

*CABRI Policy Dialogue*

# Value for money in the water, sanitation and hygiene sector



KEYNOTE PAPER  
**Key policy challenges and opportunities for  
improving service delivery in water, sanitation  
and hygiene (WASH) in Africa**

## Acknowledgments

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- advance the development of member states by strengthening capacities and encouraging training and research in public financial management; and
- develop and promote common African positions on issues associated with the budget, which are of interest to Africa.

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# List of contents

|  |           |
|--|-----------|
| Acronyms and abbreviations   | ii        |
| <b>1. Introduction</b>   | <b>1</b>  |
| 1.1 Why fund improved WASH services?   | 1         |
| 1.2 Current WASH situation in Sub-Saharan Africa                                   | 2         |
| 1.3 Understanding WASH sector structures   | 3         |
| <b>2. Policy challenges</b>  | <b>4</b>  |
| 2.1 Common structural policy issues  | 4         |
| 2.2 The policy challenge in the rural subsector                                    | 5         |
| 2.3 The policy challenge in the urban subsector                                    | 5         |
| 2.4 Meeting the policy challenge – using a phased approach to raise service levels | 6         |
| <b>3. Financing WASH sectors and services</b>                                      | <b>7</b>  |
| 3.1 Expenditure trends in the WASH sector  | 7         |
| 3.2 Innovative financing options   | 9         |
| 3.3 Funding and financing considerations in the urban subsector                    | 10        |
| 3.4 Financing and financing considerations in the rural subsector                  | 11        |
| <b>4. Planning, budgeting and expenditure management</b>                           | <b>12</b> |
| 4.1 Meeting the policy challenge – focus on 2030                                   | 14        |
| References   | 15        |

# List of tables and figures

## Tables

|   |   |
|---|---|
| Table 1: Benefit-cost ratio of universal access to WASH in Sub-Saharan Africa | 2 |
| Table 2: Key policy questions by subsector                                    | 4 |

## Figures

|   |    |
|---|----|
| Figure 1: Trends in access to water and sanitation services in Sub-Saharan Africa (2000-2015) | 2  |
| Figure 2: Annual global capital costs of different WASH service levels in 140 countries       | 3  |
| Figure 3: A phased approach to service improvement – example from urban sanitation            | 6  |
| Figure 4: Example of WASH sector funding and financing flows                                  | 7  |
| Figure 5: WASH sector funding in countries where data is available                            | 8  |
| Figure 6: WASH sector goods and services and financing sources                                | 9  |
| Figure 7: Key elements of a budget cycle  | 12 |
| Figure 8: Unpacking value for money in WASH   | 13 |

## Acronyms and abbreviations

|          |   |
|----------|---|
| BCR      | Benefit-cost ratio  |
| CABRI    | Collaborative Africa Budget Reform Initiative                           |
| GDP      | Gross domestic product  |
| GLAAS    | Global analysis and assessment of water and sanitation                  |
| KCC      | Kampala City Council  |
| KCCA     | Kampala Capital City Authority  |
| MDAs     | Ministries, departments and agencies                                    |
| NGO      | Non-governmental organisation   |
| O&M      | Operations and maintenance  |
| ODA      | Official development assistance   |
| OECD-DAC | Organisation for Economic Co-operation-Development Assistance Committee |
| SDGs     | Sustainable Development Goals   |
| WASH     | Water, sanitation and hygiene   |
| WHO      | World Health Organization   |

# 1. Introduction

Water, sanitation and hygiene (WASH) are essential for human development. Providing people with access to clean water, basic toilets and good hygiene practices remains a key challenge in most African countries. In the 2030 Agenda for Sustainable Development, member states of the United Nations reaffirmed their commitment to realising the human right to safe drinking water and sanitation. While progress has been made in improving access to WASH, the situation remains dire in many countries. Underinvestment in WASH, particularly in sanitation, is a major concern in Africa.

This paper highlights the economic case for investing in WASH. It outlines salient policy questions in many African countries and globally, examines current financing trends and options for increasing funding in the WASH sector, and discusses ways to improve how effectively, efficiently and equitably these resources are used. The paper is supported by three stand-alone case studies on Burkina Faso, Ghana and Kenya. The keynote and case study papers have been prepared to facilitate a policy dialogue between finance and WASH ministries in Africa.

## 1.1 Why fund improved WASH services?

Water is high on the political agenda in many countries due to the strong demand for better services expressed by populations. This trend is likely to continue as climate change and rapid urbanisation will place increasing stress on water resources and urban infrastructure.

In many countries, sanitation has historically been lower on the political agenda. This is gradually changing as the benefits of sanitation, such as improved health, dignity and safety, are being recognised thanks to a growing body of evidence.

Twenty-five percent of the disease burden on children under five years of age could be prevented through reducing environmental risks – which include those arising from inadequate WASH services and diarrhoeal diseases, both of which cause about 10 percent of all deaths of children under five.<sup>1</sup> In a review of 18 African countries, inadequate sanitation was estimated to inflict damage costs of US\$5.5 billion. This is equivalent to between 1 percent and 2.5 percent of their gross domestic product (GDP).<sup>2</sup>

1 WHO (2017).

2 World Bank (2012).

In a cost-benefit analysis of achieving the Sustainable Development Goals (SDGs), the World Bank estimated that the benefit-cost ratio (BCR) of achieving universal access to basic water is 3.3: that is, every US\$1 invested in water brings an economic return of US\$3.3. The BCR for universal access to sanitation is 2.9. However, when only open defecation is modelled, the BCR rises to 5.8.<sup>3</sup> Promoting hygiene has long been considered one of the most cost-effective health interventions.<sup>4</sup>

### Country example: Cholera outbreaks in Kenya

In 2015, Kenya gained lower-middle-income-country status. Despite this, in 2015, 22 percent of the rural population remained dependent on surface water as their main source of drinking water. In 2012, about 19 500 Kenyans, including 17 100 children under five, died from diarrhoea. Nearly 90 percent of these cases were directly attributable to poor WASH.

Cholera is one of myriad enteric infections which spread through poor WASH services, and is one of the deadliest. In 2009, the World Health Organization (WHO) reported faecal contamination of the environment as the root cause of an annual average of 3 500 cases of cholera affecting Kenya.<sup>5</sup> In 2015, an outbreak occurred in Migori County, involving 1 143 reported cases. Public health officials traced the disease to a stream on the Kisii/Migori border that was used for drinking water; subsequent laboratory tests confirmed this as the source of the outbreak.

*Source: Authors' account based on interviews with and data supplied by county public health officials in Migori.*

