water, staff productivity, working ratios, and debt service coverage. Consequently, a large proportion of consumers resort to self-provisioning." (World Bank, 2017).

15) For example, "in Nigeria, informal providers commonly charge 10 to 100 times more than a utility would charge" (World Bank, 2017).

16) "Many utilities in client countries are unable to recover operating costs, thus perpetuating a culture of dependence on financial support from oversight ministries and sovereign guarantees for external borrowings" (World Bank, 2017). Out of 605 developing country utilities in the IBNET database (2013), just 17% cover their Operation and Maintenance costs and create a surplus (World Bank, 2016).

areas and have the capacity of taking on loan finance, a key indicator of sustainability, as a result of a substantially positive operating cost coverage ratio. These utilities also make relatively efficient use of tariff revenues that are more than sufficient to cover their costs.

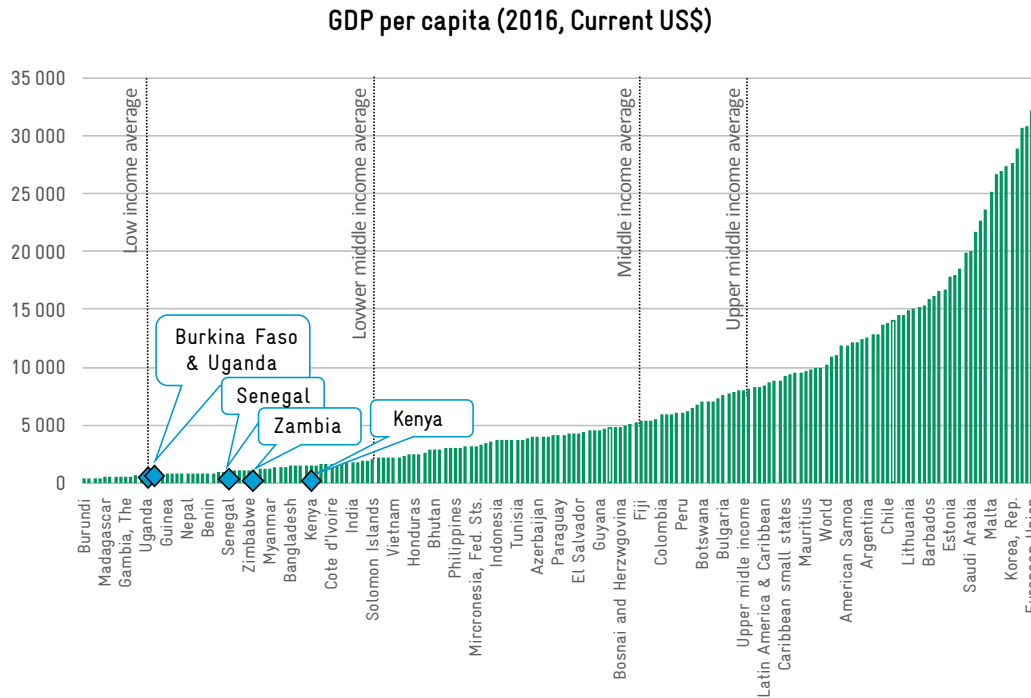
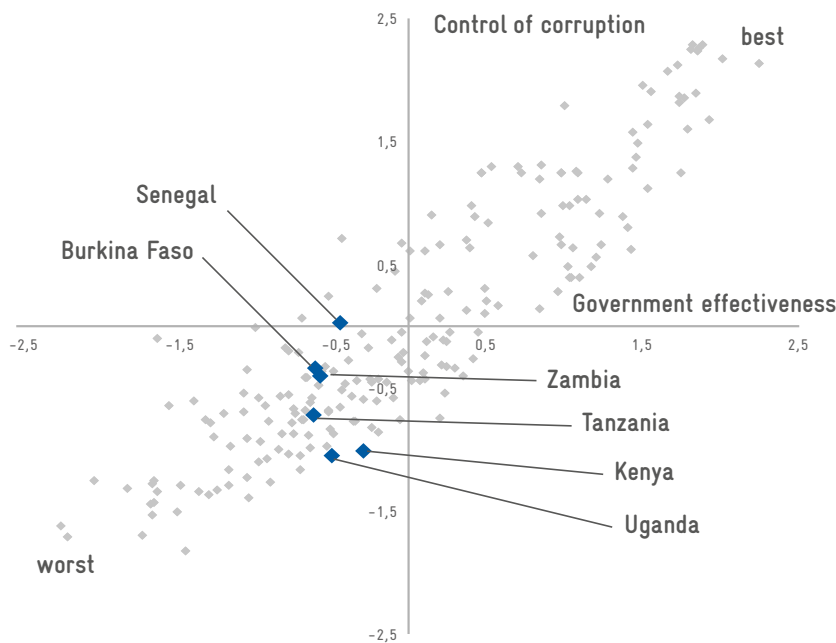


Figure 2: GDP per capita 2016 (Current US\$, top) and World Governance Indicators 2015 (bottom)

**Governance context of case study countries**



Note: Case study countries and Senegal highlighted (black diamonds)

### 2.3 Good utility performance matters

In the context of scarce investment finance, good utility performance is not an optional bonus; rather, it is a necessary condition for improving access to services in developing countries (Box 1).

#### Box 1: Water utilities translate investments into revenues – why good performance matters

The utility can be thought of as the engine of investment. The utility translates investments into services that customers are willing and able to pay for. The payments by customers make it possible to sustain the service through covering operating and maintenance costs and to pay for rehabilitating and expanding the asset base. When a utility is able to generate a cash surplus after meeting its operating expenses, then it is able to take up loans to finance investments and thus sustain its investments over time.

The performance of the utility thus has a direct bearing on the efficiency with which investments translate into services, and on its ability to raise loan finance. **Nonrevenue water (NRW) and cash collection efficiency are key indicators of operational efficiency and management effectiveness at an urban water utility.** Achieving high levels of cash collection efficiency and low non-revenue water requires sound management practices.

The following illustrative example assumes a utility serving a city of three million people, with water production at 150 liters per person per day, a tariff of \$1 per kl sold and operating costs of \$66 million per annum (Table 2).

Table 2:  
Improving utility efficiency matters – illustrative revenue gains

	NRW	Sales lcd	Collection Efficiency	Cash revenue \$ million pa	Cash surplus \$ million pa	OCCR (Cash based)	Unit cost (\$/kl sold)
<b>Inefficient utility</b>	50%	75	80%	66	<b>0</b>	1.0	0.8
<b>Efficient utility</b>	25%	113	97%	120	<b>54</b>	1.8	0.5

Increasing utility efficiency through reducing non-revenue water from 50% to 25% and increasing collection efficiency from 80% to 97% increases cash revenues by \$54 million per annum, an increase of 81% on the base revenue of \$66 million per annum. Whereas the inefficient utility charging a reasonable tariff (\$1 per kl) would not be able to raise loan finance, the efficient utility would have the substantive capability to do so, at the same tariff level and assuming the same cost base.

**Good performance enables existing financial resources to be stretched much further.** Improving utility performance is thus very important to both increase and maximise the impact of investments in the urban water sector in a context of limited availability of grants and concessionary loan finance from governments through tax revenue and from development partners through transfers.

**Good utility performance also attracts increased levels of financing.** Well-performing utilities such as SDE in Senegal, ONEA in Burkina Faso, NWSC in Uganda and Nyeri in Kenya have shown that they are able to attract financing to meet their investment needs.

Source: Author

Note: 1) Inefficient utilities typically have scope to reduce expenditure on existing activities and still achieve the same results. However, it is also typically appropriate for these utilities to reallocate these savings into priority areas not previously attended to, in order to achieve better results. The simplified example assumes these two effects cancel each other out so that expenditure remains constant but with improved results.



It is not a coincidence that sector outcomes in Burkina Faso and Uganda were better than for the three other countries (Kenya, Tanzania and Zambia) over the last ten years (Annex 2). While other factors were also important, as is explained in later sections in this report, the national utilities responsible for urban water – ONEA and NWSC – were reformed early in the sector reform process (Box 2) and both have performed relatively well over a long period of time, and much better overall compared to the aggregate performance of the utilities in each of the other three countries.

### 2.4 The sequencing and timing of utility reform matters

Not only is utility efficiency and effectiveness important, the timing of these improvements in relation to infrastructure investments is also crucial (Box 2).

#### Box 2: Why reform sequencing matters

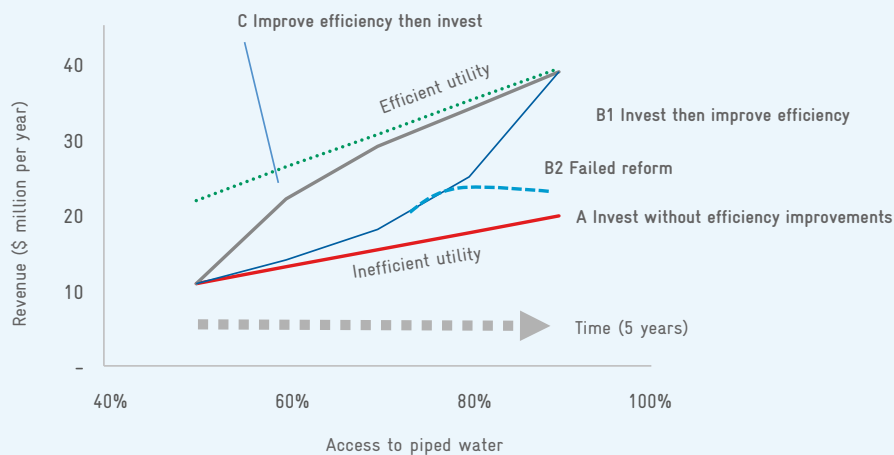


Figure 3: The effect of efficiency improvements on revenues in relation to the sequencing of investments

Table 2 assumes a utility serving a city of 1 million people and producing 150 liters per day per person served and a tariff of \$1 per kl sold. The efficient utility has non-revenue water of 18% and cash collection efficiency of 97%. The inefficient utility has a non-revenue water of 50% and a cash collection of 80%.

