

Situation analysis of the urban sanitation sector in Kenya

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Executive summary

Kenya is one of Africa's top 10 economies, experiencing strong urban growth amid deep institutional and governance reforms.

With a population of 46 million, Kenya is the 9th largest economy in Africa, ahead of Ghana and Tunisia. Economic growth has only slightly reduced poverty levels, which fell from 45% in 2005 to 42% in 2013. Inequality persists, with poverty concentrated in arid rural areas. Kenya has rapidly recovered from 2007's political turmoil and a new Constitution was approved by referendum in 2010, paving the way for deep institutional and legal reforms. Progress has been realised in reducing the gender gap in education and economic opportunities, although much remains to be done to increase women's political empowerment and decision-making roles.

Constitutional reforms have divided the country into 47 counties: political entities with fiscal and political autonomy. As of January 2017, nearly all counties have established basic constitutive structures and local government systems. In the first year of devolution (2013/14), about 20% of total government expenditure was spent at sub-national level. The inheritance by counties of assets and liabilities of previous local authorities has created a funding gap for the major urban centres, including Mombasa, Nairobi and Kisumu. Transfers from central governments currently do not take into account the specific administrative costs of running cities, nor the funding requirements for ensuring basic services.

Kenya is still predominantly rural, but is experiencing strong urban growth (4.3% per annum). Nairobi's population makes up more than 45% of Kenya's urban residents: with an estimated 3.9 million people, it is at least three times larger than the second city, Mombasa. An estimated 15% of the country's urban population lives in informal settlements: Kisumu has the highest proportion of population living in informal settlements (47%) followed by Nairobi (36%).

A minority of urban residents use improved sanitation facilities as per the JMP definition, while wastewater treatment and faecal sludge transport/treatment services are largely inefficient.

The WHO/UNICEF Joint Monitoring Program (JMP) estimates that only 31% of urban residents have access to improved facilities. About 48% use shared facilities, including public toilets as well as facilities shared by defined



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groups of households. While 18% of urban dwellers use unimproved facilities, 3% still practice open defecation. Onsite sanitation is the norm for most urban residents, as less than 20% have access to sewerage services. Transport and treatment services are very poor across all kinds of facilities. Nationally, only 5% of sewage is effectively treated due to failures of the sewerage system and inadequate wastewater treatment processes. Onsite sanitation services are equally poor: in Kisumu and Nakuru over 65% of excreta ends up in the environment untreated, due to inefficient transport and treatment. Research has shown that the impact of inadequate sanitation falls disproportionately on women.

The legal framework for sanitation remains fragmented and focuses on sewerage services.

With the new Constitution (and its Bill of Rights), access to sanitation became a basic human right. However, the legal framework for sanitation remains fragmented. The major legislation for sanitation is embodied in the 2002 Water Act, which focuses on water and sewerage services. The Water Act introduced major reforms, separating water (and sewerage) asset ownership from service provision. Regional Water Services Boards (WSBs) were formed and were able to delegate asset operations and maintenance to Water Service Providers (WSPs) via Service Provision Agreements (SPAs). A new Water Act was passed in 2016 to reflect constitutional reforms. However, overlaps of responsibilities between WSBs and county governments led counties to dispute the validity of the 2016 Water Act. Other relevant legislation for the sanitation sector includes the Environment Management Act and Coordination Act (1999), which regulates the discharge of effluents, and the Urban Areas and Cities Act (2011), which provides for the classification and management of urban areas as well as arrangements for service provision (including through Public-Private Partnerships). The Ministry of Health, with support from the World Bank, UNICEF and other partners, has embarked on the process of developing a National Environmental Health and Sanitation Bill (expected to be published in 2017).

The policy framework sets high ambitions and recognises a range of solutions and service provision models.

Alongside the Constitution, the overarching policy framework for urban sanitation is set by Kenya Vision 2030 and the Kenya Environmental Sanitation and Hygiene Policy (KESHP) 2016-2030. Kenya Vision 2030, developed in 2007 and revised in 2012, aims for universal sanitation by 2030. This objective was also formulated in KESHP, which aims to achieve improved sanitation for all (not just eradication of open defecation) by 2030. KESHP sets the ambition to increase public investment in sanitation from 0.2% to 0.9% of the GDP by 2030. The policy promotes the adoption of low-cost technologies in peri-urban and slum areas, and explicitly refers to a range of technologies, ranging from sanplats and cartridge-based toilets to conventional sewerage. It emphasises the need for sustainable systems for collection and safe disposal of solid waste from residential and commercial areas.

The Kenya Environmental Sanitation Strategic Framework (KESSEF) 2016-2020 provides a medium-term framework for the implementation of the KESHP 2016-2030. It aims to declare 100% of Kenya ODF by 2030, and to ensure that at least 55% of urban households have access to improved sanitation facilities.

There is significant institutional fragmentation and overlap, especially between the Ministry of Health and the Ministry of Water and Irrigation.

At national level, policy and strategy development for the sector is shared between three main ministries. The Ministry of Health oversees the whole sanitation portfolio, but has primary responsibility for coordinating rural sanitation activities. The Ministry of Water and Irrigation is the key institution in charge of the formulation of policies and strategies relating to urban water and sewerage

and investment planning. The Ministry of Environment and Natural Resources, through the National Environmental Management Authority, is responsible for environmental regulation.

The regulation and monitoring of urban sanitation services is the responsibility of the Water Services Regulatory Board (WASREB). WASREB issues licenses to service providers, approves service provision agreements and develops tariff guidelines, among other functions. WASREB is not currently involved in the regulation of small-scale sanitation service providers. At the county level, planning and service delivery is also shared between the County Departments of Health, Water and Environment. The Constitution requires county governments to further decentralise sanitation functions to urban areas and cities, and other lower-level units such as community/village units. However, this decentralisation process has yet to materialise.

The main services providers are the eight WSBs, the WSPs, county governments, private operators, CBOs and NGOs. WSBs and WSPs are mainly involved in sewerage services (benefiting less than 20% of Kenyans). County governments are mainly involved in the construction and management of public toilets. The private sector is relatively dynamic but remains limited, especially for service provision in low-income areas. There are many SMEs working at small scale in the provision of pit emptying and exhausting services (and solid waste collection), but only a few are large enough to bring services to scale. In recent years, some social enterprises have been developing business models to bring sanitation services at scale to low-income areas. One such social enterprise is Sanergy, which designs and manufactures public toilets with sealable containers and sells the franchise to local residents. WSUP and Kisumu County Government have also supported a small business to start providing safe manual emptying services for pit latrines.

Investments in sanitation for low-income areas are almost entirely donor-funded.

The Ministry of Health estimates that public funds for sanitation represent only 0.2% of Kenya's GDP every year, despite the country's commitment to reach 0.5% of GDP. Most investment plans for the sanitation sector have focused on sewerage services, the costs of which appear out of reach in the short to medium-term. Overall, sanitation has remained a low investment priority due to institutional fragmentation, leading to a lack of coordination in carrying out investments.

Nearly all the funding allocated to pro-poor sanitation has come from donors. The Water Services Trust Fund (WSTF) established in 2002 has channelled at least USD 18.4 million to pro-poor urban sanitation as part of the Upscaling Basic Sanitation for the Urban Poor (UBSUP) programme funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) through the German Development Bank (KfW) and by the Bill and Melinda Gates Foundation (BMGF). The World Bank's Global Partnership on Output-Based Aid (GPOBA) programme is funding a water and urban sanitation project, supporting WSPs to increase investments to serve low-income areas, including for sanitation services. There are ongoing donor projects focusing on sewerage services.

Inadequate institutional capacity, inadequate sector financing and insufficient data are major barriers to pro-poor sanitation.

County governments' capacity, in terms of staff numbers and skills, is not adequate to meet the needs of the sector. However, there is no explicit government initiative to fill this gap. In addition, pro-poor sanitation remains a lower priority, and planning and funding is left to donor projects. At the local level, counties have difficulties in allocating and appropriating budgets for sanitation activities, in part due to a lack of assigned budget codes. Finally, the sector has insufficient data on key areas: for example, the factors affecting demand for improved sanitation in low-income areas, including the role that women can play; and the operating conditions of private operators in slums, including costs related to business fees and charges (and other "informal taxes" set by local power-holders), which may deter the private sector from venturing into urban sanitation markets. Research in these areas may be useful to inform policy going forward.