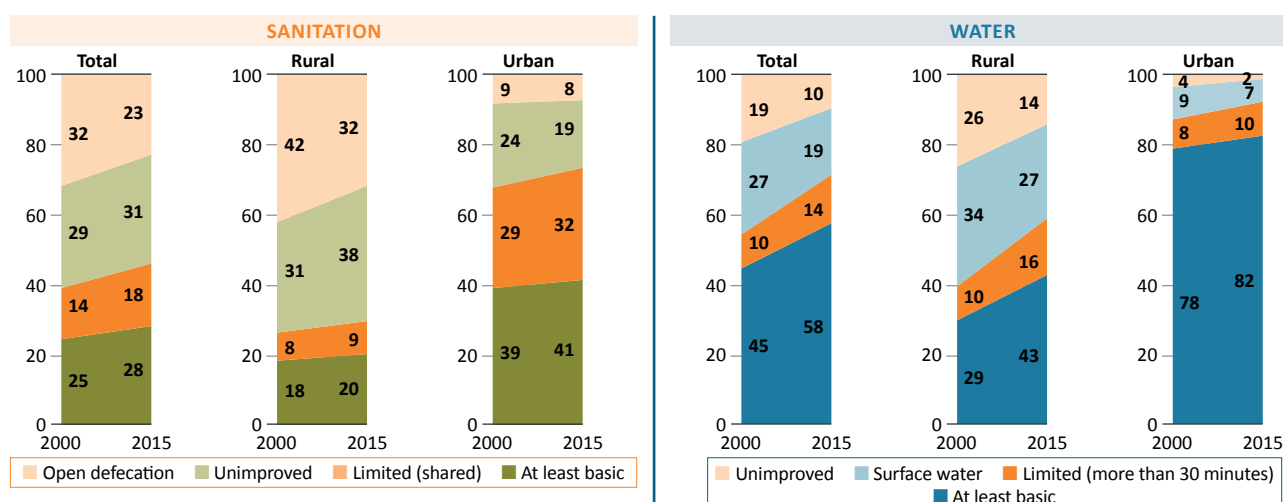
Table 1 shows the BCR of achieving universal access to WASH to 2030, and for the richest and poorest quintiles. The BCR shows the ratio of the costs to the monetised estimate of the benefits.

3 Hutton (2015). Note that this figure uses a 3 percent discount rate and a DALY (disability-adjusted life year) value of US\$1 000.

4 Jamison et al. (2006).

5 WHO Global Health Atlas, Cholera case 2005–09.

Figure 1: Trends in access to water and sanitation services in Sub-Saharan Africa (2000–2015)



Source: WHO/UNICEF JMP data <https://washdata.org/> (August 2017), authors' calculations

A BCR of above one shows that the monetised benefits from improved services are greater than the costs of delivering that service.

Table 1: Benefit-cost ratio of universal access to WASH in Sub-Saharan Africa

|                          | Quintile |         |
|--------------------------|----------|---------|
|                          | Richest  | Poorest |
| Basic water (urban)      | 2.6      | 3.5     |
| Basic water (rural)      | 6.2      | 7.9     |
| Basic sanitation (urban) | 1.1      | 1.2     |
| Basic sanitation (rural) | 3.8      | 3.9     |

Source: Hutton (2015)

The benefits are predominantly related to the value of time saved and improved productivity through improved health. In all cases, investing in improving services for the poorest has a higher return than improving services for the richest in society; this is predominantly due to greater health benefits among the poorer. Investing in rural services has a higher return than urban services and investing in water is estimated to have a higher return than sanitation.

## 1.2 Current WASH situation in Sub-Saharan Africa

There was strong progress on increasing access to WASH services over the Millennium Development Goal period (2000–2015) in Sub-Saharan Africa. About 269 million people gained access to at least basic drinking water services and a further 112 million people gained access to at least basic sanitation services.

However, the scale of the challenge remains large. Due to population growth, the number of people using surface water or other unimproved services increased in absolute terms over the Millennium Development Goal period. More than 408 million people (42 percent of Sub-Saharan Africa's population) still lack access to basic services in water and sanitation.

Figure 1 shows the change in access for different water and

sanitation service levels across Africa between 2001 and 2015. The left of each bar shows the situation in 2000 and the right of the bar in 2015. The numbers in each bar signal the percentage of the population within those bars. In Figure 1, access to water (basic services) is shown to have increased from 45 to 58 percent. Basic sanitation services marginally improved from 25 percent in 2000 to 28 percent in 2015.<sup>6</sup>

The SDGs build on the momentum of the Millennium Development Goals; in WASH, the SDGs are far more comprehensive and ambitious. Not only do the SDGs set targets for universal access to water (Goal 6.1) and the elimination of open defecation (Goal 6.2), but they move beyond simple definitions of access to consider service quality. Goal 6.1 calls for “universal and equitable access to safe and affordable drinking water” and Goal 6.2 calls for “access to adequate and equitable sanitation and hygiene for all”.

The ambitions of the SDGs are currently not well reflected in national WASH policies or targets; globally, less than 20 percent of countries have set targets for universal access by 2030.<sup>7</sup>

Globally, a large financing gap has been identified. In Sub-Saharan Africa, the costs of meeting SDGs 6.1 and 6.2 are estimated to be US\$35.4 billion (19.6 urban, 15.8 rural) – equivalent to 2.01 percent of the region's GDP.<sup>8</sup> Figure 2 outlines the cost of reaching different service levels and highlights the ambition of the SDGs in 140 countries. The global cost of extending basic WASH services to all is between 13 and 46 billion dollars per year (about 0.1 percent of global GDP) between 2015 and 2030. The higher level of service implied by the SDGs will cost triple the amount of basic services.

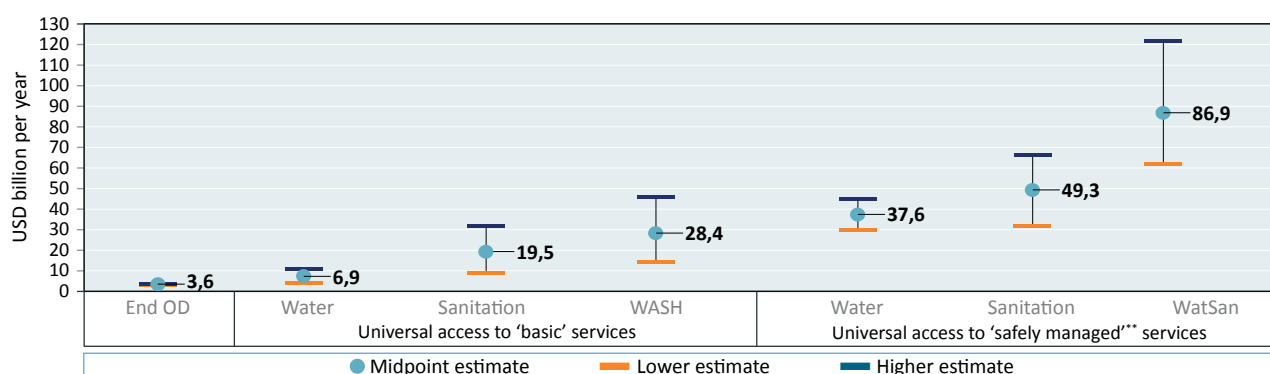
The annual capital costs of achieving universal access to basic services are considerably lower: US\$2.4 billion (1.5 urban, 0.9 rural) for water and US\$7.9 billion (4.7 urban, 3.2 rural) for US\$1.3 billion. The higher cost for sanitation is partially due to the low baseline access levels as a result of consistent underinvestment. Reaching a higher service level in sanitation requires a substantial investment.

6 JMP (2017).

7 GLAAS (2017).

8 Hutton and Varghese (2016).

Figure 2: Annual global capital costs of different WASH service levels in 140 countries



Notes: Ending open defecation (OD), or open defecation-free, has a target year of 2025. \*\* Safely managed sanitation costs are those for safe excreta management alone; they exclude latrine costs. WASH – water, sanitation, and hygiene: OD – open defecation; WatSan – water and sanitation

Source: Hutton and Varghese (2016)

### Country example: Identifying the financing gap in South Africa

A Water Sector Infrastructure and Investment Framework in South Africa found that in 2016 a total annual capital investment of 82 billion rand (US\$6.4 billion) was required for WASH over the next 10 years. Current funding is only about 46 billion rand (US\$3.6 billion) a year, i.e. only 56 percent of capital needs are currently funded.

Lack of investment in operations and maintenance (O&M) is causing a number of schemes to not function properly. There is an estimated annual sector maintenance shortfall of 44 billion rand (US\$3.4 billion). Without proper funding of O&M, capital investments are wasted.