**Path A: Investment without efficiency improvements.**

Investments are made on the basis of promised performance improvements but the financial and efficiency improvements do not materialise. This results in wasteful investment expenditure. The World Bank, for example, has had a poor success rate with financial covenants that “underscores many client countries’ political unwillingness to

use water tariffs as an economic instrument to improve the financial condition of WSS service providers.” (World Bank, 2017)

**Path B: Invest then improve efficiency.** Investments are made and improvements in efficiency only come later (B1). More typically, efficiency improvements may take a long time to materialise and the utility operates at moderate levels of efficiency for a long time and does not become a good performer with high levels of efficiency, or performs reasonably well for a period of time but then performance declines (B2). This pathway is common and does not result in an efficient translation of investment financing into revenues. Examples include Lusaka and Nairobi Water.

**Path C: Improve efficiency early.** The management effectiveness of the utility is attended to in the very early stages of reform, improving utility efficiency with existing and available resources. Larger investments in infrastructure follow. In this way, the investments are made efficiently and effectively in relation to the absorptive capacity of the utility, and where the greatest improvements can be achieved per unit of investment. The utility management embraces a philosophy of continuous and incremental improvement, and the utility becomes a good performer with high levels of efficiency. The utility is then able to attract commercial finance and can

advance on the path to sustainability. Commercial finance and other mechanisms serve to reinforce good governance and an ongoing commitment to management effectiveness. This pathway represents the most efficient translation of infrastructure investment finance into revenue. Examples approximating this reform pathway include NWSC, Nyeri, ONEA and SDE (Table 1).

The difference in revenues for Paths A, B and C over five years (moving from left to right along each path in five equal annual steps) are as follows:

Table 3:  
Illustrative  
revenue gains  
for three  
reform pathways

	NRW Year 1 & 5	Collections Year 1 & 5	Timing of efficiency gains	Cash revenue \$ million over 5 years	Additional cash \$ million / %
<b>Path A</b>	50% - 50%	80% - 80%	None	77	
<b>Path B</b>	50% - 18%	80% - 97%	Late	107	<b>+30 (40%)</b>
<b>Path C</b>	50% - 18%	80% - 97%	Early	135	<b>+58 (86%)</b>

Note: refer to Figure 3 for assumptions to determine the volume of sales and the cash revenue.

While all reform paths illustrated in Box 2 achieve the same 90% access over five years, and Paths B (Invest then improve efficiency) and C (Improve efficiency early) both achieve the same level of overall revenue per year in year 5, there is a substantial increase in the revenue for Path C over time compared to Path B and Path A. Therefore, **the implications of the reform sequence for financing are very significant. In countries where utility performance improvements have occurred early, sector outcomes are better than in countries where utility reform and performance improvements occurred later or not at all** (Box 3).

### Box 3: The timing of sector and utility reforms in the case study countries

**All five countries undertook significant urban water reforms, starting in the 1990s.** These reforms took place in the context of structural adjustments and fiscal reforms during the 1980s and 1990s that aimed to increase macro-economic stability and reduce fiscal imbalances in response to economic crisis in each country. Reform of state-owned

enterprises, including inefficient and poorly performing urban water utilities, was part of these adjustments with a view to reducing their drain on a very limited government budget.

The evolution of the water policy and legislative frameworks, the timing of the establishment of an independent (or more explicit) regulatory function and the commencement of regular (and publicly available) reporting on performance are shown in Figure 4.

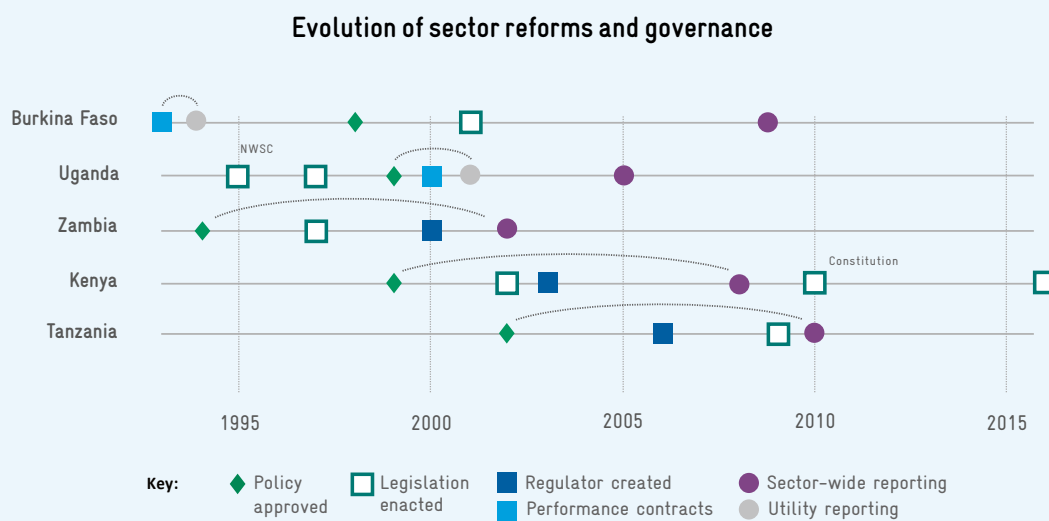


Figure 4: Evolution of sector reforms and governance in case study countries

Source: GIZ (2018)

**Reforms take a long time to be implemented.** Policy reform commenced earliest in Zambia (1993), then Burkina Faso (1998), Kenya and Uganda (1999) and lastly Tanzania (2002). New water legislation followed the approval of the new water policy after three years for Zambia, Burkina Faso and Kenya, but only after six years for Tanzania. Legislation preceded policy in the case of Uganda. Independent regulators were established in Zambia (2000), Kenya (2003) and Tanzania (2006). Three-year performance contracts between the government and ONEA (l'Office national de l'eau et de l'assainissement), the national urban water utility, were established in 1993 in Burkina Faso and oversight of these contracts was strengthened through a multi-stakeholder committee in 2008. Performance contracts were initiated in Uganda in 2000. Regular and publicly available reporting on utility performance started in 2001 in Uganda, 2002 in Zambia, in 2008 in Kenya and Burkina Faso and in 2010 in Tanzania.

Three of the five countries followed what might be called a 'standard reform sequence' of policy, legislation, institutional reform (including the creation of an independent regulator) and then

reporting on performance. Burkina Faso and Uganda both have dominant national utilities and have not created an independent regulator.

**Achieving near universal access to a piped water supply and cost-recovery were key goals in all five country urban water reforms and were explicitly stated in the water policies.**

**Timing and extent of utility reform and improvements.**

In the case of both Burkina Faso and Uganda, the reform of the national utility happened early in the reform process, and significant efforts were made to improve utility performance with good success. In the other three countries, while professional utilities were created, **arguably insufficient attention was paid to the performance of these utilities.** The result was mixed utility performance, with poor performance amongst a large subset persisting over time. (Figure 6). Sector outcomes were much better in Burkina Faso and Uganda compared to Kenya, Tanzania and Zambia (Annex 2).

Source: GIZ (2018)

## 2.5 Governance is the key differentiating factor

What is the key difference between a well-performing and poorly performing utility? The answer does not lie in the geography of the city or its economic status. Nor does the answer lie in the availability of technical know-how or financial resources – both of these are readily available when required and when suitable conditions are created for their supply. **The proximate answer lies in the effectiveness of management.** It is the management team that is responsible for translating inputs into outputs. An effective management team will continuously improve outcomes by using existing resources effectively and by increasing the availability of resources and translating these more efficiently into improved outputs and outcomes over time. Why do some utilities have an effective management team, and others not? **The causal answer lies firmly in the realm of governance.** Was the CEO hired on the basis of his/her competence? Does he/she have the freedom to create or develop a competent management team, and to hire suitable staff? Is the utility adequately resourced by allowing a tariff that covers costs and to generate a cash surplus to contribute to capital investment? Does procurement deliver suitable value for the money spent? Does the CEO have some security of tenure as long as he/she is performing well, not being subject to the whim of a changing Minister or Board of Directors? These questions get to the *substance* of sound governance. The answers to these questions are as important as the existence of formal rules, perhaps even more so (Box 4).

### Box 4: When governance substance trumps form – the case of South Africa’s electricity utility

#### **Eskom, an effective electricity utility – 1990-1995.**

Eskom, South Africa’s vertically integrated monopoly electricity utility, was established in 1923. After a turn-around in the mid-1980s from near bankruptcy and up to the mid-1990s, Eskom established an international reputation for both business success (low-cost reliable electricity) and social leadership (rapid electrification program, social responsibility initiatives and staff diversity). The turnaround was achieved with the leadership of John Maree and progress then continued with Reuel Khosa as chairman of the board.<sup>1</sup>

#### **Comprehensive public sector reforms (1994-1999).**

South Africa undertook substantive constitutional and legal reforms in the mid-to-late 1990s with a view to protecting and improving public sector governance and management effectiveness. The 1996 Constitution established the principles for public administration, including a high standard of professional ethics, accountability and effective, efficient and economic use of resources. The Public Finance Management Act (1999) created clear accountability and detailed rules for procurement that aimed to obtain value for money and prevent corruption.

**Governance instability at Eskom (2009-2017).** In the period after 2006, Eskom’s performance deteriorated and there were periods of load-shedding and black-outs. In 2009, Jacob Zuma became the president of South Africa. The Board and management of Eskom were soon changed. Whereas there were just two CEOs at Eskom in the thirteen-year period 1994 to 2007, there were ten CEOs in the eight-year period 2009 to 2017. The boards appointed by the responsible Minister, allegedly with the direct involvement of the President, were fundamentally changed in 2010 and 2014. Many of these Board appointments were allegedly linked to a wealthy influential family.<sup>2</sup>

**A corrupted entity (2009-2017).** In January 2018 the National Prosecuting Authority stated that Eskom had paid R1.6 billion (about \$125 million) to McKinsey and Trillian unlawfully without a valid contract – “Payments were made out of fraudulently generated invoices and in circumstances where no services were rendered – none whatsoever.” “Both McKinsey and Eskom were willing participants who colluded in what can be described at best as a scheme that was designed to unlawfully drain funds out of Eskom.”<sup>3</sup> This was just one example; numerous other allegations of corrupt practices have been made – “An overwhelming body of evidence has been built. Taken together it suggests that the power vested in the President, certain Ministries, and the boards and executives of state-owned entities has been misused to benefit the interests of connected individuals and entities – most prominently the Gupta family.”<sup>2</sup> These governance failures brought Eskom close to bankruptcy.