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Acronyms and abbreviations

BMGF	Bill & Melinda Gates Foundation
CBO	Community-based Organisation
DHS	Demographic and Health Survey
FSM	Faecal Sludge Management
JMP	Joint Monitoring Program
KESHP	Kenya Environmental Sanitation and Hygiene Policy
KESSF	Kenya Environmental Sanitation Strategic Framework
NEMA	National Environment Management Authority
NGO	Non-government Organisation
ODF	Open Defecation Free
SPA	Service Provision Agreement
SWAp	Sector Wide Approach
WASREB	Water Services Regulatory Board
WSB	Water Services Board
WSP	Water Service Provider

Note: 1 Kenyan Shilling (KES) = USD 0.0095 as of 24th January 2017

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Background

The Urban Sanitation Research Initiative is a 2016–2020 research programme currently focused in Bangladesh, Ghana and Kenya. The primary aim of this programme is to deliver research that builds national evidence bases around pro-poor urban sanitation, and that drives policy change and wider sector change in the three focus countries. The programme is managed by Water & Sanitation for the Urban Poor (WSUP) and core-funded by UK aid from the UK government.

The aim of this situation analysis is to inform WSUP's future research on key issues facing the urban sanitation sector in Kenya as well as opportunities to influence change. The report presents the country's wider socio-economic and political context and provides an overview of institutional and financing arrangements for the sector. It also highlights the challenges of developing pro-poor urban sanitation services and identifies possible drivers of change.

1 Country context

1.1 Socio-economic context

Kenya is an East African country with an estimated population of 46 million.¹ With an average growth rate of about 2.9% per annum, the population is expected to hit 60 million by 2030. In 2013, Kenya became a lower middle-income economy (as classified by the World Bank) and in 2014 it entered the top 10 economies in Africa, ranking 9th, ahead of Ghana, Ethiopia and Tunisia.² The economy relies on agriculture, services and manufacturing, which represented 30%, 50% and 20% of GDP respectively in 2013. Growth in 2015 was estimated at 5.6%, and is projected to rise to 6% in 2017.³ This positive outlook is predicated on infrastructure investments and the recent fall in oil prices.

Kenya has contrasting demographics and socio-economic characteristics. In recent years, poverty has declined, falling from 46% in 2005/06 to 42% in 2013.⁴ However, income distribution remains highly unequal: nationally, the Gini coefficient is estimated at 0.445. Poverty levels are highest in rural areas, especially in the arid and semi-arid areas which cover about 80% of the country and are inhabited by about 20% of the population. For example, 88% of Turkana's population lives below the poverty line, compared with 21% in Nairobi County.⁵ Gender disparities are also significant: although Kenya has made progress in reducing gender gaps in education, women's low access to health care services is in line with low-income countries, rather than the lower middle-income group to which Kenya now belongs. Women's participation in economic life has been persistently high in recent years (with a female-to-male labour participation ratio of 86%), although the gender gap in political empowerment and decision-making remains significant.⁶

1.2 Political context

The Republic of Kenya is a democratic state with a presidential system of government supported by a strong devolved governance system. The system of government is co-operative, with an emphasis on functional relationships between the national and county governments rather than the autonomy of units (as in Ethiopia or Nigeria, for example). General elections - i.e. presidential, parliamentary (National Assembly and Senate) and county government (Governor and County Legislative Assembly) elections - are held every five years. The next general election is scheduled for August 2017.

In the last ten years, Kenya has experienced several pivotal national events that have collectively shaped Kenyan politics today. In 2007, a combination of economic and ethno-political factors led to an eruption of violence following the presidential elections. The death toll of this violence was about 1,300, while at least 600,000 people were displaced. A peace deal was brokered in February 2008 and a power-sharing coalition gave birth to constitutional reforms, officially approved by referendum in 2010.

The passage of the new Constitution in 2010 brought optimism as major institutional and governance changes were introduced. Reforms led to the formation of a devolved system of government, with 47 county governments established following the 2013 general elections. In 2013, Uhuru Kenyatta, of the Jubilee Alliance, was sworn in as President, a result of a peaceful election process. The two main political coalitions, the Jubilee Alliance and the Coalition for Reforms and Democracy (CORD), are associated with two of the major ethnic groups in the country, Kikuyu (22%)

¹ UN Department of Economic and Social Affairs - Population Division 2014

² World Bank 2014a

³ World Bank 2016a

⁴ World Bank 2013

⁵ Kenya National Bureau of Statistics and Society for International Development 2009

⁶ WEF 2016 and World Bank, Gender Data Portal: Kenya, World Bank Data 2017

<http://datatopics.worldbank.org/gender/country/kenya>

and Luo (13%) respectively. Other major ethnic groups include Luhya (14%) and Kalenjin (12%). Many communities traditionally vote along ethnic lines.

In practice, issues of corruption, nepotism, ethnicity and political patronage remain major challenges as the country is only slowly engaging in constitutional reforms. Deep tensions between two key majority ethnic groups (Luo and Kikuyu) remain.⁷

1.3 Commitment to development and to pro-poor services

Kenya's Constitution and Vision 2030 are the country's long-term social and economic development blueprint. Both illustrate Kenya's commitment to development and pro-poor services. The Constitution puts human rights at the centre of public policy, decision-making and development, as it establishes the Bill of Rights as an integral part of Kenya's democratic state.

The Bill of Rights declared water supply and sanitation services basic rights, together with health, housing, education, food and social security. The Bill emphasises the principles of equitable development and sharing of national resources, and provides for affirmative action programmes to ensure that minorities and marginalised groups have reasonable access to basic services.

Poverty reduction is a key objective of Kenya Vision 2030 and its Medium-Term Plan II (2013-2017). Vision 2030 aims to enhance equity and wealth creation opportunities for the poor by making equity a recurrent principle in all its economic, social and political programmes. Special attention is given in the Medium-Term Plan to investments in the arid and semi-arid districts, communities with high incidences of poverty, unemployed youth, women, and all vulnerable groups.⁸ Vision 2030 also aims to enhance both the scale and pace of economic transformation through infrastructure development, seen as a key driver in promoting trade and economic growth.

Infrastructure investment makes up the largest share of development spending, but this is highly focused in the transport and energy sectors (75% of the infrastructure budget in 2013/2014). In contrast, budgets for environment, water and natural resources accounted for only 1.1% of GDP in 2013/2014, and actual budget execution represented only 0.6% of GDP due to poor absorption capacity.⁹

1.4 Administrative set-up and decentralisation level

The 2010 Constitution created a new structure of devolved government. It divides the territory of Kenya into 47 counties, which are political entities with fiscal and legal autonomy and mandated to provide social infrastructure, ensure basic services and local economic development, among other functions. The Constitution requires county governments to decentralise their functions to lower tiers of government (see below).

Elections in March 2013 marked the official launch of the devolved government system. The 47 new county governors and county assemblies were elected and began the challenging work of setting up the new governments, as well as a new national Senate representing the interests of the counties at national level. Kenya's devolved system is "among the most rapid and ambitious devolution processes going on in the world."¹⁰

⁷Rohwerder 2015

⁸Office of the Prime Minister 2012

⁹World Bank 2014a

¹⁰World Bank 2012

With the adoption of the Constitution, all functions that were previously assigned to local authorities (namely 45 municipal councils, 62 town councils, 67 county councils and the Nairobi City Council) were transferred to counties. In practice, the immediate effect of devolution is the recentralisation of urban functions, except in the two largest urban centres, Nairobi and Mombasa, which were designated city counties (i.e. the Nairobi and Mombasa city councils were transformed into county governments).