Source: GLAAS (2017)

## 1.3 Understanding WASH sector structures

The WASH sector is the collective term for actors and functions seeking to provide access to water supply, sanitation services and hygiene. As such, it spans areas from public health promotion to large-scale infrastructure development. Water is a resource shared by many sectors, therefore WASH services need to be considered in relation to sectors that depend heavily on water, particularly agriculture. In Africa, agriculture accounts for 81 percent of water withdrawal, industry for 4 percent, and municipal services (largely drinking water) for the remaining 15 percent.<sup>9</sup>

This is why the ministry responsible for drinking water is often also responsible for water resources more broadly, including irrigation.

Effective public health campaigns are central to improving sanitation and hygiene. This is why ministries of health often have some responsibility for sanitation. There is a strong link between improved WASH services and education (through health promotion in schools) and primary healthcare services.

One reason that WASH is considered a single sector is that in a sewer-centric vision of service delivery, water is seen as an input to a network and wastewater the output. This vision of services can be inappropriate in many contexts. Dividing roles and responsibilities across ministries, departments and agencies (MDAs) is not necessarily a bad thing, given the diverse nature of sector functions.

Such division does, however, require exceptional coordination practices (for example, in the form of annual sector reports and joint sector reviews),<sup>10</sup> investment in monitoring systems, clear policies establishing institutional mandates, and resolution of areas of overlap. Without these, institutional fragmentation can limit progress.

Less than 20 percent of African countries place water and sanitation responsibilities wholly under the same ministry. Examples include Ghana, Mozambique, Zambia, Uganda and, until recently, Madagascar. While placing water and sanitation under the same ministry can help to prioritise WASH, there is no ideal institutional structure and there can be valid reasons for dividing WASH responsibilities across ministries.

Public investment in WASH has long been justified on the basis that services are public goods and a healthy, productive population living in a pathogen-free environment has significant positive outcomes. However, the situation is complicated by some WASH assets (e.g. a household toilet or private household water connection) being perceived as private goods. This is particularly the case for sanitation.

Each of the four WASH subsectors is distinct in the types of services it provides and the skills required to provide them.

### Country example: Uniting WASH responsibilities across line ministries – the case of Ghana

In Ghana, one of the first actions of the newly elected (Dec 2016) Akufo-Addo government was to create a ministry of sanitation and water resources. This brought the two departments responsible for sanitation (the Environmental, Sanitation and Health Directorate) and water (the Community Water and Sanitation Agency) under the same line ministry. The move was welcomed by WASH stakeholders as the two departments had overlapping mandates and communication between them had been an issue in the past. The move was also seen to boost the prioritisation of sanitation, which receives very little government funding in Ghana.

Source: Authors' analysis of current affairs

<sup>9</sup> Authors' calculations based on the FAO's (Food and Agriculture Organization of the United Nations) Aquastat database: [http://www.fao.org/nr/water/aquastat/water\\_use/](http://www.fao.org/nr/water/aquastat/water_use/) (last accessed August 2017).

<sup>10</sup> Undertaken by 60 percent of countries in the last three years (GLAAS, 2017).

## 2. Policy challenges

This section discusses salient and common policy and service delivery challenges. As noted above, the WASH sector often involves many MDAs, with responsibilities divided across administrative levels. As such, a sound legal, institutional and policy framework is the foundation of effective service delivery. In cases where this is not in place, a range of strategies and policy options can be used to improve services.

Key policy questions are distinct across the subsectors. This section presents some of the most common and important policy objectives for the medium term in each of the subsectors before discussing objectives that cut across subsectors. The objectives are summarised in the table below and discussed in turn by subsector.

### 2.1 Common structural policy issues

The nature and structure of the WASH subsector creates common challenges across countries for funding and service

delivery. While noting that challenges differ across countries in Africa, the common ones include:

- Poor coordination among institutions with overlapping mandates for service delivery.
- Low budget allocations from government and reliance on donor funds and household expenditure.
- Inequities in service delivery based on location (rural versus urban areas) and wealth (the poor often have less access and pay more per litre for their services, especially in urban areas).
- Value for money is poorly understood in most sectors and often linked to local government and municipality performance.

In this context, Table 2 below, outlines the key policy questions by subsector which are explored in greater detail in sections 2.2 and 2.3.

Table 2: Key policy questions

| Sector |            | Policy questions   | Common barriers  | Key enablers   |
|--------|------------|--|--|--|
| Rural  | Water      | How can national and local governments maintain service sustainability?  | Inadequate supply chains; reliance on community-based management   | Human resources in local government<br>Strong rural supply chains for goods<br>Adequate monitoring information systems |
|        |            | How can we achieve universal access to basic services – overcoming the challenges of “last mile service delivery”? | High costs of reaching remote areas  |  |
|        | Sanitation | How can we end open defecation while ensuring households gain access to better-quality latrines?                   | Low “effective demand” for improved services; <sup>11</sup> low prioritisation by local government                 |  |
|        |            | How best to prioritise sanitation in budgets at the local level?   |  |  |
| Urban  | Water      | How can municipality/utility performance be enhanced?  | Poor financial performance   | Effective management   |
|        | Sanitation | How can the urban poor access improved services?   | Rapid urbanisation; land tenure and tenancy; misperception that the poor cannot pay for services                   | Viable markets – often the poor pay more for their services  |
|        |            | How can we ensure the safe removal of faeces from the urban environment?   | High costs of sewerage; challenges in linking to other urban services; rapid urbanisation; land tenure and tenancy | Innovative technology solutions  |

11 Effective demand is defined as the strength of the preference for improved services in relation to willingness and ability to pay.

There are significant inequalities between rural and urban areas in access to services. To ensure equity and universal access, services must be affordable to users and cover the costs of service providers. A wide range of policy instruments can be used, including cross-subsidies in tariffs/pricing (particularly between commercial and domestic users); volumetric tariff structures designed to avoid penalising low-income users; and ring-fenced taxation.

The diverse nature of the sector makes it critical that there is effective coordination and communication among role-players. This depends on a well-defined institutional structure. It is essential, too, that there is effective monitoring of progress in the sector. A common strategy is to establish sector agencies to periodically review progress and issue joint sector reviews. Between 2001 and 2015, 93 reviews took place in 16 African countries, with Uganda undertaking a review every year since 2001 and Rwanda every year since 2005.<sup>12</sup>

## 2.2 The policy challenge in the rural subsector

In 2015, 43 percent of the rural population in Sub-Saharan Africa had access to basic services, while 16 percent had access to limited services.<sup>13</sup> The remaining 41 percent relied on unimproved sources, with 14 percent depending on surface water. In the short term, there is an urgent need to focus on extending basic services to those without access. This can be combined with a progressive approach to raising service levels for those with only limited access.

Sustainability of services is a huge challenge in rural water. A recent review found that about a third of water points in Africa are non-functional.<sup>14</sup> The causes of this are often related to inadequate funding of O&M and a reliance on community-based management of services; poor supply chains for spare parts; and poor surveillance of system functionality. Government and donor expenditure is currently heavily weighted towards capital investments, as most countries focus on expanding services. Over time, greater attention will need to be placed on O&M to sustain services. It is estimated that, in order to meet the SDGs, O&M expenditure will need to rise from US\$4.2 billion in 2015 to US\$31.1 billion in 2030, by which time it will be 40 percent greater than the capital investment requirement.<sup>15</sup>

Despite the great need, rural sanitation is often the least prioritised of the subsectors. In rural Sub-Saharan Africa, 32 percent of the population lack access to a toilet and openly defecate, with a further 38 percent reliant on unimproved services. The low prioritisation of sanitation is slowly changing. Increasingly, countries are adopting policies and strategies that focus on eliminating open defecation. Rural sanitation ranks among the highest donor priorities in the four subsectors.<sup>16</sup>

One reason for the low prioritisation of rural sanitation – and of water – is that often it is viewed as a private (consumer)

good. While a latrine is a private good, widespread use of latrines is a public good. Perhaps counterintuitively, this presents an opportunity for the private sector to play a role in expanding services, as household expenditure is a major source of funding in rural sanitation. This issue, and its related equity considerations, are explored in greater detail later in the paper.