**Cleaning up (2018-).** In early 2018, the newly installed President, Cyril Ramaphosa, moved quickly to correct the glaring governance failures of his predecessor. A skilled and ethical board, and CEO with impeccable credentials, were appointed, narrowly averting a liquidity crisis and creating the conditions to rebuild the organisation.

**Robust laws and governance frameworks have to be backed by ethical leadership and public accountability.** The case study shows that good laws and governance systems are not necessarily sufficient to prevent corruption which occurred

even though South Africa has, arguably, an excellent Constitution and public management legislation. Ethical and principled political leadership is still critical as are well functioning mechanisms to hold public servants and utility managers to account.

Sources: <sup>1</sup>Graham, Ann. 2006. The Company That Anticipated History. Strategy+business. November 30, 2006 / Winter 2006 / Issue 45. <sup>2</sup>Eskom Inquiry Reference Book. A resource for Parliament's Public Enterprises Inquiry. State Capacity Research Project. <sup>3</sup>www.fin24.com NPA concludes Eskom payments to McKinsey and Trillian were criminal 17 January 2018.

In the case of SDE, ONEA, NWSC and Nyeri, conditions were created in which the utility was *allowed* to perform well. Enterprising and effective CEOs either helped to create this context or took advantage of it. See, for example, the story of the early reforms in Nyeri (Box 5) and ONEA (Box 6).

The regulator in Kenya, WASREB, recently initiated reporting on a corporate governance indicator to promote better management practices. Early results for 17 WSPs scoring 40-and-below and 60-and-above are shown in Figure 5.<sup>17</sup> This subset of data, albeit for a small number of utilities, shows a possible correlation between corporate governance and WSP performance as might be anticipated.<sup>18</sup>

**Correlation between corporate governance and performance**

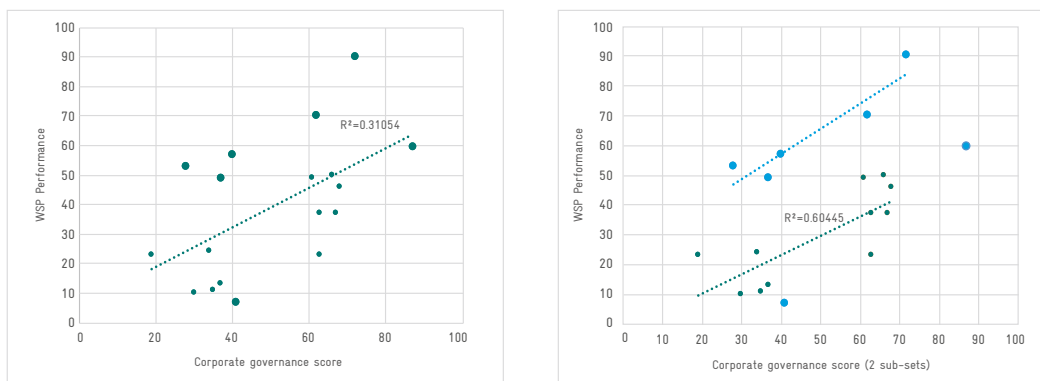


Figure 5: Correlation between corporate governance and performance

Source: WASREB Impact Report #9 2016. Note: the larger dots represent the very large WSPs. The right hand graph shows the correlation separately for the very large and the other (not very large) WSPs.

**The possibility of achieving good governance for a single utility, or for a sector, even in a context that is generally unfavourable, is significant.** Kenya scores poorly at a country level on the World Governance Indicators (Figure 2) yet there are some utilities that perform very well. (See Table 1 and Box 5.)

17) Ruiru-Juja which scored 39 on the governance indicator and 81 for overall WSP performance was excluded because the WSP was found by the regulator, subsequent to the publication of the Impact Report #9, to be misreporting its performance. Mombasa which scores 41 on the governance indicator was included.

18) There is a much wider dispersion of performance for WSPs with a 'middling' governance indicator score of between 40 and 60. This is not surprising. If these are included, the correlation between governance and impact for the 32 reporting WSPs is very weak (0.15).

### Box 5: Sound governance delivers good outcomes – the example of Nyeri Water in Kenya

In the early 1990s, municipal water was rationed, unreliable, and unsafe to drink. Although reliable data on the situation before 1995 are not available, those who lived through the period recall that infrastructure investment had not kept up with population growth. Water was rationed by limiting supply to a few hours per day. The poor families living in the growing informal settlements lacked access to the piped water network.

The reforms at Nyeri Water and Sewerage Company were initiated through the combined efforts of a political and a technical leader. The political impetus for reform came from the mayor, Jackson Wanjage, who had support from the municipal council. Technical and managerial input came from the Municipal Engineer, Joseph Nguiguti, who at the time was responsible for water supply because of his role in running all of the municipality's engineering services. Together, they persuaded GTZ (GIZ's predecessor) to let Nyeri join an existing programme supporting the creation of municipal-owned public companies with autonomous management.

At the time of reform, predation and neo-patrimonial leadership were reportedly widespread in Kenya, and one would expect that the utility would have been subject to penetration by national and local political elites. However, this was not the case in Nyeri in 1995. Mayor Wanjage was a civic-minded reformer, with an uncommon level of autonomy. The utility's small size and weak financial standing minimised vested interests in continuation of the status quo (low coverage and intermittent service) for patronage, corruption or other forms of predation. In other words, it seems the political benefits of improved service outweighed the political costs from loss of rent-seeking opportunities. It may also have helped that Nyeri is a relatively ethnically and culturally homogenous town, minimising inter-group rivalries that could otherwise have interfered with a drive for universal service and the use of cross-subsidisation to achieve it.

Source: Heymans et al (2016).

Conversely, the review showed clearly that poor governance holds the water sectors back in Kenya, Tanzania and Zambia. In the case of Kenya, the review stated that “**there appears to be strong evidence that political influences strongly affect sector outcomes.**” For example, after the regulator placed Coast Water (a poorly performing water services board) under an administered regulatory regime, and recommended, after the end of the maximum intervention period, that the board should be replaced, no action was taken. While the regulator has managed to remain relatively independent, its actions have limited consequences. The Cabinet Secretary (Minister) has strong powers of appointment of the water services boards, and county governors of the appointment of the water company boards. Minimum requirements for appointments, set in law, are routinely flouted without consequence. In Tanzania, the CEO of the electricity utility, Tanesco, was fired by the President over a tariff increase, even though the regulated process had been followed. This is symptomatic of political influence negatively affecting sound governance and sector outcomes. In Zambia, Board nominations are still largely influenced by political considerations. In late 2017, only two out of the eleven boards of the utilities were nominated and operating. In the remaining utilities, representatives of the ministry are directly exercising the board functions.

## 2.6 The benefits of good governance can extend beyond water

**The water sector can be a catalyst for wider political economy reforms.** The political economy within a sector, or for a specific utility, does not have to replicate the national political economy, in fact, it can act in the opposite direction in a positive way. Khan (2017) proposes the possibility of “strategies that identify sectoral opportunities for

anti-corruption where policy changes are likely to be supported by some powerful players in the sector and achieve immediate development goals.” His approach can be summarised as follows: “To make sequential progress towards a rule-following society, anti-corruption reform in particular sectors has to be designed to be implementable and to have a development impact. When the vertical enforcement capacities of a state are limited and horizontal enforcement is also weak it is vitally important to identify activities where anti-corruption is feasible because some powerful interests can feasibly benefit from anti-corruption. This is possible if changes in policies and institutions can make it profitable for at least some powerful players to behave in developmental and socially desirable ways in these activities. **If we can identify these opportunities and make the changes that create effective support for anti-corruption of specific types, anti-corruption strategies can be both feasible and developmental. This in turn can help to accelerate the creation of a dynamic and diversified economy with many productive sectors.** As more and more productive organisations emerge, the social capability for a horizontal enforcement of a generalised rule of law becomes stronger and informality declines” (Kahn, 2017, own emphasis).

**The good water sector performance in terms of both investment and access in Burkina Faso and Uganda suggest that Kahn’s ‘sector first’ approach to wider reforms is possible.** In Uganda in the late 1990s the pressure to privatise the national water utility created an opportunity for the reform of the institution. A business-trained managing director, William Muhairwe, seized this opportunity and was able to forge a compact with his political principals, the Minister and the President, that gave him the space to improve performance in a context where commercialisation of entities was supported by government for pragmatic reasons (the government was short of cash). Key initiatives in the reform of the NWSU included insulating the organisation from patronage in both recruitment and procurement practices, and building a competent management and technical team to lead the utility. In Burkina Faso a compact with donors was forged in the 1990s and rendered secure and sustainable with external stakeholder oversight of tariffs and sector performance from 2008 (Box 6).

**This paper emphasises the role that financing can play in incentivising and supporting good governance in the urban water sector in sub-Saharan Africa** (and beyond).

### Box 6: Sector reforms in Burkina Faso

In the 1990s, Ouagadougou faced a severe water shortage. The city population had doubled from 1985 to 2000, but the development of water service infrastructure had not kept pace with increasing demand. By 2000, just half the population had access to piped water (through individual taps or communal outlets). ONEA, the utility responsible for providing water to Ouagadougou, was performing poorly and thus lacked the cash needed for service improvement. Salif Diallo (Burkina Faso’s Minister of Environment and Water from 1995 to 1999) and Mamadou Lamine Kouate (Managing Director of ONEA from 1995 to 2005) were the political and technical leaders, respectively, that were critical to starting the water sector reform.

It can be inferred that Burkina Faso’s then-president, the strongman Blaise Compaoré, gave his political blessing. Diallo and Kouate resisted suggestions from the World Bank to introduce a private operator to manage the service. Instead, ONEA remained a government-owned, limited liability company. From 2001 to 2006, technical assistance from a private operator (Veolia) was provided through a performance-based service contract. In addition, a Supervision Committee – comprising representatives of consumers, government, NGOs, and development partners – was established. The Supervision Committee monitors both ONEA and the government’s performance against the Contract Plan (three-year performance contract), but it also is an example of a formal structure that developed an important informal role in connecting the key actors in a common forum, from where they have been able to guide and support reform and progress in alliance mode.