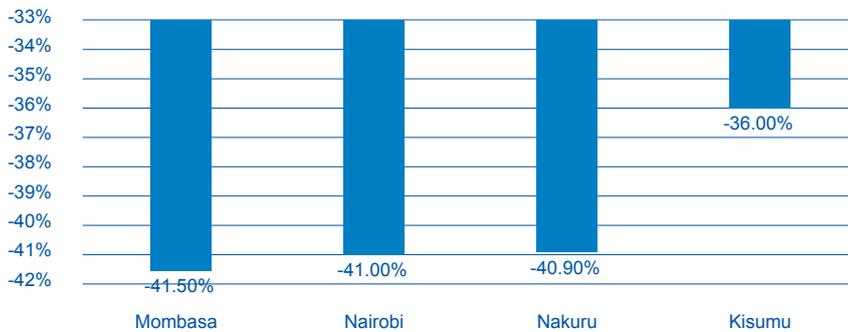
The County Government Act 2012 provides that the functions and provision of services of each county government should be further decentralised to lower tiers of government. In urban areas, cities, municipalities and towns can be established when a population reaches 500,000, 250,000 and 10,000 respectively. Nairobi and Mombasa are currently the only urban agglomerations that are cities. Several counties are in the process of establishing municipalities and towns (town committees have less power and autonomy than municipal boards, which have separate legal status). As of January 2017, no county had yet established these lower tiers of government. Urban areas remain fully dependent on county governments both for function assignments and the funding to carry out their functions.

National and county government responsibilities with respect to public finance are set in the Public Finance Management Act (PFM 2012). In order to ensure counties' maximum autonomy, the PFM Act provides for an unconditional transfer of a share of national revenues from the central government to counties. This share between national and county governments is determined by the Commission on Revenue Allocation, based on a formula that takes into account counties' population size and poverty rates, among other parameters. The PFM Act also mandates counties to allocate at least 30% of their expenditure to development spending. Devolution has, however, created a funding crisis for many urban counties (Box 1).

Box 1: The funding crisis in urban counties

The Commission on Revenue Allocation's national revenue sharing formula has not yet taken into account the unique funding needs of counties with large urban areas. This has led to a serious crisis in financing urban infrastructure and basic services such as sanitation, especially for the large cities and highly urbanised counties including Nairobi, Mombasa, Kisumu, Nakuru, Aushu Gishu (Eldoret), Kakamega, Embu and Meru. Predominantly urban counties have consequently been subjected to fiscal shocks as shown in the figure below, as they are required to manage devolved functions with fewer resources than before devolution. For example, the four largest urban counties have to manage devolved functions with only 60% of their previous resource allocation, despite large additional administrative costs such as the county assemblies and executives, which were not part of the old local government system. They are also required to meet significant mandatory costs associated with servicing the debt they inherited, which are not factored into these calculations.

Figure 1: Reduction in urban counties' budget in 2013/14 (compared with 2012/13)



Source: World Bank 2016b

As of January 2017, nearly all counties have established the basic constitutive structures and local government systems. In the first year of devolution, 2013/14, about 20% of total government expenditure was spent at sub-national level (this is below the levels of devolved funds in federal countries such as Nigeria, but in line with other countries in the region, such as Tanzania). However, only 10 counties had reached the 30% threshold required by the PFM Act on development expenditure. Counties still depend, in large part, on their share of national resources to fund both capital and recurrent activities, as the counties' own-revenue collection rates are low. For example, although they targeted to collect at least 1.2% of GDP as own-source revenue in 2013/2014, on average counties only managed to collect 0.5%. In addition, counties underspent their budget allocation, with an overall execution rate of only 63%.¹¹

¹¹ World Bank 2014a

2 Access to urban sanitation services

2.1 Urbanisation situation

Kenya is at an early stage of urbanisation and is still predominantly rural. Data on the current urban population is difficult to obtain, as the latest national census was conducted in 2009. International organisations such as the World Bank and the UN estimate that only 25% of the population lived in urban areas in 2015. But these estimates only consider urban centres. The 2009 national census, which included peri-urban areas, estimated the urban population to be 32%. Similarly, the urbanisation rate is difficult to estimate, due to a lack of reliable recent data. The World Bank estimates it at 4.3% per annum and projects that the urban population will make up over 50% of the population by 2050.¹²

Based on the 2009 population census, half of the urban population resides in 11 major urban centres.¹³ Nairobi, the capital city, makes up about 25.9% of Kenya's urban population, with over 3.1 million residents in 2009, followed by Mombasa (7.7%), Kisumu (3.2%), Nakuru (3.1%), Eldoret (2.6%), Kikuyu (2.2%), Ruiru (2%), Kangundo-Tala (1.8%), Naivasha (1.4%), Thika (1.3%) and Machakos (1.3%).

Urban growth has generally been established around population centres and productive agricultural regions. Most urban dwellers live near the Northern Corridor, which connects Mombasa Port through Nairobi to Malaba, with a branch line to Kisumu in the west.¹⁴ The concentration of population along the Northern Corridor has led to the development of three important hubs: the coastal hub around Mombasa, the central hub around Nairobi, and the western hub around the urban centres of Kisumu, Eldoret, Kericho, and Nakuru. Table 1 below shows the projected population for some of the major urban centres in Kenya up to 2030. Nairobi City County alone will be home to about 7 million people, double the figure recorded in the last census in 2009.

Table 1: Projected population (in thousands) of some major urban centres in Kenya

Urban centre	1990	1995	2000	2005	2010	2015	2020	2025	2030
Nairobi	1,380	1,755	2,214	2,677	3,237	3,915	4,792	5,870	7,140
Mombasa	476	572	683	802	940	1,104	1,326	1,619	1,973
Nakuru	168	194	224	256	293	335	396	482	589
Eldoret	116	141	173	213	261	321	397	489	598

Source: UN Department of Economic and Social Affairs - Population Division 2014

Of the 25 largest urban areas in Kenya, 10 (including Nairobi City County itself) are within the greater Nairobi metropolitan area (yet to be formally established). These 10 urban areas contain about 5.77 million people and nearly 40% of Kenya's urban population. Of these 10 urban settlements, three (Thika, Juja, and Kitengela) were among the 10 fastest-urbanising areas in Kenya, and four others - Mavoko, Ngong, Ongata Rongai, and Ruiru - were in the top 25 fastest-urbanising areas.¹⁵

Urban growth is mainly fuelled by the high rate of rural-to-urban migration, as people move to urban areas in search of better employment opportunities, services and living standards. Other factors driving urban growth include boundary changes and the reclassification of small agglomerations from rural to urban.¹⁶

¹²World Bank, World Development Indicators 2015

¹³Kenya National Bureau of Statistics 2009

¹⁴World Bank 2016b

¹⁵ibid

¹⁶National Council for Population and Development 2013

2.2 Slum characteristics

Rapid urban growth has brought social and economic challenges. The percentage of the urban population in Kenya living below one dollar a day rose from 29% in 1992 to 33% in 2005 with nearly 75% of slum dwellers living below the poverty line.^{17, 18} This increasing population has also put a strain on the existing urban infrastructure including housing, transportation and health facilities. As towns become congested, the number of informal settlements, associated with declining quality-of-life and living standards, has risen. The last census estimates that about 15% of the country's urban population lives in informal settlements. Kisumu leads with a high proportion of informal settlement population (46.9%) followed by Nairobi (36.2%), Mombasa (23.55%), Eldoret (23.3%) and Thika (10.9%).

While low-income urban settlements, including urban slums, differ markedly from each other, there are some shared characteristics. These include high population density and mobility, high crime levels and, for some, a lack of social cohesion. Table 2 summarises some common slum characteristics in Kenya.