Local government is often the lead agency in rural service delivery. To expand and sustain the services they provide, these institutions need to be given sufficient resources (financial and otherwise). Where access to basic services is low, the short-term policy focus should be to end open defecation, because, as noted earlier, the BCR for universal access to basic services is higher than for higher service levels.

## 2.3 The policy challenge in the urban subsector

Access to improved water services in urban areas is generally relatively high. Across Sub-Saharan Africa, 82 percent of people living in urban areas have access to at least basic services, 10 percent have access to limited services and only 9 percent rely on unimproved sources or surface water. However, only 56 percent of people are served with on-plot piped connections, with the rest served by off-plot standposts and self-supply infrastructure – extending formal utility services to all remains a major challenge.

Challenges in the urban water subsector are often linked to service quality and the financial sustainability of the service providers (usually municipalities or utilities). Only half of urban utilities in Africa have revenues that exceed their costs, and the performance of municipalities and utilities is a key driver of service quality.<sup>17</sup> Improving utility performance is a relevant policy objective in many sectors.

When most people think about urban sanitation, often the first thing that comes to mind is sewerage. But, globally, 29 percent of people living in urban areas use non-networked sanitation (where their latrine or septic tank needs to be emptied periodically). This figure is much higher in low- and middle-income countries.<sup>18</sup> As with water, urban sanitation is considerably better than in rural areas, with only 8 percent of the population openly defecating and 73 percent of the population having access to basic or limited<sup>19</sup> services.

A primary concern in urban sanitation is what happens to the faecal waste when latrines or septic tanks need to be emptied. Illegal dumping of faecal sludge and other unsafe faecal sludge management practices create significant public health risks, particularly in densely populated areas and during rainy seasons. Urban sanitation policy therefore needs to look beyond access to ensure that faecal waste is safely managed from containment through to treatment. This entails looking at technology solutions beyond sewerage, and integrating urban sanitation with a broader set of services (such as solid waste and drainage).

A key feature of service delivery in many cities is a stark difference in service quality and price between the richest in

12 Skat (2016).

13 That is, collecting their water involves over an hour's round trip.

14 Tincani et al. (2015).

15 Hutton and Varghese (2016).

16 GLAAS (2017).

17 Van den Berg and Danilenko (2017)

18 JMP (2017).

19 Predominantly those using shared facilities.

society and the poorest – particularly slum populations. The poor often pay far more per litre and for lower-quality services than their richer counterparts.

This applies both to water and sanitation but is most notable with regard to water.

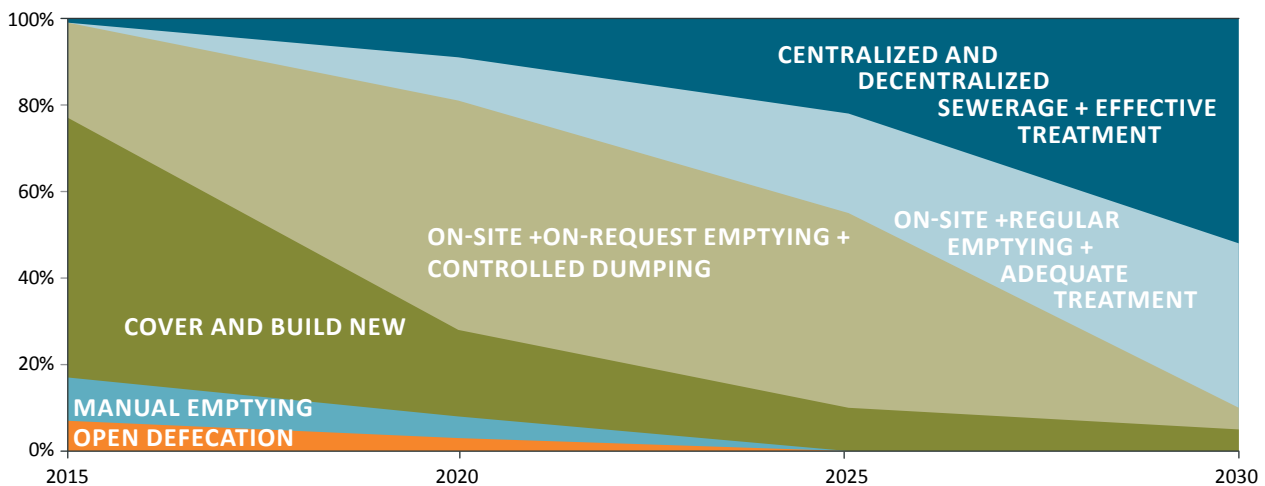
Another common feature in many cities as opposed to rural areas is the role of a large informal private sector in providing services, particularly to poor areas. One consequence of the poor paying more for services is that it demonstrates that these are viable markets for utilities and other providers. This is contrary to widely held perceptions that slum populations “don’t want to pay”. Urban policy needs to consider (and recognise) the role these informal providers already and could play in service delivery and include high-level policy objectives to redress current inequalities.

## 2.4 Meeting the policy challenge – using a phased approach to raise service levels

Meeting the challenge of universal access is daunting, requiring significant capital investment. The costs of extending basic services are considerably lower and the economic returns higher. There is therefore a clear rationale for making it a priority to extend basic services.

Raising service levels in WASH often entails progressively greater per capita investment in more sophisticated technology. Taking a phased approach to expanding services will allow universal access while raising service levels. Figure 3 shows how this could be applied in the urban sanitation subsector. Sewerage may be a viable medium-term solution for some parts of a city, but short- and medium-term action to address faecal sludge management is likely to be more relevant to improving the health and quality of life of the majority of people.

Figure 3: A phased approach to service improvement – example from urban sanitation



Source: Adapted from Ross et al. (2016)



### 3. Financing WASH sectors and services

The sections above have highlighted the scale of the funding<sup>20</sup> required to achieve universal access to WASH services. This section provides an overview of financing trends, examines how funding differs between water and sanitation, and discusses innovative financing methods.<sup>21</sup>

Figure 4 shows what financial flows look like in many countries' WASH sector. It highlights how "private repayable finance" is often channelled directly to service providers or households.

20 In this paper, a distinction is drawn between funding and financing, based on the approach of the Infrastructure Finance Working Group (2012). Funding means providing money which is not expected to be repaid. In the WASH context, funding usually comes from three sources: tariffs (including self-supply expenditure or user charges such as connection fees), government tax revenue, and donor transfers. Together, these are known as the "3Ts" framework popularised by the OECD (2009). Financing, however, means providing money as debt or equity in the expectation that it will be returned in full later, along with interest (in the case of debt) or dividends from profits (in the case of equity). In other words, financing is understood to be repayable finance.

21 For the purpose of this discussion, "innovative funding/finance" refers to sources other than tariffs, taxes and transfers.