Source: Heymans et al (2016)

## 3 LINKING FINANCING AND GOVERNANCE

### 3.1 Strengthening incentives for good governance

Governance is the key causal differentiator between poor and good performance. Good governance will result in well-performing utilities, and well-performing utilities are much better at serving the poor than poorly-performing utilities. Well-performing utilities, even those operating in challenging contexts, are also financeable. **It follows then that any financing strategy that seeks to expand access to water sustainably should focus strongly on creating and strengthening incentives for good governance in both form and substance.**

**Testing for good governance, and a credible commitment to the necessary reforms for substantially improved utility performance, is much less costly (by orders of magnitude) than making a commitment to investment and hoping that governance improvements will follow.** In Tanzania, for example, more than \$700 million was invested into the water sector over a period of 8 years, but with little to show in terms of improvement in governance and utility performance and, consequently, with relatively poor sector outcomes. In contrast, \$520 million was invested in Burkina Faso over ten years by the well-performing utility, ONEA, with substantially better sector outcomes. (See Box 6 and Annex 2.)

**Expanding the reach of good governance is a sensible strategy.** It is hard to establish good governance. Where it exists, it makes sense to extend the reach as far as is practical and appropriate. This can be achieved through the incorporation of new areas under the management of an existing well-managed and soundly governed utility. This has been the approach used in Burkina Faso and Uganda. In these cases, the national utility was transformed and then its reach was expanded. However, this approach also has dangers. The utility could become too large and management arrangements unwieldy. NWSC rapidly took over many towns and now serves over 200. The impact on utility performance is still to be assessed.

Competitive allocation of financing will improve investment effectiveness. There is a significant opportunity to improve investment effectiveness by linking operational improvements with investment (Box 7). Water providers who have demonstrated a commitment to good governance and operational improvements (using their existing assets) will participate in the design and implementation of new investments much more effectively, resulting in more cost-effective and sustainable investments (Box 2).

**This means that major investments should take place after some governance and operational improvements have been achieved and that scarce finance should be competitively allocated to water providers that have demonstrated both governance and operational improvements.** A possible concept is described in Box 7. It is argued by some that this approach is counter to the ‘leave no one behind’ principle of the SDG. This is not the case. When investments are inefficient, then this will necessarily result in leaving people behind in a context where available investments are not sufficient to meet the total need. **An approach that substantially increases the efficiency and effectiveness of investment will extend the reach of the money invested, reaching more unserved people and hence leaving fewer people behind.**



### Box 7: Linking financing to operational improvements – a concept

1. A key to success is to identify promising starting conditions for significant improvements in water providers. The essential element here is sound governance, as argued in section 2.5. These starting conditions, that is, a credible commitment to reform, can be tested in a low cost way (See Box 8).
2. Water providers that have demonstrated a credible commitment to reform are supported in a practical way with technical operations and management, after an initial scoping. Small funds could be made available for essential equipment and small works to significantly improve operations and revenues, and to further support the strengthening of governance. This could be through a grant and/or interest free loan (from a revolving loan fund). The experience shows that inefficient utilities can easily increase cash flows through management interventions at low cost.
3. While operational improvements, support to management and governance strengthening are underway, the required larger investments can be scoped and planned.
4. The utility would only then apply for investment funds. The water provider would, by now, be in a much stronger position to benefit from the investments and to maintain and operate the assets sustainably over time.
5. Investment funds could come from a number of sources. Ideally, the initial grants and/or loans for operational improvements would be part of an integrated financing mechanism.
6. Successful water providers will forge a pathway to good performance that other water providers can follow and the process will lead to the more effective use of scarce capital across the sector over time (see Box 2).
7. Well-performing urban water utilities will, over time, be able to source commercial loan finance.

Source: Author

## 3.2 Implications for the design of financing arrangements

**The key urban water sector financing challenge is to allocate scarce grant and concessionary loan finance in such a way that is maximises impact – improved and sustained access to water – and, at the same time, leverages commercial loan finance.** This paper has argued that the most effective and efficient route to do this is through early improvements in the efficiency and effectiveness of water utilities, the engines that turn investments into revenue and service outcomes (Box 1). In turn, good utility performance is fundamentally dependent on sound governance.

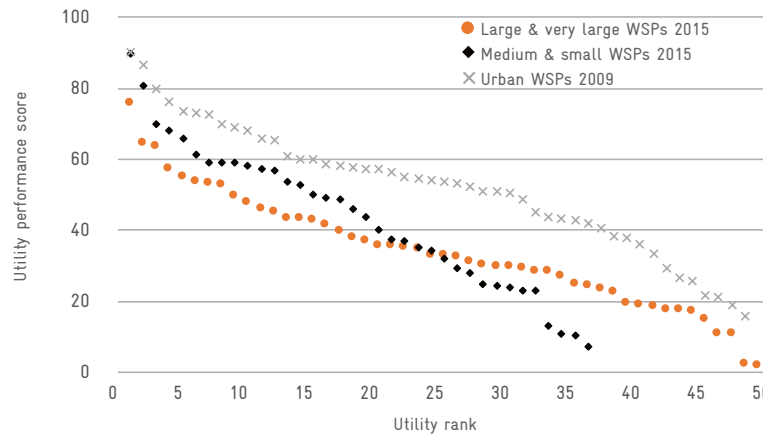
**There is a wide distribution of utility performance across Sub-Saharan Africa** and within countries where provision is decentralised (Figure 6).<sup>19</sup> The challenge, therefore, is to improve service provider performance efficiently, and to use the investment allocation process to drive this.

The ultimate objective is to raise the performance of all of the utilities, achieving high levels of access to piped water and a financially sustainable service, with ongoing contributions to investment from the tariff. But this must be done in a context of limited grant and concessionary loan finance. Therefore, **it is critically important that the investment pathway to improved access is efficient.**

19) The water regulator in Kenya, WASREB, uses a composite metric to measure performance comprising the following indicators: water coverage, drinking water quality, hours of supply, personnel expenditure, operating cost coverage, revenue collection efficiency, non-revenue water, staff productivity and metering ratio. See WASREB Impact Report #9 2016 for details. Comparative data on composite metrics for sub-Saharan Africa is not available, but analysis of individual performance indicators shows a similar dispersion of performance across the continent as is shown here for Kenya.

A financing approach that bases allocation only on need (level of access), or provides an equal allocation of finance across all of the utilities, or some other criteria not related to utility performance improvement, will not be efficient nor effective in achieving the objective (Box 2).

Figure 6: Utility performance scores and ranking in Kenya (2009 and 2015)



Source: WASREB Impact reports 2016 and 2010. Composite indicate. Scale has been normalised to 0 – 100.

**What is needed is a financing architecture that radically rethinks the financing allocation question. Creating, supporting and incentivising the essential conditions for good performance, namely sound governance, must be the priority.** Finance should follow a credible commitment to reform that includes setting in place the essential governance conditions for success (Box 8).

**Box 8: Testing credible commitment to reform through a 100-day program**

A well-performing utility needs the following essential ingredients – effective management and the ability to generate positive cash flows through a tariff that recovers costs and enables a contribution to capital investment. In simple terms, a competent management team needs to be allowed and supported to ‘do the right things’. Sound governance will enable and protect these essential ingredients. There are three critical tests: On what basis are appointments made? Does procurement deliver value for money? Are tariff decisions strongly informed by economic and financial considerations?

It is possible to test for these conditions in a low-cost way through a 100-day program. The 100-day program can quickly establish whether a utility (the CEO, Board and responsible shareholder Minister) is

serious and committed to doing what is right and what is needed by establishing a set of upfront agreements that establish the essential governance conditions for improved performance, and then testing follow-through during the 100-day program. The utility commits to a set of stretch goals and is provided with practical support in achieving these goals. Appropriate incentives and penalties are put in place to support the process.

Success in the 100-day program, followed by consolidation and further improvements in a follow-on program, supported with a small interest-free loan for small investment, can provide a strong demonstration of credible commitment to the reforms necessary to successfully improve performance over time.

Source: Muhairwe and Eberhard. Growing bankable utilities. Presentation to the Global Water Summit. Paris. April 2018.

This financing architecture could be put in place at global, regional and/or country levels. It is easier to conceptualise the approach at a country level. But the same principles apply at a global or regional level.

**An urban challenge fund.** It is proposed that the countries with decentralised provision of urban water services create a “Challenge Fund” or “Water Catalyst Fund” (or any other suitable name) for investments in urban water and that this Challenge Fund comprise three sequential and linked funding windows, offering a phased pipeline of financing instruments for urban water. Window 1: Small upfront investments (with low transaction costs), offered as grants, test credible commitment to reform (Box 8). Window 2: Early improvements in utility operations are then funded through improved cash flows (Box 9), which in turn enables Window 3 during which larger investments in infrastructure upgrades and expansion over time are financed through **concessional loans and blended finance**, ultimately leading to a sustainable utility that finances investments through **commercial loans**. Utilities compete for the funds and must meet specified thresholds to move to the next phase of financing. Loan preparation can proceed in parallel to the operational improvement phase, rendering subsequent investments more effective without any time delay (Box 9). The same approach could operate at a regional or continental level, through, for example, an urban water financing window created as part of the African Water Facility.

To be most effective, the majority of financing for urban water (in a single country, or for a region from a group of development partners) should flow through this mechanism, creating strong competition for the financing. In practice, it more likely for this approach to be established as one of a number of funding windows through which some share of total urban water investments flow. Demonstrated success would naturally lead to an expansion in the flow of funds using this approach.

This approach will require changes to the financing incentives in operation for many development partners and multi-lateral financing agencies.

### Box 9: Financing operational improvements and project preparation

**Operational improvements.** Poorly performing utilities are inefficient and it is almost always possible to generate an increase in cash flow through more effective management (without and prior to major investments in infrastructure). The increase in cash flows can be used to make further operational improvements. This is a virtuous circle and significant gains can be achieved while project preparation is being undertaken for the major infrastructure investments. Operational improvements will, however, usually require small investments. To kick start this process, it is proposed to make a revolving loan fund available to finance the necessary working capital for making investments in operational improvements. This process can start straight after testing credible commitment to reform and is not dependent on lengthy project preparation.

**Project preparation.** In parallel to the operational improvements, project preparation for major investments can be undertaken. The investment of time and resources in this process is unlikely to be wasted because credible commitment to reform has already been tested.

**No time slippage.** Because project preparation has to take place for all major infrastructure investment, there is no slippage of time in the proposed program. Instead, while project preparation is underway, operational improvements are already being undertaken. These operational improvements put the utility in a better position to benefit from the infrastructure investments when they take place.