Table 2: Common characteristics of slums in Kenya

Feature	Characteristics
Population and socio-cultural characteristics	High population density. Ethnically mixed, but some areas predominantly inhabited by particular ethnic groups or religious communities. Large presence of transient population (new arrivals from rural areas, students, etc.) Strong presence of civil society organisations (NGOs, faith-based organisations, community-based self-help groups).
Socio-economic characteristics	Low income levels. High unemployment levels (youth employment levels in particular). Local economy dominated by the informal sector (small-scale businesses, trade, and casual labour). Formal employment mainly limited to low-grade government or local authority roles, shop attendants, security guards, drivers; others are day-wage earners in the construction industry and other industrial sectors. Pattern of economic differentiation, with the majority of residents being poor or very poor while a few residents are well-off local entrepreneurs, landlords, etc. High crime levels (robbery, vandalism, etc.).
Land ownership and planning	Lack of security of tenure for many residents. Planned areas on public lands; unplanned areas on private lands. Majority are tenants, with landlords often residing on-plot. Accommodation often several households living in a single compound. Often located in marginal or poorly drained areas e.g. areas with a high water table, swampy areas, flood-prone areas, or areas on steep hills.
Housing characteristics	Variable housing quality, depending on land tenure, with owners occupying while tenants often use temporary structures.
Infrastructure and services	Lack of or limited access to basic services such as safe water and sanitation. Challenges in obtaining land for the construction of water and sanitation infrastructure (such as water kiosks and public sanitation facilities). Poor condition of existing infrastructure. Prevalence of informal water service providers (water resellers), often controlled by cartels. Unregulated prices of water and sanitation services.

Source: Majidata (www.majidata.go.ke)

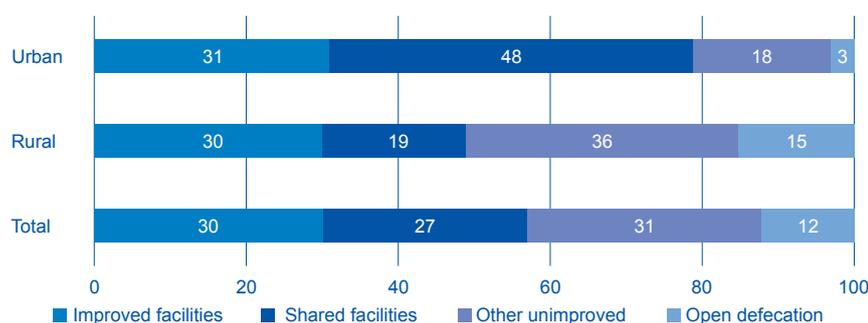
¹⁷ Kenya National Bureau of Statistics 2006

¹⁸ World Bank 2006

2.3 Access to basic sanitation

According to the 2015 Demographic and Health Survey (DHS 2015), only 2.5% of the urban population had access to private (own-household) improved sanitation in 2014.¹⁹ The Joint Monitoring Program (JMP) has a slightly higher figure, estimating access to improved sanitation facilities at 31% in 2015. Shared facilities are predominant in urban areas: 50% of urban dwellers use such facilities according to the DHS (48% according to the JMP). Open defecation is practiced by 3% of urban residents. An estimated 18% use unimproved facilities (other than shared) (Figure 2).

Figure 2: Access to basic sanitation in %



Source: JMP 2015

There has been only a marginal improvement in sanitation coverage within the last 25 years (1990-2015), from 27% in 1990 to 31% in 2015. The rate of open defecation remained constant at 3% since 1990.²⁰ Although inadequate sanitation affects all segments of the society, research shows that Kenyan women are disproportionately impacted.

Box 2: The impact of poor sanitation on women in Kenya's low-income areas

A study conducted in Mathare (a low-income area of Nairobi) found that an average of 85 households shared one toilet, and that the mean distance between a household and a functioning toilet was 52 metres. While 92% of households within 30 metres of a toilet reported good health, only 33% of households more than 30 metres from a toilet reported good health. The survey found that 30% of women reported at least one episode of diarrheal disease within the previous month. Diarrheal disease was also mentioned as the most frequently reported illness for children. Insecurity and indignity related to inadequate sanitation were key concerns for women and girls. Women expressed feeling vulnerable when using public toilets that are far from their homes and that do not have locks on doors or proper lighting at night. Fear of rape, especially at night, could lead to women not drinking fluids, chronic constipation, and using a bucket in their home as a toilet. Evidence suggests that the majority of sexual violence in slums occurs in the context of using a toilet, bathing, and/or menstrual hygiene. This is very relevant given that over 36% of women in the Nairobi slum of Kibera report that they have been physically forced to have sex (compared to 14% of all Kenyan women).

Sources: Corbun & Hilderbrand 2015 and Amnesty International 2010

¹⁹ Kenya National Bureau of Statistics 2015

²⁰ JMP 2015

Onsite sanitation is the norm for the majority of urban residents. The DHS estimates that 21% of urban dwellers use pit latrines with slabs; 16% use VIP latrines; 13% have a toilet facility with septic tanks; and nearly 5% percent use flush/pour flush pit latrines. Only 0.5% of the population use composting toilets. Estimates of access to sewerage services vary from 12% (in the Environmental Sanitation and Hygiene Policy) to 20% (DHS). The Water Services Regulatory Board (WASREB) estimates national sewerage coverage to be 19%.²¹

2.4 Access to transport and treatment services

There are no consolidated and up-to-date data on the availability and quality of transport and treatment services for wastewater and sludge in all urban centres of Kenya. In total, the eight Water Services Boards (asset owners of water and sewerage infrastructure, see Section 4.2) have an estimated 3,267,246 connections to the sewerage system, with coverage rates ranging between 2% and 32% of their service area.²² In terms of service quality, the Kenya Environmental Sanitation and Hygiene Policy paints a bleak picture of sewage transport and treatment services (Box 3).

Box 3: The situation of sewerage services in Kenya

The Kenya Environmental Sanitation and Hygiene Policy estimates that 12% of the population use sewerage services, but only 5% of the national sewage is effectively treated. Of the wastewater that enters the sewer network, only about 60% reaches treatment plants. There are about 43 sewerage systems in Kenya and wastewater treatment plants in 15 towns (serving a total population of 900,000 inhabitants). The operational capacity of these wastewater treatment plants is estimated at around 16% of design capacity, due to inadequate operation and maintenance, as well as low connection rates to sewerage systems. These are often neglected and characterised by blockages owing to intermittent water supply. The most common solution for wastewater treatment in Kenya is waste stabilisation ponds, which mix industrial effluent and domestic sewage, resulting in inadequate wastewater treatment. Burst sewers and non-functional treatment plants that discharge raw sewage into watercourses are also common.

Source: Ministry of Health 2016 based on data from 2009.

Access to transport and treatment services for onsite sanitation is equally poor. Shit Flow Diagrams (SFDs) have been produced for Kisumu²³ (419,072 people dependent on onsite sanitation) and Nakuru²⁴ (369,839 people dependent on onsite sanitation), indicating that over 65% of excreta produced in these cities ends up in the environment untreated, due to inefficient transport and treatment services.

²¹ WASREB 2015

²² WASREB 2015

²³ Furlong 2015

²⁴ Furlong 2016

3 Legal and policy framework for urban sanitation

3.1 Legal framework

The overarching legal framework for urban sanitation is provided by the Constitution which defines access to a clean and healthy environment, adequate housing and sanitation as rights for all, including women and vulnerable groups. The Constitution requires the State to take legislative measures (e.g. setting standards for service delivery) to ensure the progressive realisation of the right to sanitation. The Constitution also gives every person the right to institute court proceedings when his/her rights to sanitation have been denied, violated, infringed or threatened.

At statutory level, the existing legal environment for sanitation remains fragmented with sanitation-related laws scattered across various legal instruments. The main legal acts pertaining to sanitation are presented in Table 3 below.