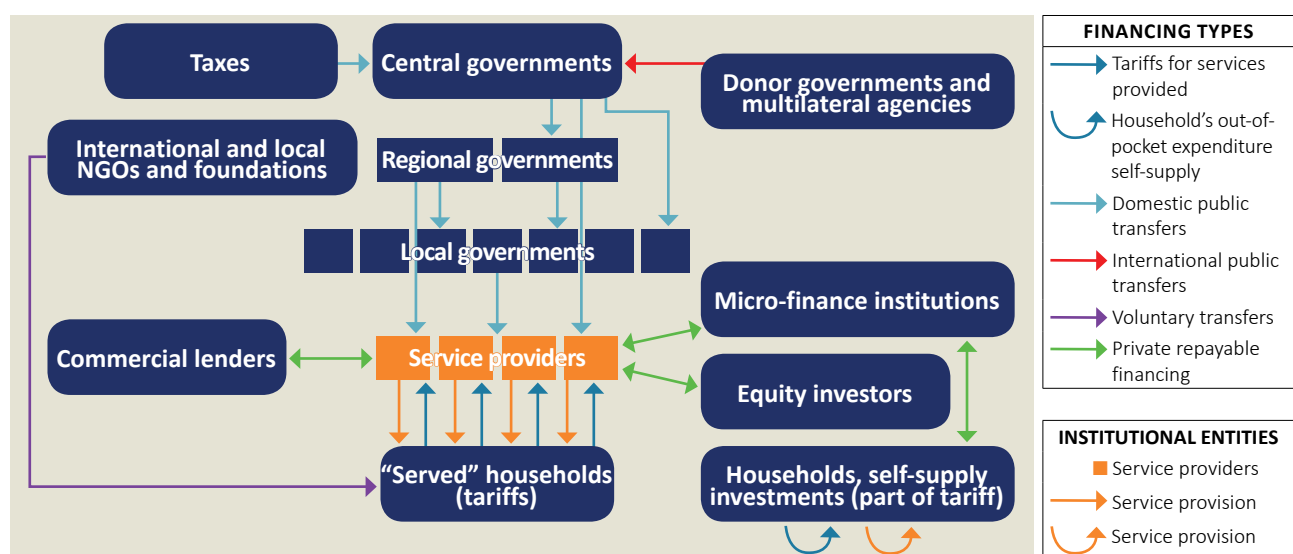
Another common trend highlighted in the figure is for non-governmental organisation (NGO) funding to flow directly to providing services for households, by-passing government systems or formal service providers. Donor funds are most often channelled through central government and may be subject to national budgetary processes.

Service providers may be formal (such as utilities) or informal (such as water vendors). In the case of informal providers, it is unlikely they receive government funds (although they may do so through a subsidy). Households that rely on informal providers pay for services directly ("out of pocket expenditure") rather than through tariffs.

#### 3.1 Expenditure trends in the WASH sector

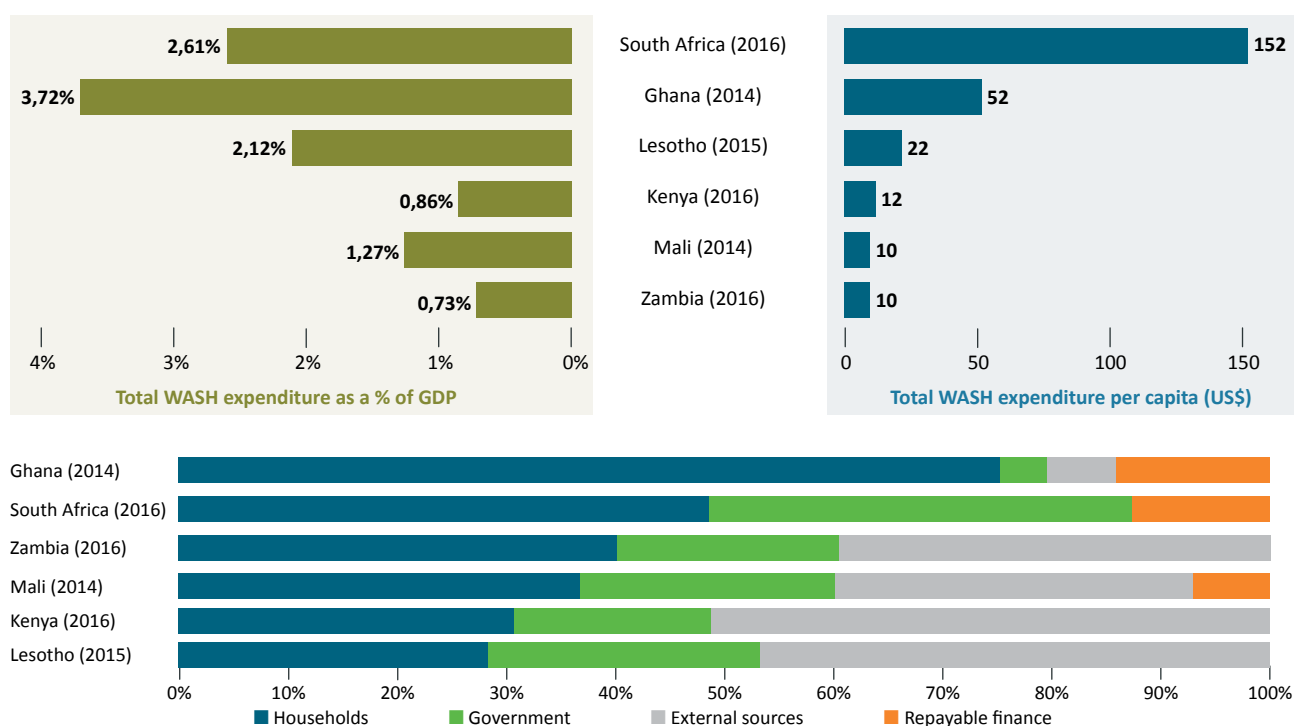
Identifying and tracking WASH sector expenditure is considerably more challenging than in more "vertical" social sectors such as health and education. It is also clear that in most African countries government expenditure forms a small part of total WASH expenditure. Thanks to the development of

Figure 4: Example of WASH sector funding and financing flows



Source: Adapted from WHO (2016)

Figure 5: WASH sector funding in countries where data is available



Source: Adapted from GLAAS (2017)

TrackFin, a system for classifying WASH expenditure, there is now a growing body of data mapping WASH expenditure in many countries. Figure 5 presents data on WASH expenditure in total and per capita for countries that have reliable data. This is followed by a discussion of the different funding and financing streams and their relative importance.

A few key trends stand out. The first is the wide variation in the level of investment per capita and as a proportion of GDP. The breakdown of expenditure by source provides a view into the funding and financing landscape of different countries. With the exception of South Africa, government expenditure accounts for less than 30 percent of total WASH expenditure; in Ghana, it is roughly 5 percent of expenditure. In all cases, household expenditure is about 30 percent or more. With the exception of Ghana and South Africa, external sources (largely donor funds) account for a sizeable proportion (40–50 percent) of total expenditure. Another common feature is the limited role repayable finance plays in countries' sectors.

### Household expenditure

In a 2016/17 review of 25 countries globally – the largest exercise undertaken to date – it was found that on average 66 percent of expenditure in WASH is undertaken by households.

This compares to 24 percent expenditure by governments, 8 percent from repayable finance and 2 percent from external sources.<sup>22</sup>

This household expenditure can take the form of tariff payments or expenditure on self-supply. The balance between

these two forms is highly dependent on context. For example, in Ghana, US\$87 million is spent annually on tariffs, but this is dwarfed by US\$978 million spent on self-supply, such as construction and maintenance of private wells and toilets.<sup>23</sup> However, there are other countries where the reverse is true and expenditure on tariffs is far greater than on self-supply.