Source: Author

### 3.3 Professionalisation of the financing function

Irrespective of whether or not a challenge fund is created, the review showed that the professionalisation of financing of the urban water sector has strong benefits. The reasons for this are not hard to understand. The evidence for development countries shows that countries that rely wholly on government grant financing are unable to invest at the levels required to sustainably improve access to water and sanitation service. Therefore, finance from development partners (grants and loans) and from banks (loans) are important sources of finance for the sector. It goes without saying that countries who are able to develop institutional arrangements for investment that have the following characteristics – autonomy of action (from direct political influence), professionalism in the planning and implementation of investments, and transparency in how funds are spent with clear reporting on investment outputs and outcomes – are much more likely to attract higher levels of investment financing compared to those that are not. This could account for the high levels of donor finance provided to both Burkina Faso and Kenya (Box 10).

#### Box 10: Examples of investment professionalism and transparency

Three-year performance contracts between government and ONEA (the national urban water utility) were established in 1993 in Burkina Faso and oversight of these contracts was strengthened through a multi-stakeholder committee in 2008. The multi-stakeholder committee comprises representatives of customers, nongovernmental organisations and the development partners who finance the sector. The committee monitors performance of both the utility and the government under the contract, on the basis of independently audited financial and technical reports. This design helps to establish accountability to external stakeholders within formal structures.

In the case of Burkina Faso, the stakeholder oversight arrangement together with the professionalism and efficiency of the utility, are likely to have played a major role in supporting the confidence of financiers.

In Kenya, professional investment agencies provided better (though partial) transparency in investments. Fund mobilisation is hampered by the fact that there is no professional structure combining the work of the water services boards at the national level. A clear way forward for financing sector investments, including the role of the proposed water works development agencies, is yet to be charted.

Source: GIZ (2018)

The specific design of the financing arrangements depends on the sector structure in each country. Where there is a single national urban water utility – which is the case for the majority of countries in Sub-Saharan African countries (Figure 1) it makes sense for the financing function to be undertaken within the utility itself. Where service provision has been decentralised to the regional or local level, it may make sense to establish a national financing agency that is responsible for sourcing and allocating financing in the sector. Tracking the implementation and impact of investments could also be the mandate of such an agency. Such an agency has been proposed in Kenya and is currently being studied in Zambia.

## 4 ACCELERATING AND SUSTAINING ACCESS – A BETTER DEAL FOR THE POOR

### 4.1 Policies are not enough

While all five countries in the review had strong policies with respect to the human right to water, the translation of these policies into practice was at various stages of effectiveness.

The most important intervention to improve services to the poor is to fix the utility and to create a well-performing utility. This is because poor utility performance hurts the poor the most (Section 2.1). Strategies to do this have been discussed in Section 3.

Equally important is to ensure that the available (and scarce) subsidies are applied in a way that benefits the poor the most. Unfortunately, the majority of the subsidies used in the water sector benefit wealthy households, industry and commerce disproportionately. These subsidies are anti-poor. A significant rethink in the way subsidies are used is needed. This is discussed in Section 4.2.

Beyond these two important interventions, what is needed are practical mechanisms to reach the poor. In the five-country review, two practices stood out as having particular merit – a pro-poor funding mechanism and practical implementation concepts to manage public outlets. These two initiatives are complementary to each other, one providing the earmarked funding to benefit the poor, the other practical mechanisms to translate the funding into pro-poor outcomes. They are discussed in Sections 4.3 and 4.4 respectively.

### 4.2 Rethinking subsidies

**It is possible for the sector to achieve both the social goal of greatly increased access and the commercial goal of cost-recovery at the same time.** This is not a trade-off. In fact, achievement of the commercial goal of cost-recovery is both necessary and supportive of achieving greater access. The experience with sector reforms in Africa over the last twenty years has shown that it is possible for well-managed urban water utilities to be created and sustained in challenging circumstances in low-income countries. These utilities extend the piped water network to the large majority of people living in the cities they serve, even in the context of rapid growth. A substantial share of these investments is financeable. The findings in the review support this. This was also found in a World Bank study (Heymans et al, 2016).

**It is possible for urban water utilities in African countries to be substantially financed on the basis of operating revenues from the tariff.** The evidence from the case studies shows that the utilities in the two poorest countries, Burkina Faso and Uganda, were able to run a substantially positive operating cost coverage ratio, meaning that the utility was able to contribute significantly to investments from the cash obtained from operations after meeting operating costs. This view is also supported by evidence from Senegal, as reported in Heymans et al (2016). What is also significant is that outcomes in terms of reported access to water services were better in Burkina Faso and Uganda (and also Senegal) compared to the other countries (Annex 2). However, what is also required is a transition away from reliance on development partners for financing. Both Uganda and Burkina Faso were heavily dependent on development partner financing. In the case of Uganda, loans to the government were passed on as grants to the utility. In Burkina Faso, the utility ONEA was required to pay back the loans.

**The urban water sector can mobilise loan financing, even in poor countries.** NWSC and ONEA (and some utilities in the other countries) show that loan-financing is possible and can and should be pursued. In the case of ONEA the instrument of “sub-sovereign lending” enables development partners – such as AFD – to directly provide loans to the utility. Loan-financing is important in order to mobilise resources from the capital markets in the long-run, to enhance the discipline of the utilities and also to make the best use of scarce grant financing.

**Cash surpluses can be generated to support increased investment.** A higher tariff does not automatically translate into cash availability for investment or loan financing. In fact, the evidence from Kenya suggests that tariff increases result in an increase in operating costs rather than an increase in cash availability for investment. Mechanisms are therefore needed to ensure that a portion of the tariff is set aside for investment, rather than being swallowed up into increased operating costs through, for example, increased staff and salaries. This is one advantage of separating asset holding from operations, as this ‘forces’ a fee to be paid between the operating and the asset holder. However, there are disadvantages to this arrangement. An alternative is to tie tariff increases to a cash contribution towards investment. For example, in Kenya, the Regulator has the power to require (and enforce) that water service providers open and manage a separate account to be used solely for the purposes of funding/financing assets or repaying loans, and require that a defined portion of the tariff revenue, as determined by the regulator in the approval of the tariff, be paid into this account. This would reduce the risk of tariff increases being ‘eaten’ by operational costs instead of being set aside for asset replacement and financing asset expansion. This is already a proven procedure over many years in Burkina Faso, with oversight by the Ministry of Finance that guarantees that the system works.

**Tariff indexing can protect sector revenues.** Tariff increases are often politically contentious. For example, the Managing Director of Tanesco, the electricity utility in Tanzania, was fired by the President over a tariff increase even though the tariff increase had followed due processes as set out and managed by the electricity regulator in Tanzania. NWSC in Uganda was able to negotiate and agree with its parent Minister an indexation of the tariff. This meant that the tariff would increase automatically in line with inflation and other agreed core cost drivers. Consequently, NWSC did not have to apply for a tariff increase or adjustment for many years, yet it was able to sustain positive operating cash flows over a long period of time through this mechanism. In contrast to this, the Nairobi utility in Kenya struggled to maintain its tariff level. Even though the regulator supported tariff increases, political considerations often trumped technical-financial considerations. In many cases, utilities in Kenya did not apply for a tariff increase even though the regulator encouraged and requested them to do so, suggesting that political considerations were at play.

**It is important to make better use of scarce grants and subsidies to expand services to the poor.** Most sector investments, which are subsidised, go into backbone (‘first mile’) infrastructure and only a small share – typically about 7-10% – goes towards ‘last mile’ connections and kiosks for poor people. At the same time, the minority of households (in most settlements) who do have access to a connection are not paying for the full cost of the service. This is problematic in a context where a growing number of households do not have access to any piped water service. The implicit subsidy in this system (investment cost and subsidised operating cost) is regressive, benefiting existing users with connections (including industry, commerce and a minority of the population) and reducing the resources available for investments to extend the service to the unserved. The poor households who do not have access typically pay vendors many times the cost of water from the utility. There is an opportunity here to rethink the subsidy model in a way that makes it both more progressive (benefitting those without a service first) and sustainable. Investments into backbone infrastructure should be financed from loans and go hand in hand with tariff increases for consumers with access to a connection. The scarce subsidies should be used to extend the network to poor households. This is the most progressive use of the scarce subsidy.

### 4.3 Pro-poor funds to accelerate access

Pro-poor financing mechanisms were established in Zambia (Devolution Trust Fund) and Kenya (Water Sector Trust Fund) (Box 11). In Kenya, the pro-poor Trust Fund accounted for 7% of sector investments and about 7% of new connections and a third of the new kiosks, thus disproportionately contributing to new connections and access. In Zambia, the pro-poor Trust fund accounted for about 10% of sector investment. One of the main success factors of these financing mechanisms was the competitive allocation of funding to water utilities.

### Box 11: The Water Sector Trust Fund in Kenya

The 2002 Water Act provided for the establishment of a Water Sector Trust Fund. A Trust Deed was created in 2004 and the fund operationalised in 2005. The Fund is governed by a Board of Trustees appointed by the Cabinet Secretary and has a staff of 67 people. Funding is provided from the national government budget and development partners, with annual funding growing from about \$200 000 in 2008 to \$11 million in 2016, accounting for 7% of sector investment in the period 2006 to 2016. More than 80% of the WSTF funding has come from development partners. The Fund funds water resources and urban and rural services.

Funds under the urban component are allocated competitively based on calls for proposals. Of the \$47 million invested in urban water and sanitation services, \$34 million was invested in water, which was reported to benefit 1.8 million people at a cost of \$18 per capita, adding 646 kiosks, 34 500 water connections and about 1 700 km of network. These accounted for 7% of the total number of new connections added in the period 2008 to 2016, and about a third of the kiosks. The assumptions used to calculate the number of beneficiaries are not reported publicly. The cost per capita for the latest call for proposals (Call #7) is more than double the per capita cost compared to previous rounds. While an increase in unit cost in successful rounds is expected, the magnitude of the increase is concerning.