Table 3: Main legal acts pertaining to urban sanitation

Act	Key points
Water Act (2002)	Introduced important reforms in the sector, separating responsibilities for asset ownership from the operation of water and sewerage infrastructure, creating autonomous utilities and an independent sector regulator, ring-fencing revenues within the sector, and establishing a framework for utilities and other Water Service Providers (WSPs) to move towards cost-reflective tariffs.
Water Act (2016)	Issued to reflect constitutional changes and adjusting the institutional arrangements, based on devolution reforms.
Environment Management and Coordination Act (EMCA 1999)	Provides the legal framework for environmental management and conservation and established the National Environment Management Authority (NEMA). EMCA provides regulations on water pollution prohibition, effluents to be discharged into the sewerage system, licensing for discharge of effluents, standards for waste, licenses for existing waste disposal sites and plants, etc.
Urban Areas and Cities Act (2011)	Provides for the classification, governance, and management of urban areas and cities and the criteria of establishing urban areas. One of the criteria for classifying an area as urban or city or a municipality is the capacity to effectively and efficiently deliver essential services including sanitation services and the capacity for functional and effective waste management and disposal. To this end every city and municipality (yet to be established as of January 2017) must formulate and operate within the framework of an integrated development plan. The Urban Areas and Cities Act also provides the basis for promoting service provider contracting, public-private partnerships, and joint ventures as well as the regulation of city, municipal, and town services. ²⁵
County Government Act (2012)	Provides the basis for sanitation planning and performance management within each county's integrated development plan. The Act requires that in planning for services the county governments must provide clear input, output, and outcome performance indicators, including the percentage of households with access to basic services including water and sanitation.
Public Health Act (1986)	Makes provisions to promote public health and prevent infectious, communicable, or preventable diseases. The Act makes proscriptions on sanitation and housing and prohibits nuisance injurious to health, including unsafe housing (including those which are liable to favour the spread of any noxious matter such as wastewater).

The absence of a coherent legislative and regulatory framework for sanitation means that service delivery lacks a set of normative principles reflecting current development objectives.

In order to fill this gap, the Ministry of Health, with support of the World Bank, UNICEF and other partners, has embarked on the process of developing a National Environmental Health and Sanitation Bill (expected to be published in 2017). The Ministry of Health has also developed a Prototype County Environmental Health and Sanitation Bill to assist the county governments in enacting county legislation for achieving the right to sanitation and a clean and healthy environment; ensuring effective execution of the sanitation functions and powers vested in the county governments; and enabling effective provision and regulation of sanitation services within the counties.

²⁵ Government of Kenya 2012

Some counties have a licensing system in place for operators involved in mechanical faecal sludge emptying. In Kisumu, Nairobi and Mombasa, in addition to their trading licence, vacuum tank operators need to obtain a license from the National Environment Management Authority (NEMA) and a tipping licence issued by the utility company. The license fees can be issued for each truck (as in Kisumu) or on a dumping basis (as in Nairobi and Mombasa). In Nairobi operators also require an exhausting licence issued on a truck-by-truck basis.

3.2 Policy framework

The overarching policy framework for urban sanitation is provided by the Constitution, the Kenya Vision 2030 and the Kenya Environmental Sanitation and Hygiene Policy 2016-2030.

The Kenya Vision 2030, developed in 2007 and revised in 2012, states the aim of universal access to sanitation by 2030. It proposes a number of strategies for urban areas, including:

- Improving community sanitation;
- Developing and expanding sewerage schemes;
- Improving the planning of informal urban settlements;
- Encouraging public-private partnerships in the development and management of sewerage systems²⁶; and
- Providing solutions that can provide “Total Hygienic Sanitation” including clean toilets, safe sludge removal and effective sludge treatment.

The Kenya Environmental Sanitation and Hygiene Policy (KESHP) 2016–2030, launched in May 2016, provides the broad guidelines for both state and non-state actors to work towards ensuring universal access to sanitation by 2030. The policy aims to make Kenya open defecation free (ODF) by 2030; achieve and sustain 100% access to improved sanitation in rural and urban areas by 2030; and to increase public investment in sanitation and hygiene from 0.2% to at least 0.5% of GDP by 2020 and to 0.9% of GDP by 2030. In line with Sustainable Development Goal 6, the policy emphasises equitable access, including for women and vulnerable groups. In addition, it recognises the need for gender-sensitive campaigns for hygiene promotion, for positive behaviour change campaigning and marketing, and for a real role of women in local decision-making and governance.

With respect to urban sanitation, the KESHP commits to increase access to improved urban sanitation facilities and to ensure effective waste disposal and management systems. This would be achieved by promoting low-cost technologies in peri-urban and slum areas. The policy explicitly refers to multiple technologies, ranging from low-cost onsite options (including sanplats and cartridge-based toilets) to conventional sewerage. The policy emphasises the need for sustainable systems for collection and safe disposal of solid waste from residential and commercial areas (including institutions and public places in urban areas); for resource recovery and recycling; and for the development of urban master-plans for treatment of municipal and industrial wastewater.

The policy also seeks to enhance private sector participation and ensure that market-based solutions are inclusive of the poor and marginalised. It encourages private sector participation, while recognising that special mechanisms may have to be put in place in order to extend services to the poorest. The policy mentions “market-compatible financing options including new types of cash transfer and social subsidies to enable households in the lower wealth quintiles to purchase through the market, while maintaining incentives for others who can afford to purchase on their own.” The policy therefore does not rule out subsidies, but states that they should be aligned with market-based solutions.

²⁶ The Kenya Vision 2020 only refers to sewerage services; by contrast, the 2016 policy recognises the need to develop centralised sanitation services.

The Kenya Environmental Sanitation Strategic Framework (KESFF) 2016-2020 provides a medium-term framework for the implementation of the KESHP 2016-2030. It aims to declare 100% of Kenya ODF by 2030. It also aims to ensure that at least 55% of urban households have access to improved sanitation facilities and to increase sewerage coverage by 50% by 2020. Considering the current level of access to sewerage services (12% according to the KEHSP), this target is not unrealistic but would require a substantial injection of public funds into the sanitation sector.

4 Institutional arrangements for urban sanitation

Institutional responsibilities for sanitation were defined in the 2002 Water Act. As of May 2017, the revised 2016 Water Act has been enacted but remains to be implemented, with counties arguing that it does not properly reflect constitutional reforms: certainly, the 2016 Act retains a role for central government agencies to plan and develop water and sanitation infrastructure. While the legislation is being disputed, the 2002 Water Act remains the main current text defining institutional functions in the sector.

4.1 National and local level institutions

At national level, policy and strategy development for the sector is shared between three main ministries:

- The Ministry of Health oversees the whole sanitation portfolio and is mainly responsible for coordinating rural sanitation and hygiene activities;
- The Ministry of Water and Irrigation is the key institution in charge of the formulation of policies and strategies relating to urban water and sewerage, sector coordination, investment planning, and resource mobilisation; and
- The Ministry of Environment and Natural Resources, through the National Environment Management Authority, is responsible for environmental regulation and providing guidelines for both solid and liquid waste management.

The regulation and monitoring of urban sanitation services is the responsibility of the Water Services Regulatory Board (WASREB). WASREB is a non-commercial State Corporation whose core functions include issuing licenses to service providers, approving service provision agreements, developing tariff guidelines, carrying out tariff negotiations, setting standards and developing guidelines for service provision. WASREB licenses Water Service Boards (WSBs) who in turn are given the mandate to sub-contract utilities through Service Provision Agreements. However, there is currently no regulatory framework for small-scale sanitation service providers, who do not fall within the regulatory ambit of WASREB.

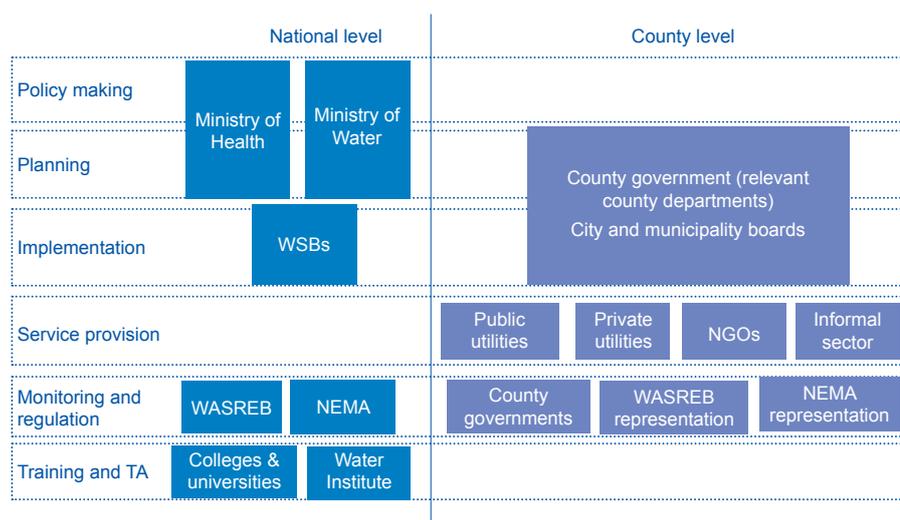
As shown in Figure 3 below, there are overlaps in the institutional set-up of the urban sanitation sector. Sanitation has several institutional homes: sewerage services explicitly fall under the authority of the Ministry of Water, while onsite sanitation is the responsibility of the Ministry of Health. Regulatory functions are shared by different institutions. Whereas the Water Act 2016 mandates WASREB to regulate sewerage services, the Environmental Management and Co-ordination Act 1999 mandates NEMA to regulate effluent discharge into the sewerage system, pollution control and hazardous waste including pesticides and toxic wastes.