The importance of self-supply expenditure and tariffs can be easily overlooked as they are not apparent when budgeting or developing financing strategies. However, these expenditures can place a considerable strain on household budgets.

### Government expenditure

Data on government expenditure in WASH is scarce as there is limited routine reporting that is disaggregated into sufficient detail. Until TrackFin was implemented in 2015, the sector also lacked a consistent method for tracking data. TrackFin and public expenditure reviews that focus on WASH are now providing a more detailed picture of government funding to the WASH sector in many countries. Government expenditure in WASH is explored in detail in the next section.

### External and donor expenditure

Water and sanitation official development assistance (ODA) expenditure (disbursements) increased from US\$6.3 billion in 2012 to US\$7.4 billion in 2015. However, over the same period spending commitments fell from US\$10.4 billion to US\$8.2 billion. This decline was particularly sharp in Sub-Saharan Africa, where it fell from US\$3.8 billion to US\$1.7 billion.

<sup>22</sup> GLAAS (2017)

<sup>23</sup> GLAAS (2017), derived from 2014 TrackFin in Ghana.

It is uncertain whether external finance will continue to play a substantial role in sector funding and financing.

The recent (2013-15) decline in WASH ODA (-21 percent) is set against an overall increase in all-sector ODA commitments (+24 percent) over the period. In 2015, water and sanitation ODA accounted for 3.8 percent of all aid commitments, while commitments to HIV/AIDS alone accounted for 14.6 percent.<sup>24</sup> These figures are based on what is reported through the OECD Development Assistance Committee (OECD-DAC) database, which in some countries is thought to significantly underestimate the donor contribution and does not account for NGO spending, which in some countries is substantial.

#### Country example: External funds in Mali

By 2015, in Mali, NGO contributions surpassed those of government projects and programmes, with NGOs providing 966 new water points compared to 591 from the government. However, information on NGO financial contributions is not always available at the level of national institutions in charge of planning and monitoring. Only five NGOs reported data during the first phase of TrackFin in Mali. This data represents only 4 percent of total expenditure, and thus does not fully reflect NGO contributions.

Disbursements by donors in WASH to sectoral government departments amounted to US\$96 million from 2012 to 2014, while OECD-DAC data indicated additional US\$17 million – equivalent to about 15 percent of total donor funding. So, there is significant underreporting of aid. The government also has access to non-OECD-DAC donor funds, representing about 5 percent of total public transfers.

<sup>24</sup> GLAAS (2017), referencing OECD-DAC data.

Donors are increasingly providing performance-based funding,<sup>25</sup> with some moving away from general budget support.<sup>26</sup> In many new lower-middle-income countries (for example, Ghana), donors have also shifted from funding direct implementation to funding more “upstream” activities such as technical assistance and capacity-building packages.

### Private sector and repayable finance

Private sector funding and finance can enter the sector through a variety of routes. The primary route is directly to service providers through commercial lending, equity investment, or microfinance, or to households through microfinance.

Figure 6 outlines a framework that separates some of the private goods and services from those that are more relevant to urban sanitation. All of the goods and services are required for services to function effectively, but the framework highlights which goods and services are suited to which finance streams.

### 3.2 Innovative financing options

This section focuses on innovative financing mechanisms and the opportunities for using them.

Innovative financing here is considered to be anything other than taxes, tariffs and transfers (the three Ts), though it can include innovative modalities.

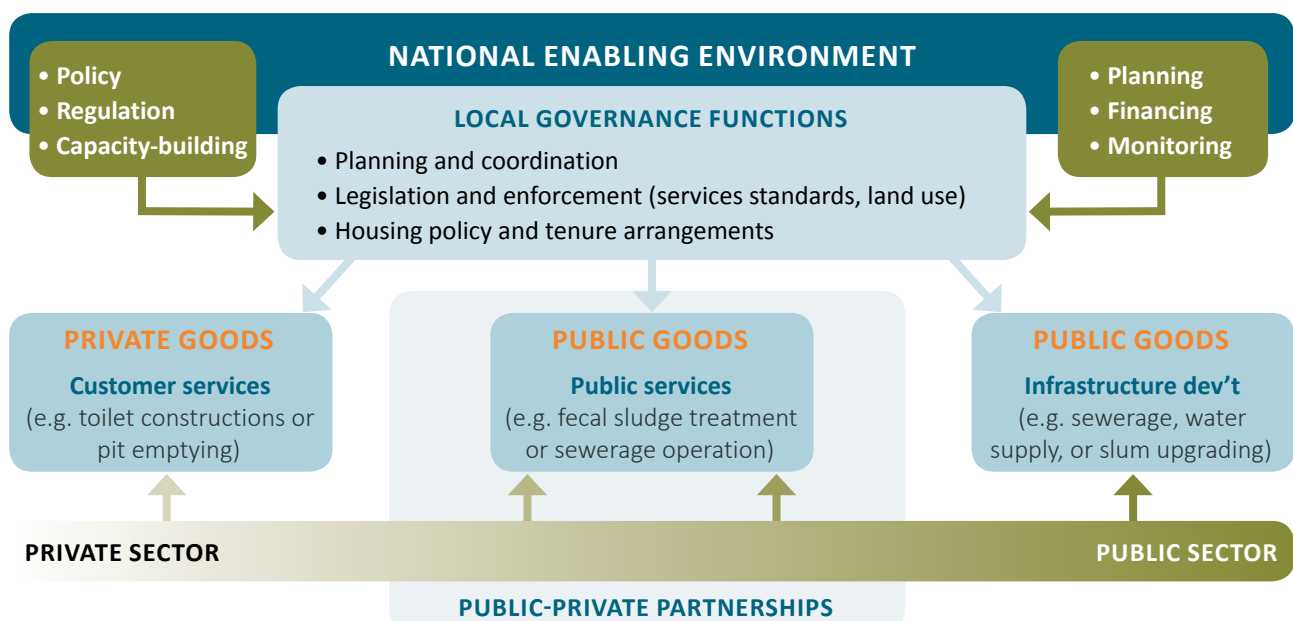
### Public-private partnerships

The private sector can play a large role in funding and providing WASH services, especially in relation to “customer services” and some aspects of “public services” (see Figure 6).

<sup>25</sup> Often also referred to as output-based aid, programme-for-results funding (World Bank) or payment-by-results (Department for International Development).

<sup>26</sup> Notably, the Department for International Development.

Figure 6: WASH sector goods and services and financing sources



Public-private partnerships are one of the most common ways private finance enters public services. They have the potential to increase the volume of finance in the WASH sector either by encouraging new investment (e.g. build, operate and transfer agreements) or improving the operational efficiency of services. Although public-private partnerships are increasingly being used across Africa, they take many forms and there is limited evidence to show their effectiveness.

#### Types of public-private partnerships used in WASH

##### Concessional and build, operate and transfer agreements

– The private sector actor is given permission to run a service for a set period of time and charge a fee. In return, they are responsible for developing the asset. At the end of the agreement, the asset is often transferred to public ownership.

**Management, operation, maintenance contracts** – The assets (generally) remain in public ownership but the operation of services is provided by a private sector actor according to a performance agreement.

**Lease and affermage contracts** – An affermage is a contract granting use or occupation of property for a specified time and payment. In the water sector, these contracts are often used in long-term leasing of services and assets previously managed by a municipality.

**Bulk supply agreements** – A specific kind of agreement required for the treatment of water or wastewater which sets out the responsibilities between the private actor and local government.

### Supporting and creating markets

A less conventional option for encouraging private sector finance is to create market opportunities and formalise the informal sector. This can include subsidising aspects of small-scale service delivery, issuing licences to informal providers or forming professional associations. These actions can create a more supportive environment for small-scale operators and businesses and can encourage further investment and improve service quality.