Source: GIZ (2018)

## 4.4 Practical implementation concepts for managing public outlets

**Provision of access by public outlets is an important strategy to increase access.** The extent to which countries paid attention to and prioritised the effective provision of water to poor communities through public outlets therefore matters. These outlets need to be sustainably managed, reliable and make affordable water available. Very little attention was paid to this in Tanzania, whereas a lot of attention was paid to this in Burkina Faso. In the case of Uganda, Kenya and Zambia, the story is mixed. In Uganda, while some efforts have been made through the institution of a pro-poor unit in NWSC, the practical management of outlets is problematic in many areas, with some outlets effectively privatised and others not functioning. (Some 20% of outlets were reported to be not active in 2017.) In Tanzania, many kiosks do not adhere to sector guidelines. In Kenya, concepts for the development and management of kiosks have been developed by the Water Services Trust Fund. In Zambia, the Devolution Trust Fund also developed standards and implementation concepts for kiosks.

## 5 INSTITUTIONAL CONSIDERATIONS

### 5.1 The reforms provided a sound basis for better outcomes

The review found that the **reforms have provided a sound basis for better outcomes – investments leading to improved access**. In Burkina Faso and Uganda especially, reforms have been associated with increased levels of investment and better sector outcomes (Annex 2). In the other countries, performance is likely to have been worse in the absence of reforms and in the context of high rates of urbanisation. For example, in Kenya, very low levels of investment in the 1980s and 1990s led to a stagnation of the sector which was not the case after the reforms. The water sectors are no longer dependent on operating subsidies from government.

**Without reforms it would not have been possible to reduce the decline in water coverage.** High levels of urbanisation would have resulted in significant declines in the urban water sector in the absence of reforms.

**Policy and legislation provided a sound basis for good outcomes.** All five case study countries embarked on a more or less standard set of reforms comprising the following elements:

1. **Policy:** a water services policy that recognises the human right to water and the importance of cost recovery in the urban water sector.
2. **Legislation:** separation of water resources from water services, and codification of the water policy and institutional design in law.
3. **Professionalisation and commercialisation of the water provider function:** creating of companies (under public or company law) with governing boards, to assume responsibility for the provision of water supply (and typically sewer) services, and requiring these utilities to recover their costs from the tariff. In some cases, the investment and operations functions were combined and in others these were separated.

Interestingly, the overall sequence did not seem to matter too much (except to the extent that it affected the timing of the performance improvements of the urban utilities as discussed in Box 2) – in some cases the legislation preceded the policy. What is perhaps more significant is that reforms took many years to be substantially implemented, and the extent to which the reforms impacts affected utility performance varied greatly.

**In summary, it can be argued that the reforms undertaken in each of the countries provided an adequate basis for the achievement of good sector outcomes. However, performance across the countries was mixed. Clearly the creation of this enabling framework was not, on its own, sufficient to ensure good sector outcomes.**

### 5.2 No single preferred institutional design

**There is no single preferred institutional structure.** The sector structures in the different countries are different and unique to their context. There is no single preferred institutional structure for the sector. **Success is possible for national-level, regional-level or local-level utilities, with or without a regulator, and with or without a national professional financing/investment agency.**

**National, regional and local delivery each have their advantages and disadvantages.** Where there is a single national utility, the reform of that utility will achieve significant benefits for the country. At the same time, the stakes are high – poor performance by one single national utility will affect the urban population of the whole country. In this context, the regulator may be subject to regulatory capture due to the relative power of the national utility. Regional entities retain the benefit of economics of scale that a national utility enjoys. Sector-wide good performance requires that all or most of the regional entities perform well. This requires attention to sound governance for each



utility. More boards are required to function well and more competent CEOs and management teams are required. A regulator is likely to add value in the sector by increasing transparency and enforcing standards. In the context of decentralisation, the smaller utilities may not benefit from economies of scale and many more competent boards and managers are required. Regulating a large number of utilities is challenging. Clustering of utilities to form fewer, large utilities may be beneficial. It is also easier to regulate a few utilities compared to many. The appropriateness of a national or regional provider is also contextual to the size of the country. In many relatively small African countries, a single national provider makes the most sense. Whereas in very large countries such as Nigeria, regional or localised provision may be more appropriate. The incidence of national, regional and local provision (as the dominant form of provision) is shown in the map on page 1.

**Scope for large-scale structural reforms may be limited.** The water reforms in the late 1990s and early 2000s took place in the context of wider structural adjustments in each country. This provided the opportunity for fundamental reforms of the sector, including the redesign of the institutional arrangements in some cases. In the absence of any large scale crises or external shifts (for example, the new constitution in Kenya in response to election-related violence) there is unlikely to be scope for large scale institutional reforms in the urban water sector in any of the case study countries. Incremental reforms are more likely, including, for example, the recombining of the asset holding and operating functions or clustering of service providers in some cases (see below).

### 5.3 Separation of asset holding from operations is not necessary

**Separation of asset holding from operations is not necessary to achieve good performance and may be an obstacle.** The operating of the assets was explicitly separated from the asset holding and investment function in Kenya and for the entities supplying water in Dar es Salaam in Tanzania. The motivation was to facilitate private sector involvement in the operations of the assets while maintaining public ownership and control over the investment function. However, in both Kenya and Tanzania, the hope for private sector involvement in the operation of the assets did not transpire to any significant extent. There was a failed initiative to lease assets to a private operator in Dar es Salaam and the amalgamation of the asset holder and operating company (both publicly owned) is being considered. The future of the asset holding and investment companies in Kenya, the Water Services Boards, is highly uncertain. The assets have been transferred to the newly established county governments who have responsibility for water and sanitation services.

Assets were not separated from operations in Burkina Faso, (most of) Tanzania, Uganda and Zambia. Both Burkina Faso and Uganda performed well with respect to both the overall level of investment as well as the qualitative assessment of the investment and financing function.

In summary, **the separation of asset holding from operations is therefore not necessary for good performance and is unlikely to be desirable in the absence of private sector involvement in the operations of water services. It is better for a single professional entity to be responsible for both investment and operations as this is more supportive and enabling of an appropriate alignment between investment and operations.**

### 5.4 An important role for a regulator where provision is decentralised

Fragile and patchy sector information systems, poor quality and insufficient verification of sector data and reports result in poor sector investment allocation choices and in misleading service coverage reporting. Sector data is more difficult to collate where provision is decentralised. (Where there is only a single urban water provider, the task is much simpler.) In the context of decentralised service provision, the role of the regulator has proved important in improving the transparency of sector performance, but there is still room for improvement.

Without credible data on access to water services, across all of the important dimensions (proximity, quality, quantity, affordability and reliability) it is difficult to measure improvements in access to water and sanitation services with any degree of confidence. A credible system should use and reconcile both input data (based on number of active connections together with reliability, quantities provided, quality of water supplied, etc.) and outcome data (surveys of household experiences in accessing water). While important strides have been made in improving the quality of data collected and reported by Ministries, utilities and regulators in the five country case studies through sector reports, utility annual reports and regulator reports, there is still room for improvement in the following areas:

- ✚ More transparency in assumptions and methodologies employed to assess access.
- ✚ Reconciliation of input data and outcome (survey) data.
- ✚ Third party verification of collected and reported data.
- ✚ More use of longer timeframes (ten years and more) in reporting to understand sector trends.
- ✚ Improvements in reporting formats.
- ✚ Making reports available in a timely manner (within 6 months of the financial year end).

**A separate, professional regulator has benefits but is not essential in all cases.** Of the five countries studied, three had established independent professionalised water regulators and two had not. It is unlikely to be a coincidence that the two countries without a national regulator both have a single national utility with responsibility for water provision to a major share of the urban population. In this situation, it is difficult for a national regulator to balance or oppose the power of the single national utility and it is impossible to benchmark the performance across utilities. In the case of Uganda, the national utility, NWSC, actively opposed the establishment of a regulator, asserting that this was not necessary and would not add any value, only an additional cost to the customer. In the case of Burkina Faso, a supervisory mechanism was introduced through a multi-stakeholder oversight committee. The performance of both NWSC (Uganda) and ONEA (Burkina Faso) was managed through performance contracts between the national shareholder ministry and the utility.

Regulators were established in Kenya, Tanzania and Zambia. The regulators have reported on the performance of the regulated utilities in these countries ranging from ten in Zambia to over 100 in Kenya and Tanzania, respectively. Performance of these utilities has been mixed and poor performance has continued in the case of many of the regulated entities. The proposition that greater transparency in reporting utility performance would create sufficient incentives to significantly improve performance on its own has not proven to be robust. However, benchmarking and overall improved transparency has affected performance to some extent, for example in Zambia (Lang, pers comm, 2018). The licensing arrangement is a blunt instrument because the threat to withdraw an operating licence is generally not credible – to the author’s knowledge, no operating licence has been withdrawn from a provider in any of the three countries. One option to increase incentives to perform is to establish performance contracts between the owner (shareholder) and the utility. Where operations are decentralised, this would result in a large number of performance contracts and thought needs to be given as to how these contracts are supervised and enforced.

In summary, **an independent regulator has an important role to play where operations are decentralised (to the regional or local level), and less so where there is a single national provider. The benefits of regulation are increased transparency and benchmarking of performance, as well as an important role in setting or approving tariffs. However, the most fundamental difference between a well and poor performing utility is due to governance. Getting governance right is the responsibility of the utility shareholder, although a regulator can assist in monitoring and enforcing adherence to governance rules.**

**An important basis for sound governance is accountability. This requires audited (externally verified) reporting on access and financial and technical performance.** While important progress has been made in reporting on access and technical performance in all five case study countries, there is still significant room for improvement. The regulator can play an important role here.

## 6 SUMMARY MESSAGES AND IMPLICATIONS

### 6.1 For government, regulator and utilities

It is possible for well-managed urban water utilities to be created and sustained in challenging circumstances in low-income countries, for these to extend the piped water network to the large majority of people living in the cities they serve, even in the context of rapid urban growth, and for the investments to be financeable.

It is possible for the sector to achieve both the social goal of greatly increased access and the commercial goal of cost-recovery at the same time. This is not a trade-off. In fact, achievement of the commercial goal of cost-recovery is both necessary and supportive for achieving greater access.

Commercialisation and professionalisation of public water services have accelerated access only to the extent that the actual performance of the utility was actually improved and full commercialisation was achieved (an operating cost-recovery ratio of substantially above one).

**A substantial increase in sector investment is necessary.** Indicative targets are more than 1% of GDP and at least \$10 per person per year for water.