The sector lacks a coordinating body and an institution that could provide technical assistance to counties for developing sanitation services. In order to address these gaps, the new Kenya Environmental Sanitation and Hygiene Policy 2016-2030 has proposed the establishment of a statutory body to be known as the National Environmental Sanitation Regulatory and Coordination Authority (NESCRA). This Authority would be tasked to coordinate and regulate sanitation matters throughout the country, including development and enforcement of necessary rules, guidelines and service standards. The proposed National Environmental Health and Sanitation Bill 2017 (under development) provides for the establishment of the Authority.

The KESHP 2016-2030 outlines the role of universities, colleges and the Kenya Water Institute in the sanitation sector. These institutions are expected to design and provide specialised training and education programmes to address the shortage of skilled personnel including engineers, planners, technicians, technologists, artisans and prosecutors. Capacity building and training programmes may include the management of sanitation engineering services, governance, public-

private partnerships, contract management, regulation and enforcement, sanitation marketing, sanitation planning, environmental protection and environmental health impact assessment, and monitoring and evaluation.

Figure 3: Institutional set-up for urban sanitation in Kenya



Despite sanitation being at the intersection of interventions in health, water, environment, education, housing, etc., multi-sector coordination is weak. Although there is an Environmental Sanitation and Hygiene Inter-Agency Coordinating Committee, established as a collaborative oversight and advisory structure at the Ministry of Health, it is not established by law to effectively coordinate the sector and intergovernmental relations within the sector. Without a clear multi-sectoral vision for sanitation, key interventions are currently disjointed, uncoordinated, duplicative and sometimes contradictory.

At the county level, planning and service delivery is also shared between the County Departments of Health, Water and Environment. As per the Constitution, county governments can decentralise sanitation functions to urban areas and cities and other lower-level units such as community/village units within the county governments. However, this decentralisation process has yet to materialise. As and when this transfer of responsibilities takes place, the challenge will be to ensure that responsibilities between counties and cities and municipalities do not overlap and that adequate regulatory functions are vested in the county governments.

4.2 Service providers

As presented in Figure 3, numerous entities currently provide sanitation services in urban Kenya. The main types of service provider are indicated below.

Water Services Boards (WSBs). Under the 2002 Water Act, eight WSBs have the responsibility to ensure water and sanitation services provision through Service Provision Agreements (SPAs) signed with Water Service Providers (WSPs). WSBs are the water and sewerage asset owners within their area of jurisdiction, and are responsible for planning, development and expansion of water and sewerage services. The 2016 Water Act replaces WSBs with Water Works Development Agencies, whose function is to plan, develop, maintain and manage national public water works.²⁷

²⁷ The situation is still confusing on the ground, since the Constitution has clearly allocated the responsibility to deliver water and sanitation services to counties. Counties have contested the 2016 Water Act on the basis that they are to be the asset owners.

Water Service Providers (WSPs). There are formally 100 WSPs (65 urban, 35 rural) that have signed SPAs with various WSBs, serving 21.1 million people. WSPs are independent entities (public liability companies) in charge of operating water and sanitation assets, and directly serve consumers with water and sewerage services. WSPs are either publicly or privately owned. They serve a wide range of the population, from high- to low-income residents. There are currently two regulated privately owned utilities, namely Runda Water Company and Kiamumbi Water Project, which only cover a small population consisting mainly of medium- to high-income customers. Based on the 86 utilities that submitted their data to WASREB in 2015, about eight WSPs are very large utilities serving about 5 million people in total, 28 (31%) are considered large and serve about 3.8 million people, 9 (23%) are considered medium and serve about 1.3 million people, while the remaining 31 are considered small and serve about 580,000 people. The average sewerage connection rate (the number of people with flush or pour-flush to piped sewer, as a percentage of the total population within the service area of the utility) was 15% for the 2014/2015 period across all WSPs. Coverage seems to go down as the size of the utility decreases, with very large utilities having the highest coverage at 35%, followed by large utilities (6%), medium utilities having a coverage of 2%, and small utilities at only 1%. At least 22 WSPs are involved in the construction of public and household facilities and provide faecal sludge management (FSM) services and decentralised sewerage services, mostly with capital investments coming from donors (see Section 5.1). One of the WSPs involved in faecal sludge management is Nakuru Water and Sanitation Services Company.

As the Constitution allocated the responsibility for water and sanitation services to the counties, WSPs are also answerable to county governments (i.e. not only WSBs). Under the new Water Act, WSPs are to be referred to as County Water Service Providers (CWSPs) and are to be regulated by the Water Services Regulatory Board.

County, cities and municipal governments. The Public Health Act gives local government authorities (now city and municipality boards and town committees) the mandate to implement all lawful measures to maintain clean and healthy sanitary conditions within their areas of jurisdiction. Municipality, city or town authorities have responsibility for the construction and operation of solid waste management systems, sewerage (delegated to WSPs), and public toilets, either alone or in partnership with private sector actors. While the task of sludge emptying is also mainly the responsibility of these authorities, most of them lack the specialised equipment and trucks required, and thus emptying is often carried by the informal private sector.

Small and Medium Enterprises (SMEs). In the sanitation sector, SMEs include both for-profit commercial enterprises and social enterprises. SMEs are mainly involved in public toilet service provision and sludge emptying services. While there are many SMEs working at small scale providing pit emptying and exhausting services (and solid waste collection), only a few are large enough to bring services to scale. Further, most services on offer through the formal private sector are more suitable for middle- to high-income households. Most sludge emptying trucks, for example, cannot access pit latrines in low-income urban areas due to the dense housing pattern, which limits accessibility. In recent years, some social enterprises have been developing business models to bring at-scale sanitation services to low-income areas. One such social enterprise is Sanergy, which designs and manufactures public toilets with sealable containers and sells the franchise to local residents.²⁸ In recent months, with support from WSUP and Kisumu County Government, a business called Gasia Poa was supported to start providing safe manual emptying services for pit latrines typically in low-income areas. The business was trained with the help of public health officers, and has received approval to dump sludge at treatment facilities in Kisumu.

²⁸ Trémolet, Prat & Mansour 2014

Among manufacturers, SILAFRICA Kenya has been marketing affordable, durable, and movable plastic toilet slabs that can be used to upgrade an existing pit latrine, or used for a new latrine. The supply side of the sanitation market, however, remains small with limited reach particularly in urban areas. Overall, private sector participation in the provision of urban sanitation services is limited, and mostly in the informal sector (Box 4).

Box 4: Limited private sector participation in urban sanitation services

Kenya passed a policy for public-private partnerships (PPP) in 2011, and a related Bill in 2013. The experience of private sector participation (and public-private partnerships in particular) in the water and sanitation sector is very limited, however. The current SPAs are only between WSBs and public utilities and are not open for competitive bidding. Private utilities are allowed to operate under a license given by WASREB. There are only two regulated private utilities, namely Runda Water Company and Kiamumbi Water Project, serving a total population of only 21,228. These private operators have a license to operate sewerage services only, and not other types of sanitation services. Other SMEs involved in faecal sludge emptying and toilet construction are not regulated by WASREB. These SMEs usually obtain a standard business license from the counties. As of February 2017, there were few regulatory guidelines that counties could use to engage with the private sector for the delivery of sanitation services. There are no contract templates in place, for example. Although tariffs for tipping sludge at disposal points are set, tariffs applied to customers are not regulated. There are no incentives in place to enable SMEs to extend services into low-income areas. Only NGOs and social enterprises are involved in service delivery for low-income residents.