As noted above, in rural areas household expenditure on self-supply (both in water and sanitation) is often a major component<sup>27</sup> of WASH expenditure. A common strategy, especially in rural sanitation, is to support this expenditure by creating an enabling environment for private sector providers of customer goods and services (often referred to as Sanitation Marketing or SanMark) and facilitating the supply chain of crucial goods, in the process lowering the cost of services and the price of goods.<sup>28</sup>

27 Financing, regulations, and a legal framework are the main policy options for creating an enabling environment.

28 It is not uncommon for donors or governments to create market incentives, such as bulk purchase agreements with certain suppliers or producers of goods needed for sanitation.

### Commercial finance

Commercial finance is another option for additional financing, although to date its use in the WASH sector in Africa has been limited.<sup>29</sup> As highlighted in Figure 4, this finance is best suited to financing service providers directly, and as such it depends on the creditworthiness of municipalities, utilities and other service providers. The financial position of many utilities is dire, with O&M expenditure alone often exceeding revenues.

However, commercial finance becomes more viable as utility performance improves – as exemplified by the KCCA in Uganda. It is thus likely to play an increasingly important role in financing WASH services, provided there is a dedicated effort to improve utility performance. Steps can be taken to support commercial lending. For example, recently the Kenyan regulator (WASREB), in conjunction with the World Bank, undertook a creditworthiness indexing exercise of the country's water service providers.<sup>30</sup> The aim was to lower barriers to investment by conducting the first step of the lender's due diligence process for them.

### Blended finance

A combination of some of the above strategies is often described as “blended finance”: “the strategic use of public taxes, development grants and concessional loans to mobilize private capital flows to emerging and frontier markets”<sup>31</sup> to “crowd-in” private sector investment in WASH.

Expenditure has a very different profile in each subsector and often involves different actors and financing agents. The final sections of this paper highlight sector-specific considerations.

## 3.3 Funding and financing considerations in the urban subsector

Between 2000 and 2015, Africa's urban population grew by 80 percent – an additional 373 million people. In both the urban water and urban sanitation subsector, WASH services need to be considered as part of a wider package of services. This is because urban services are often “networked” across a city in a way that rural services are not. As such, more efficient investment is possible through co-financing different services. For example, a recent study in Lusaka recommended that installing drainage while constructing roads would lead to significant savings.

A second feature of the urban subsector is the central role played by utilities (and municipalities) in service delivery. In urban water, and to a lesser extent sanitation, utility<sup>32</sup> performance is a key driver of efficiency. In a review of the performance of 120 African utilities, the majority registered an efficiency score of 0.30 (well below the highest score of 1), demonstrating significant scope for improvement.

Furthermore, just over half the utilities were able to cover their O&M costs with their revenues. Focusing on the high-performing utilities highlights that “sector reforms in

29 GLAAS (2017).

30 World Bank (2015).

31 GLAAS (2017).

32 Covering 14 countries and serving 53 percent of the urban population.

combination with changes in the economic environment in which utilities are operating<sup>33</sup> can help to improve the efficiency of water utilities in Africa”.<sup>34</sup>

**Country example: The unconnected poor pay more per litre in urban Nigeria**

In urban Nigeria, access to improved water barely increased between 1990 and 2015. Furthermore, during that period the proportion of the urban population using a network connection at home dramatically declined from 32 percent to 3 percent.

This trend is reflected in Bauchi city in northern Nigeria, where coverage rates of household connection have been falling in recent years as a result of limited network expansion, poor maintenance and a growing population.

The result is that poor people, typically living outside areas covered by the network, pay far more per litre for water from informal private vendors than they would from the utility. A study in Bauchi found that those buying 25-litre jerry cans from an informal provider might pay about 1 Nigerian naira per litre in the wet season and about 2 naira per litre in the dry season. However, those using a utility connection (who are typically richer), might pay ten times less, only 0.1–0.2 naira per litre.

*Source: Authors' unpublished research and survey data in Bauchi, Nigeria*

Lastly, in urban areas, private, often informal service providers play a far greater role. In the case of water, they do so by providing tanker or sachet water and, in the case of sanitation, by providing pit-emptying services. Financing of the urban subsector can be boosted by encouraging private investment in urban infrastructure through public-private partnerships and by improving the enabling environment for business expansion.

### 3.4 Funding and financing considerations in the rural subsector

In rural WASH, water and sanitation services are less networked. In the case of water, communal facilities (boreholes or standpipes) are far more common, and in terms of sanitation, sewerage is all but non-existent.

The institutional structure is also different, with local government authorities (as opposed to utilities) taking a more central role in service delivery. The profile of household expenditure also changes, with a greater proportion of spending being on self-supply rather than tariffs. There is also a tendency for services to be managed by the communities themselves, with O&M responsibilities transferred from the local authorities to the service users. It should be noted that rural service areas often encompass small towns and peri-urban areas, which have a different profile.

As local government is often the key actor in rural service delivery, the institutional structure of the sector – particularly the degree of decentralisation – affects the volume of funding flowing to rural WASH and how efficiently this finance is used.

33 This includes civil service reform, energy policies, land use planning, and improvements in public investment planning.

34 Van der Berg and Danilenko (2017).

## 4. Planning, budgeting and expenditure management

This section focuses on the processes associated with distributing funds via tariffs, taxes and transfers, how value for money can be conceptualised in WASH, and funding in relation to the different sector actors. The discussion is contextualised with findings from recent public expenditure reviews that focus on WASH.

Common challenges across sectors affect the efficient use of public resources in WASH. Due to the limited availability of detailed budget data and the fact that WASH expenditure comes from many MDAs, public expenditure reviews often provide the most detailed view on the composition of public spending and efficiency. Recent<sup>35</sup> reviews in Ethiopia, Mozambique, Sierra Leone, Burkina Faso and Kenya<sup>36</sup> highlight some common trends:

- Expenditure is heavily weighted towards development (capital) expenditure, often constituting more than 80 percent of budgets.
- Recurrent budgets are dominated by salaries, with only small allocations for O&M.
- Budgets are increasing in absolute terms, but in many cases falling as a proportion of total government expenditure or GDP.
- Civil servant salaries are cited as a considerable drain on recurrent expenditures.
- Budget execution in the WASH sector is lower than other social sectors. This is partially due to difficulties in executing development expenditure.
- Sanitation expenditure is difficult to identify and, when compared to water and other sectors, is considerably underfunded.

These public expenditure reviews capture donor expenditure to varying degrees. However, most reviews stress that this comprises a sizeable proportion of funding, and often more than government expenditure. Key common sector challenges related to planning and budgeting include:

- Issues related to fiscal decentralisation and the flow of funds between administrative levels.

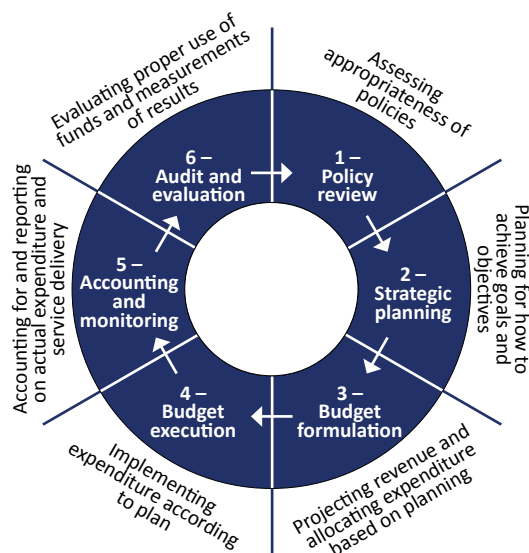
<sup>35</sup> Over the last 10 years.