**The attraction of finance, and extending the network to be more socially inclusive, requires a financially viable utility, with an operating cost coverage ratio of substantially above one.** The target operating cost-coverage ratio should be 1.5 and the minimum ratio 1.2. It is possible that some regulators are paying too much attention to keep tariffs low. In other words, a strategy that pays more attention to good corporate governance and gives a premium for it in terms of a higher tariff should be further explored. A tariff that is less than US\$1 (5 US cents for 50 liters) is almost certainly too low to enable a utility to fulfil its essential functions, recover its costs and contribute towards investments. Tariff indexing can protect sector revenues.

**Good governance is the key differentiator between poor and good performance.** As the owner of the assets (at national, regional, or local level), **government must assume responsibility for putting in place and sustaining good governance.** The appointment of the CEO, management team and staff must be based on competence, procurement must deliver value for money and the utility must be allowed a tariff that recovers costs and contributes to capital investment. It is possible to achieve good performance in a utility or sector within a wider more challenging political-economy context. The experiences show that a few people, acting together to create sound governance conditions, can make an important difference to utility and sector outcomes. But these are only likely to be sustained where accountability has been well established.

**Governance substance is more important than form.** Structural indicators of good governance (“good form”), such as the existence of a board of directors and how many times they meet, are poor indicators of governance substance. Better indicators need to be found and used.

Much more focus should be given to **measures to improve governance substance.** As part of this, mechanisms to increase **stakeholder oversight** of sector performance and sector institutions should be explored where these are not in place or are inadequate.

**An important basis for sound governance is accountability.** At a minimum, this requires audited (externally verified) reporting on access and financial and technical performance.

**Investments should be preferentially allocated to institutions and utilities where sound governance has been established.** In particular, measures for the competitive allocation of finance that rewards good governance should be explored and implemented.

**Countries able to develop sound arrangements for investment are more likely to attract financing than countries that do not have these characteristics.** Key characteristics are autonomy of action (freedom from undue political influence), professionalism in the planning and implementation of investments, and transparency and accountability in how funds are spent, with clear reporting on investment outputs and outcomes.

**A key distinguishing feature of sector performance is the extent to which countries have developed and put into practice practical pro-poor implementation concepts,** particularly related to the allocation of funds targeting services to poor underserved people and the development and management of public outlets. The presence of a dedicated pro-poor funding mechanism specifically targeting investments into low-income areas makes a difference.

**It is important to make better use of scarce grants and subsidies to expand services to the poor.** Investments into backbone infrastructure should be financed from loans and go hand in hand with tariff increases for consumers with access to a connection. The scarce subsidies should be used to extend the network to poor households. This is the most progressive use of the scarce subsidy.

**Good sector information systems matter:** Fragile and patchy sector information systems, poor quality and insufficient verification of sector data and reports result in poor sector investments allocation choices and in misleading service coverage reporting. Without credible data on access, it is difficult to measure improvements. National governments, regulators and utilities need to pay more attention to management information systems, data verification and reporting. They need to undertake more regular surveys to improve data on access outcomes (how customers access and experience the services or lack thereof) and they need to reconcile output data (connections) with outcome data (surveys).

### Key messages related to institutional structure

**The reforms undertaken in each of the countries provided an adequate basis for the achievement of good sector outcomes.** However, performance across the countries was mixed. Clearly the creation of this enabling framework was not, on its own, sufficient to ensure good sector outcomes.

**There is no single preferred institutional structure.** The sector structures in the different countries are different and unique to their context. There is no single preferred institutional structure for the sector. Success is possible for national-level, regional-level or local-level utilities, with or without a regulator, and with or without a national professional financing/investment agency.

**There is unlikely to be scope for large scale institutional reforms in the urban water sector in any of the case study countries.** Incremental reforms are more likely.

**Separation of asset holding from operations is not necessary to achieve good performance and may be an obstacle.** The separation of asset holding from operations is therefore not necessary for good performance and is unlikely to be desirable in the absence of private sector involvement in the operations of water services. It is better for a single professional entity to be responsible for both investment and operations, as this is more supportive and enabling

19) See, for example, the implementation concepts for water and sanitation of the Water Sector Trust Fund in Kenya: <https://waterfund.go.ke/safisan/>.

of an appropriate alignment between investment and operations.

**An independent regulator** has an important role to play where operations are decentralised (to the regional or local level), and less so where there is a single national provider. The benefits of regulation are increased transparency and benchmarking of performance, as well as an important role in setting or approving tariffs. However, the most fundamental difference between a well and poor performing utility is due to governance. Getting governance right is the responsibility of the utility shareholder, although a regulator can assist in monitoring and enforcing adherence to governance rules.

## 6.2 For development partners

**The water sector can be a catalyst for wider political-economy reforms, and therefore the benefits of positive improvements in governance and outcomes in the water sector should not be underestimated.**

There is a large and growing financing gap and investments will have to be increased by a multiple of current amounts to meet the Sustainable Development Goals for water and sanitation in Sub-Saharan Africa.

**The necessary substantial increase in investment means that commercial finance must be leveraged through much more effective use of scarce grant and concessionary loan finance.**<sup>21</sup>

It is possible for the sector to achieve both the social goal of greatly increased access and the commercial goal of cost-recovery at the same time. This is not a trade-off. The urban water sector in developing countries can be self-financing.

**This will require a different approach by development partners.** There is a poor link between financing and performance, and between financing and governance. Sovereign guarantees mute incentives to ensure financing is effectively used. Lenders have perverse incentives to disburse and allocations are not based on maximising effectiveness and efficiency.<sup>22</sup>

**Development partners and financiers have paid too little attention to governance, across the sector and particularly at the utility level.** The apparent trend away from the Paris Declaration on Aid Effectiveness towards bilateral arrangements between development partners and developing country governments will not yield the required results. What is needed, instead, is a more collective approach that insists on sound governance as the basis for effective use of grants and lending to achieve sustainable results efficiently.

One way to expand good governance is to expand the reach of well-governed institutions. This suggests that a well-implemented clustering approach could yield positive benefits.

**Financing can play an important role in incentivising and supporting good governance** in the urban water sector in sub-Saharan Africa. This will require a strengthening of coordination between technical and financial assistance and between development partners. A coordinated approach to implementing the recommendations in this report will be much more effective than would otherwise be the case.

An approach that seeks to strengthen the financing ecosystem in a country, paying attention to professionalisation, isolation from undue political interference (good governance, commercialisation of the service providers, and account-

21) The independent review of the World Bank Water and Sanitation Program recommended that [development partners] “engage intensely with client governments on WSS sector reforms to strengthen the financial viability of service providers and to create conditions for increased access to commercial finance, in keeping with the new Cascade Approach” (World Bank 2017).

22) For example, only half of IFC investments and advisory services [in water] showed moderately satisfactory or better results, because of realised risks; weak government execution capacity; lack of political will; and a politicised tariff adjustment system (World Bank 2017).

ability and transparency in reporting on investments and outcomes), is appropriate and should be continued but this, on its own, is not enough.

**What is needed, in addition, is a financing architecture that radically rethinks the financing allocation question. Creating, supporting and incentivising the essential conditions for good performance, namely sound governance, must be the priority.** Any financing strategy that seeks to expand access to water sustainably should focus strongly on creating and strengthening incentives for good governance in both form and substance.<sup>23</sup>

There is a significant opportunity to improve investment effectiveness by linking operational improvements with investment. **In order to substantially improve investment effectiveness, major investments should take place after some governance and operational improvements have been achieved and scarce finance should be competitively allocated to water providers that have demonstrated both governance and operational improvements, and put in place measures for ongoing accountability.**

**An approach that substantially increases the efficiency and effectiveness of investment will extend the reach of the money invested, reaching more unserved people and hence leaving fewer people behind.**

**A financing architecture with three sequential and linked funding windows offering a phased pipeline of financing instruments for urban water should be explored.** Small upfront investments (with low transaction costs), offered as grants, test credible commitment to reform (Box 8). Early improvements in utility operations are then funded through improved cash flows (Box 9), which in turn enable larger investments in infrastructure upgrades and expansion over time financed through concessional loans and blended finance, ultimately leading to a sustainable utility that finances investments through commercial loans. Utilities compete for the funds and must meet specified thresholds to move to the next phase of financing. Loan preparation can proceed in parallel to the operational improvement phase, rendering subsequent investments more effective without any time delay.

**This approach will require changes to the financing incentives in operation for many development partners and multilateral financing agencies.**

Support to countries in the development and implementation of very practical pro-poor implementation concepts should be continued, particularly as these relate to targeting funding to the underserved poor areas (pro-poor funds) and to the development and management of public outlets.

Development partners should work with governments, regulators and utilities in support of improved information systems. In addition to better data on access (reconciling utility and survey data), **a common universal multi-dimensional definition, and measurement, of utility performance should be developed and implemented.**<sup>24</sup> A proposed framework for the multi-dimensional measurement and assessment of utility performance is given in Annex 1.

## Key messages related to institutional structure

Development partners can work with countries to improve performance within the existing institutional frameworks, seeking incremental improvement to institutional structures rather than radical reforms or sector overhauls.

23) An independent review of the World Bank Water and Sanitation Program concluded that “achieving SDG 6 requires fundamental tariff and regulatory reforms that enable service providers to achieve adequate cash flow from operating the WSS infrastructure. Without tariff reforms in LMICs and LICs, most households in these countries will not receive modern network services by 2030” (World Bank 2017).

24) An independent review of the World Bank Water and Sanitation Program recommended that “projects should track service delivery outcomes (that is, adequacy, reliability, quality, and affordability), and the extent of access and services to the poor” (World Bank 2017).

Development partners should continue to promote the clustering of small providers into fewer large providers.

Development partners should support the amalgamation of the asset holding and operations functions in a single entity, where appropriate, as this improves investment-operation alignment and synergies, and reduces complexity and opportunities for inter-agency gaming.

Development partners should not insist on the creation of an independent regulator, particularly in a context where there is a single national utility.