Informal service providers. There are small-scale unlicensed service providers delivering services where public services are unavailable mainly in urban informal settlements. They are largely involved in construction of latrines, public toilets and manual faecal sludge emptying.

NGOs, CBOs and other not-for-profit organisations. NGOs and other civil society organisations have grown substantially in number and influence over the past few decades in Kenya. The inability of local governments to provide basic sanitation services, especially in low-income and informal urban settlements, resulted in the involvement of NGOs, CBOs and faith-based organisations. Some of the most visible NGOs and not-for-profit organisations in urban sanitation include AMREF Health Africa, Kenya Water for Health Organization (KWAHO), WaterAid, Practical Action, SANA International, Umande Trust, Africa Now, Water.org, WSUP, SNV, WASH Alliance Kenya, WASH United, Millennium Water Alliance, Goal Kenya, World Vision Kenya, CARE International Kenya, Plan International and PSI-Kenya. These organisations are involved in activities including the promotion of behaviour change and personal hygiene practices, and health education; demand creation; sanitation marketing and communication; promotion of affordable and appropriate sanitation technologies; capacity building and training; sanitation rights awareness campaigns, community mobilisation; and policy advocacy and influencing including lobbying for increased government investment in urban sanitation.

5 Financing arrangements for urban sanitation

5.1 Government and international transfers

The Ministry of Health estimates that public funds for sanitation represent only 0.2% of Kenya's GDP every year.²⁹ In comparison, the eThekweni Declaration and the Ngor Commitment (to which Kenya is a signatory) is for public expenditure on sanitation to reach 0.5% of GDP.

The absence of a coordinated financing strategy hinders accelerated progress towards improved sanitation services. The main funding streams for urban sanitation in Kenya are as follows:

- Central government funding channelled from the Treasury to the relevant ministries, departments and national agencies (including the WSBs), including Health, Water and Environment;
- County funds, sourced from central government transfers or own revenues: counties have full discretion over the use of these funds as there are no earmarked funds for sanitation and counties do not have specific expenditure targets regarding sanitation; only 11 counties (out of 47) specifically referred to sanitation in their health, water or environmental budget lines. Most counties lacked budget codes for sanitation in 2013/2014;³⁰
- International transfers from donors to the central government, WSBs and WSPs; and
- International transfers from donors (and international NGOs) for off-budget projects implemented in counties.

Although a Sector Wide Approach (SWAp) was launched in 2006 to provide a unified financing framework based on a sector investment plan, financing for the water and sanitation sector remains fragmented. The SWAp has provided a useful platform for discussing sector issues, but harmonisation and alignment still need to be improved in practice.³¹

The lack of a viable sector investment plan that would provide a common strategy for all sector funders accounts for the lack of engagement in the SWAp. Most financing strategies developed for the sector have focused on sewerage improvement. The National Water Master Plan 2030 (developed in 2013) estimated that USD 5.2 billion would be required to build and rehabilitate urban sewerage infrastructure between 2013/14 and 2030/31, excluding operation and maintenance. Considering that only about USD 0.725 billion (6.5% of the needed resources) would be available from domestic resources, the shortfall to finance urban sewerage would be USD 4.675 billion.³² A Draft Water Sector Investment Program was prepared in 2011, estimating that about KES 849 billion (USD 8 billion) would be required to meet the sanitation targets by 2030 with about KES 368 billion (USD 3.4 billion) required to fund urban sanitation specifically (with 97% of the investment channelled to sewerage infrastructure). While it may take time to increase the current levels of investment to meet the sector development targets, a sharp increase in national and county budget allocations for capital investments in sanitation is necessary if the constitutional obligation of the government to ensure universal access to improved sanitation is to be realised. There will, however, be a need to strengthen the institutional and absorptive capacity of urban sanitation authorities including public utilities and sector institutions to avoid underutilisation of approved budget.³³

²⁹ Ministry of Health 2016

³⁰ Ministry of Health 2016

³¹ AMCOW 2011

³² Ministry of Environment, Water and Natural Resources 2013

³³ World Bank 2016b

Overall, sanitation has remained a low investment priority area due to institutional fragmentation, leading to a lack of coordination in carrying out investments. Both the Ministry of Health and the Ministry of Water have responsibility for sanitation, but targets and strategies appear to be disjointed: while the Ministry of Health and the KESHP recognise faecal sludge management as a key component of the sanitation strategy, the Ministry of Water has focused on sewerage infrastructure, which does not appear to be a realistic solution for universal coverage in the short or medium term.

A Water Services Trust Fund (WSTF) was established under the Water Act 2002. WSTF is a basket fund set up to channel funds for pro-poor water and sanitation projects. Funding is disbursed through three windows: rural, urban and water resources. By the end of 2014, the WSTF had raised a total of KES 7.8 billion (USD 73.7 million) and disbursed KES 5 billion (USD 47.2 million) for water resources, water supply and sanitation services. At least USD 18.4 million has been allocated to pro-poor urban sanitation as part of the Upscaling Basic Sanitation for the Urban Poor (UBSUP) programme funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) through the German Development Bank (KfW) and the Bill and Melinda Gates Foundation (BMGF) (Box 6)³⁴. With the 2016 Water Act, the Fund has been renamed the Water Sector Trust Fund.

It is important to note that the KESHP recognises the need to leverage funds for sanitation from domestic sources, including from county governments. Counties should actively identify and pursue local sources of funds to subsidise services where full cost-recovery is not a foreseeable option (Box 5).

Box 5: Leveraging local sources of funds for sanitation

According to the policy, where full direct cost recovery is not possible, the shortfall in the cost of any services should be subsidised by the county governments from additional revenues generated in other sanitation services or from other revenues of the county government. To this end, the county governments shall actively pursue the establishment of systems to generate sustainable revenues to cover the costs of sanitation services. This activity shall be treated as a major factor for achieving sustainability where the services can be designed to earn revenue. Among options to be considered are the inclusion of an element to cover environmental sanitation in other fees, rates or other charges levied by the county governments; direct levies on producers of pollutants, especially non-biodegradable pollutants such as plastics; and the use of a reasonable proportion of national transfers to subsidise the cost of sanitation services, especially for marginalised areas within counties and poor urban neighbourhoods such as slums and informal settlements. Subsidies, where they exist, shall be transparent, effective and equitably applied. The policy therefore provides grounding for the establishment of sanitation surcharges to be added to water bills (at least for better-off customers).

Source: Ministry of Health 2016

It is estimated that USD 1 billion has been granted to the country as Official Development Assistance (ODA) for water and sanitation since 2000.³⁵ The major development partners in the urban sanitation sector include KfW, GIZ, the World Bank, the African Development Bank, Agence Française de Développement (AFD), the Swedish International Development Cooperation Agency

³⁴ Schröder 2016

³⁵ Data obtained from Organization for Economic Co-operation and Development website OECD Stat, <http://stats.oecd.org/index.aspx?DataSetCode=CRS1#>, extracted on 26 Jan 2017.

(Sida), and BMGF. Several are involved in the provision of technical assistance to the government. The formulation of a new policy for sanitation and hygiene was supported by the World Bank's Water and Sanitation Program (WSP) (see Box 6).

Numerous international NGOs and not-for-profit organisations are active in Kenya and aim to support the government in implementing its policies, including through testing innovative approaches.