<sup>36</sup> World Bank (2008), (2010), (2011), (2015)d (2016), and Oxford Policy Management (2017).

- The absorptive capacity of service delivery agents, often related to capacity to execute development expenditures.
- There is no clear funding strategy that sets out how costs should be covered and from which sources.
- Poor coordination among actors with overlapping mandates
- Insufficient focus on performance, i.e. linking expenditure to outputs/outcomes. This is partly because ministries of finance have a different conceptual framework for performance than sector line ministries.

The starting point for any discussion of public financial management begins with understanding the budget cycle and how this relates to sector expenditure. Figure 7 depicts the key stages of a conventional budget cycle, with the first half of the cycle devoted to planning a strategy and the second half devoted to execution and monitoring.

Figure 7: Key elements of a budget cycle



In WASH, perhaps more than in other sectors, a fit-for-purpose policy, institutional and regulatory framework is central to success further in the cycle due to the fractured nature of the sectors involved. Similarly, in formulating the budget, careful

attention needs to be paid to which MDAs hold which responsibilities and how funds are allocated. This is especially pertinent in the case of rural services, where the degree of fiscal decentralisation can have a strong effect on the budgetary allocations to WASH.

The core objectives of effectiveness, efficiency and equity (the three Es) are common to most social sectors. A framework for considering how WASH funding strategies are linked to broader sector plans and the three Es is shown in Figure 8.

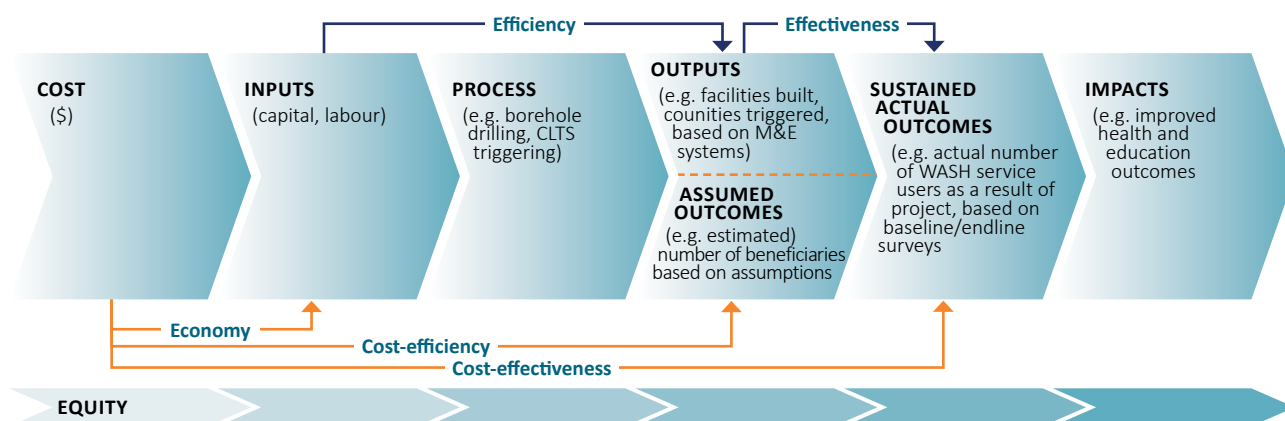
Sector strategies should be based on an overall assessment of needs in the sector (step 1), linked to policies and associated targets (step 2). With sector targets agreed, the costs of achieving them can be estimated (step 3). This enables the development of a comprehensive WASH funding strategy to cover those costs (step 4). Finally, the uptake and quality of services can be analysed to assess whether their outcomes are

equitable (step 5). In many countries, one or more of these components is missing, leading to an unclear strategy that does not readily provide bankable projects for presenting to financing agencies.

Understanding effectiveness, efficiency and equity requires a sector-specific framework for performance, with clearly defined objectives. Figure 8 presents a conceptual framework for assessing value for money in WASH. In defining and measuring sector objectives, results need to be situated within the chain and monitored. Performance can be assessed against sector standards or by monitoring over time.

It is not uncommon for WASH responsibilities to be decentralised in line with fiscal decentralisation – to local authorities in rural areas and to municipalities or utilities in urban areas. Consequently, performance management needs to be done at the sector, rather than the MDA, level.

Figure 8: Unpacking value for money in WASH



#### Country example: Value for money in the Ethiopian government's WASH programme 2004–2013

The Water Supply and Sanitation Programme, led by the government of Ethiopia, operated between 2004 and 2013. The World Bank and the Department for International Development (DFID) provided US\$221 million of sectoral budget support through a trust fund.

A study was carried out in 2014 to establish the value for money of the programme and lessons for the future. It found that, for rural water supply, the average cost per beneficiary ranged between US\$15 and US\$20 in real terms (2008 US\$) over the period. However, this was thought to be an underestimate because the monitoring system was weak and beneficiary counts were based on technology assumptions rather than outcome surveys.

Recommendations for improving value for money focused on improving efficiency through better planning and performance management, and improving economy through stronger procurement processes.

Source: Tremolet et al. (2015)

#### Country example: Municipal reforms in Uganda

After nearly 40 years of poor performance, the Kampala City Council (KCC) was replaced in 2011 with the Kampala Capital City Authority (KCCA). The creation of the KCCA was part of sector reforms introduced by the KCC Act, which Parliament passed in 2010. The reforms were in response to “the near total breakdown of systems and service delivery in KCC stemming from mismanagement, fraud and lack of financial accountability by both staff and political leaders”. The reforms brought many disparate urban service functions under a single authority, introduced more stringent accountability mechanisms, and depoliticised the management structure. Since 2011, there has been a significant improvement in municipal financial performance and services in Uganda.

Source: Authors' account based on discussions with KCCA officials and analysis of acts of parliament

#### 4.1 Meeting the policy challenge – focus on 2030

Enormous progress has been made on WASH in the last two decades, with hundreds of millions of people on the African continent gaining access to basic services. However, the challenge remains huge, with many more people still lacking access.

This paper has highlighted the financing gap for capital investment and the lack of O&M spending in the WASH sector. Despite excellent returns on investment, many sectors remain underfunded, institutionally fractured and inefficient.

This paper has outlined the relative importance of different financing streams and where they have been underused. In particular, the volume of sector funding can be increased and efficiency enhanced in the following ways:

- Ensure there is a clear sector structure. Mandates must be well defined and understood by sector actors, and appropriate coordination and monitoring practices must be in place.
- Focus on efficiency, particularly utility performance in the urban subsector and local government in the rural subsector.
- Improve the execution of development budgets by establishing fit-for-purpose procurement procedures and sufficient human resources.

- Increase finance through innovative sources and emphasise the larger role private service providers can play.
- Recognise that household expenditure is likely to remain a significant portion of sector expenditure. This has serious equity dimensions, as in many cases the poor are paying more for their services and from their own pockets.

Careful attention should be given to these points in addressing sector reforms, developing policies and plans that ensure equitable outcomes, and formulating and executing budgets. In many countries, a combination of the above strategies has improved sector performance.

Only recently has there been a great improvement in sector monitoring practices, bringing with it a better understanding of the financing landscape. Understanding this landscape is an important first step in improving efficiency, effectiveness and equity. There are many other short-term strategies that can be used, particularly when focusing on issues within subsectors or public financial management processes more broadly.

Despite the challenges, universal access to basic services is achievable. A phased approach to extending basic services and improving service levels will enable sectors to provide universal access to WASH.



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