### 6.3 For German Development Cooperation

#### Are the GDC institutions doing the right things, and are they doing things right?

GDC has invested considerable resources in the five case study countries and the region. Not only is the GDC strategy appropriate, GDC has also implemented the strategy effectively. The influence of GDC on the water sectors in the five case study countries is strongly evident in numerous ways. A few examples are given here. Key sector persons with outstanding reputations and credentials benefitted earlier in their careers from study and training opportunities made possible through GIZ and its predecessors. Some have gone on to be leaders of utilities, regulators and at regional and even continental levels. Key institutions have been built from scratch with, relatively speaking, impressive systems and capacity – for example, the independent water regulators in Kenya, Tanzania and Zambia. The practice of annual sector reporting on performance was established. Dedicated pro-poor funding mechanisms were created in Kenya and Zambia and supported by other Development Partners (BMGF, EU). Very practical concepts for the design and management of public outlets were developed and implemented. Professional mechanisms for the appointment of board members were developed. Management teams and boards at numerous water companies have been trained. The close relationship between technical and financial support in the case of some utilities over a substantial period of time has yielded impressive results, for example, Nyeri Water in Kenya. The stakeholder oversight mechanism and sector financial model in Burkina Faso are widely regarded as sector best practices. Further evidence is given in each of the five case studies and summarised in the synthesis report (GIZ, 2018). Water reforms take many years to be implemented. **GDC should not underestimate the benefits of flexible and needs-oriented long-term engagement with partner countries.** This allowed for the development of trust, in-depth knowledge of the sector dynamics and for consistency of effort over time, with impressive results.

#### What should GDC do differently?

GDC has an impressive track record in supporting reforms in Africa and beyond. This track record can be leveraged in GDC's engagements with other development partners. The move toward a bilateral approach between development partners and developing countries needs to be reversed. **There needs to be a collective effort among development partners and financiers to ensure that any grant and concessionary loan finance supports improved governance and that these improvements in governance are sustained over time through improved accountability mechanisms.** Much more attention needs to be paid to utility performance. There really is no excuse for poor performance. The managerial and technical know-how exists and finance will naturally follow improvements in utility performance. The causal factor that differentiates good and poor utility performance is governance. **Much more attention there-**



**fore needs to be paid to identifying where promising conditions for improved governance exist and then providing support into these contexts to support improved governance that will, over time, result in the improved performance of utilities. This is a low cost, low regret approach.** If followed with discipline, the long term benefits will be very significant. Investments will be more effective and more sustainable utilities, even in poor countries, will make a much larger contribution to investment costs and be able to leverage commercial loan finance. This is the only route to meeting the sustainable development goals and human rights for (near) universal access to safe piped water in urban areas.

Within GDC, the findings point to a need for a stronger link between technical and financial support, and a greater focus on the utilities themselves, prioritising governance substance, creating the essential conditions for improved performance. **GDC, in partnership with other development partners, should adopt the mission of supporting the creation of 100 well-performing water utilities (whose performance is assured and sustained through sound governance and ongoing built-in accountability) in the next decade in a diverse range of contexts.** GDC should impose financial discipline on all of its lending, not hesitating to withdraw financial support where sound governance substance is compromised. This should be built into its lending covenants. **A major contribution to the sector could be in identifying the key leading indicators that reveal the conditions for sound governance substance** (rather than form), and their opposite (compromised governance).

This suggests that GDC should adopt a dual approach. **On the one hand, it should continue with a consistent, relatively low cost, presence in each country, providing ongoing technical support. On the other hand, the financial support for investments should be much more flexible, with a willingness and ability to move funds away from utilities where governance has been compromised,** and reallocated to where promising conditions for improved utility performance (and sustained good governance and accountability) exist.

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## ANNEX 1: TEN DIMENSIONS FOR ASSESSING WATER UTILITY PERFORMANCE

Water service providers translate investments in infrastructure into a service – reliable water that is safe to drink.

A water service provider may be considered to be performing well if it performs well across multiple dimensions of performance (Table 4). In addition to directly affecting customer experience, service provider performance also has a substantial impact on the efficiency with which investment is translated into services and then into cash revenues to sustain the service.

Table 4: Ten dimensions for assessing successful urban water utilities

<b>1. Accessibility</b>	A large share of the population in the utility's service area obtains water that is safe, sufficient, and reliable and convenient (including public access) [Indicators: share of population (total and poor) with access to piped water]
<b>2. Safety</b>	The water supplied is safe to drink [Indicators: appropriate sampling, testing, verification & reporting systems in place]
<b>3. Sufficiency</b>	People get enough water to least meet basic health requirements. [Benchmark: 50 liters per person per day in urban areas (WHO)]
<b>4. Reliability</b>	Water is available, with few supply interruptions of limited duration. [Benchmark: 24 hours per day]
<b>5. Convenience</b>	It does not take long to get water and water does not have to be carried far. [Benchmark: on-site delivery or proximate public access]
<b>6. Cost-effectiveness</b>	The service is provided cost-effectively (effectiveness and efficiency) [Indicators: collection ratio, NRW, staff productivity]
<b>7. Financial sustainability</b>	Sufficient resources available to maintain, replace and expand the infrastructure [Indicator: operating cost coverage ratio]
<b>8. Affordability</b>	Ability of poor households to afford water to meet at least basic needs [Indicator: household expenditure on water as percentage total expenditure]
<b>9. Responsiveness</b>	The utility is responsive to customers [Indicators: call center, access to regional offices, use of cell-phone based technologies to improve communications between customers & utility]
<b>10. Transparency</b>	Customers have access to information on utility activities and performance [Indicators: availability of annual and financial reports; user friendly website]

Source: Author

## ANNEX 2: SUMMARY ASSESSMENT

A summary of the key quantitative parameters on financial performance, investment and access is given in Table 5 for the five countries reviewed, arranged in order of relative performance.

Table 5:  
Summary  
quantitative  
assessment

	Burkina Faso	Uganda	Kenya	Zambia	Tanzania
<b>GDP (current US\$ million, 2016)</b>	1.595	1.687	2.926	3.636	2.583
<b>OCCR (2011-15)</b>	1.18	1.28	1.09	1.03	0.99
<b>Self-financing from water revenue</b>	7%	10%	4%	0%	0%
<b>Investment 2005-15 (as %GDP)</b>	0.39%	0.17%	0.09%	0.10%	0.17%
<b>Investment per person (US\$ per annum)</b>	8.7	6.7	5.6	3.3	4.6
<b>New persons served (% of 2005 urban pop)</b>	96%	88%	78%	51%	47%
<b>Piped water access (2015) - sector reports</b>	89%	71%	59%	83%	50%
<b>Piped water access (2015) - JMP</b>	76%	56%	70%	66%	59%

Note: Colour formatting based on a 3-colour scale for each line, with green high (best), yellow middle (moderate) and orange low (worst).  
Source: Country case studies.

A target for countries to invest at least 1.2% of GDP just on sanitation by 2018 was recommended to AMCOW.<sup>25</sup> Burkina Faso, the best performing country, invested only 0.39% on both water and sanitation.

**The positive association between financial performance, investment performance and access is evident from Table 5.**

A qualitative assessment was undertaken on 27 indicators for each country in four areas.

**Sector financing and investment** refers to all funding sources and financing mechanisms used for capital investment and coverage of operation and maintenance costs of infrastructure (tariffs, transfers, loans, and taxes). This includes, for example, mechanisms for investment planning and the competitive allocation of funding into infrastructure applied in the sector.

**Pro-poor orientation** of the sector refers to the priority attributed to low income and peri-urban population groups.

**Sector information and reporting** refers in this assignment to the national systems and public reports on urban WSS coverage. In most countries different sources of information / reporting formats co-exist, in particular, data reported by a) national regulatory authorities, b) national water utilities, c) sector review reports, d) national statistics offices, e) WHO/UNICEF Joint Monitoring Programme (JMP). See Section 5.1.

**Sector Governance** concerns the informal and formal rules of the game, that is, the interactions and institutionally defined relationships between sector institutions within the political, legal and institutional framework. This also includes corruption and political interference with the operational decisions of sector institutions like regulators and service providers. Sector governance significantly affects the efficiency and effectiveness of investments, performance of institutions and the quality of service delivery. See Section 2.

25) Investment in Sanitation to Support Economic Growth in Africa: Recommendations to the African Ministers' Council on Water (AMCOW) and Ministers of Finance. Yolande Coombes, Sophie Hickling and Mark Radin. May 2015. WSP World Bank.

The overall outcomes are summarised in Table 6 below.

	Burkina Faso	Uganda	Kenya	Zambia	Tanzania
Financing & investment	94%	50%	53%	28%	17%
Pro-poor orientation	86%	61%	79%	68%	39%
Governance	70%	35%	55%	50%	35%
Access data quality	83%	42%	71%	63%	38%
All areas	85%	50%	64%	50%	31%

Table 6:  
Summary  
qualitative  
assessment

There appears to be an association between the summary quantitative assessment (Table 5) and the qualitative assessment (Table 6) with Burkina Faso scoring well in both domains and Tanzania scoring relatively poorly in both domains. On the other hand, Uganda scored relatively well in terms of the quantitative performance (Table 5) but not well on the qualitative assessments particularly with respect to governance and access data quality.

Bearing in mind the methodological caution made in the main review report, the following tentative findings could be made.

**Significant overall increase in the number of people served.** Irrespective of what data source was used (survey data or sector reported data), there was a significant increase in the number of people served in urban areas in each of the five countries over the period 2005 to 2015. **Without sector reforms it is unlikely that such significant increases would have been realised.**

Irrespective of the data source on access (sector reported or survey based), there appears to be a positive relationship between investment and access. The higher investment in Burkina Faso translated into higher access and the relatively low investment in Zambia related to a low level of improvement in access. This is expected and it would be concerning if this were not the case.

**Positive association between investment, access and the qualitative assessment.** Overall, there is a positive association between the qualitative assessments and investment and access. **Diverging trends in the two data sets.** It is nevertheless concerning that the trends in access between the two data sets – sector reported and survey data – are in different directions in four of the five countries.

**Lack of reconciliation between data sets.** It is unfortunate that the national government department responsible for water and/or the water regulator do not appear to have attempted and/or have not reported on a detailed reconciliation of input and outcome data to better understand sector trends.

**A need to show progress?** It is possible that sector reported data, based on inputs, is influenced by a need to show improvements in percentage access to water services – four of the five countries reported improvements in percentage access to water whereas survey data in these countries showed a decrease in percentage access.

**Number of people without access is growing.** Overall, the number of people without access to piped water in the five case study countries is likely to be growing.

**Provision of access by public outlets is an important strategy to increase access.** A significant share of the urban population in the case study countries rely on public outlets or kiosks for access to water – between 20% and 50%.

*For further details, see the full review report (GIZ, 2018).*







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