Box 6: Main donor-funded pro-poor sanitation programmes

KfW, GIZ and BMGF through the WSTF (2011-2017). With an overall allocation of USD 18.4 million for urban sanitation (50% funded by BMZ and 50% funded by BMGF), Upscaling Basic Sanitation for the Urban Poor (UBSUP) is the largest pro-poor sanitation programme in Kenya. The programme, also known as "Safisan", aims to provide sustainable sanitation services to 400,000 households in low-income areas. Safisan channels grant funding through the WSTF (which has the specific mandate to fund water and sanitation improvements for the poor) to Kenyan utilities for the extension of sanitation services in low-income areas. The Fund launches calls for proposals once or twice a year and all utilities in the country are eligible to respond. All funded projects include similar components:

- **Demand creation:** Some demand should be identified at proposal stage; following the grant approval demand is created through intensive social marketing activities promoting toilets "door to door". Local consultants or civil society groups (social animators) are contracted and trained by the utility.
- **Toilet construction:** Landlords receive an ex-post partial subsidy for toilet construction from the utility; landlords can choose from available technologies (the toilet is designed for use by up to ten tenants); local craftsmen are hired directly from the landlord but are supervised by the utility.
- **Completion of toilets and payment to landlord:** Landlords receive a fixed amount of KES 20,000 (USD 189) per new toilet or KES 15,000 (USD 142) per rehabilitation; the partial reimbursement is released upon completion of construction works and quality control procedures.
- **Development of sanitation chain:** The utility identifies, trains and equips local entrepreneurs to empty toilets (in the case of urine diverting dry toilets) or to service septic tanks.

The Fund also finances the construction of decentralised treatment facilities to be owned and managed by the utilities. As of April 2016, UBSUP had supported the expansion of sanitation services in more than 23 low-income areas. About 74% of toilets have septic tanks and 24% were connected to the sewerage system.

The World Bank GPOBA programme for urban sanitation (2014-2018). The USD 11.8 million project (of which 30% is expected to be allocated to sanitation) supports WSPs to increase investments to serve low-income areas. With regard to sanitation, WSPs can invest in sewage treatment and distribution works and public toilets where WSPs have the mandate to build and service such facilities. An estimated 5,000 people will benefit from sewer connections and 10,000 from public toilet facilities. As of 2016, the project was experiencing serious difficulties, but was making progress towards its targets: it is addressing both systemic and operational issues associated with delivering services in slum areas, e.g. vandalism, indiscriminate disposal of solid waste into the sewer system, inadequate involvement of communities and households, lack of awareness etc. The initiative is likely to bring valuable lessons to the sector.

World Bank-funded Water and Sanitation Service Improvement Project (2012-2017). This large project (USD 427 million) focuses on conventional water supply and sewerage systems but also aims to extend services in low-income areas. As part of the project, a randomised control trial was commissioned to test how subsidising the cost of connecting to the sewer system and providing information about the health benefits of improved sanitation affects the number of landlords who connect to the sewer system.*

Source: Schröder 2016 and World Bank 2014b.

*Galiani & Gertler <https://www.povertyactionlab.org/evaluation/demand-sanitation-kenyan-urban-slums>

5.2 Tariffs

There is limited data on household expenditure on sanitation and the overall funds raised in Kenya through urban sanitation tariffs: this section is therefore limited to presenting the type of tariffs paid by users and qualified assessments on service affordability. Tariffs for urban sanitation are currently raised through user (households, public institutions and businesses) fees to acquire sanitation facilities, use public toilets, connect to and use the sewerage system and use emptying services for those who rely on onsite services. Other sources of revenue from tariffs include fees paid by service providers at faecal sludge disposal points.

Toilet construction or installation. The latest official estimates indicate that the cost of a single pit latrine ranges from KES 25,000 (USD 250) to KES 60,000 (USD 600) depending on the type and quality of the latrine.³⁶ With a typical household living in an informal settlement earning an approximate monthly income of about USD 150 per month, most cannot afford to construct their own latrines.³⁷ However, it is also important to note that a majority of poor urban dwellers live in rented housing where the responsibility of installing a sanitation facility is considered to lie with the landlord.

Shared toilet use. The cost of using shared facilities is usually included in the monthly rent paid by tenants to their landlord.

Public or community-operated toilet use. The use of community operated toilets often requires a monthly fee averaging between KES 30 (USD 0.28) and KES 50 (USD 0.47). Access to public toilets can also be paid on a pay as you go basis; the price usually ranges between KES 5 (USD 0.04) and KES 20 (USD 0.19) depending on the operator. The tariff includes tissue paper, and the use of the hand washing facility with soap. There is little disparity in public toilet tariffs between different towns in Kenya.

Sewerage connection tariffs. The official policy for sewerage tariffs is embedded within the Water Act (2002 and 2016), which states that service providers may be licensed to impose a sewerage services levy on all water services. In Nairobi, Mombasa and other urban centres, the cost of sewerage is charged at around 75% of the water billed for all customers with a sewer connection. Domestic customers with no water connection but connected to the sewer system in Nairobi are billed at KES 200 (USD 1.9) per month flat rate, while Mombasa Water and Sewerage Company (Mowasco) charges KES 300 (USD 2.8).³⁸ The two utilities charge KES 5,000 (USD 50) for new sewer connections to residential houses.

Faecal sludge emptying services and dumping fees. The amount paid for faecal sludge services differs from one urban area to another.³⁹ While manual emptiers exist, most have not been licensed and operate illegally. Gasia Poa (a small business specialised in pit emptying, see section 4.2 above) charges between KES 9,000 (USD 85) and KES 15,000 (USD 142) depending on the volume of sludge emptied. Vacuum trucks operators charge different rates, depending on the location:

³⁶ Ministry of Water and Irrigation 2005

³⁷ World Bank 2015

³⁸ Data on tariffs obtained from the companies' websites at <https://www.nairobiwater.co.ke/index.php/en/watertariffs> and <http://www.mombasawater.co.ke/index.php/customer-care/water-and-other-services-tariffs>

³⁹ Mwangi, Nzainga, Muvelah & Kiogora 2011

- In Kisumu, both individual households and commercial premises pay about USD 52 per trip for mechanical emptying services. KIWASCO charges USD 434 per truck per annum as a dumping fee.
- In Mombasa, emptying tariffs range from USD 108 to USD 205 depending on the truck size and whether it is a commercial premise or an individual household. Trucks are usually charged at USD 10.87 per trip as a dumping fee.
- In Nairobi, emptying fees range from USD 70 to about USD 108 depending on the client and type of facility. Trucks are charged about USD 2 per trip as a dumping fee. Licensing fees for exhausters are set by Nairobi City Water and Sewerage Company (NCWSCO) at USD 50 per month per truck.

6 Key barriers to developing pro-poor urban sanitation services

The findings detailed above highlight some of the key barriers to developing pro-poor urban sanitation services in Kenya. These challenges can be summarised as follows:

Inadequate capacity. Institutional capacity (in terms of staff numbers and skills) is not adequate to meet the needs of the sector. Although counties are responsible for ensuring sanitation services, there is no technical assistance provided by the central government for improved planning, budgeting and implementation. Service providers also lack knowledge and skills to provide adequate sanitation services. Many service providers operating informally – including artisans and pit emptiers - lack the necessary business management skills to develop successful sanitation businesses.

Inadequate sector financing. While funding in the water and sanitation sector has increased in recent years, only a small proportion has been directed towards pro-poor sanitation. This trend also applies to WSBs and WSPs who have focused their investment on water projects rather than sanitation services. Available finance is usually allocated to sewerage infrastructure for the benefit of a fraction of the urban population.

Inadequate planning for sanitation at national and county level. The lack of a clear mechanism for planning, monitoring and coordinating investments in sanitation is a major bottleneck to progress. At the national level, the development of a national sanitation and hygiene investment plan has been pending for a long time. At local level, counties have difficulties in allocating and appropriating budgets on sanitation activities due to a lack of assigned budget codes.

Lack of enabling legal and institutional frameworks for FSM. The sector lacks a proper institutional strategy for expanding sanitation services to informal settlements and for developing faecal sludge management due to a fragmented legal and regulatory environment for sanitation. There is no coherent regulatory framework defining a set of normative principles and institutional and regulatory structures for sustainable sanitation: related laws are scattered in various legal instruments, and multiple institutions (including counties, WSPs and WSBs) have mandates for sanitation. This is reflected in the lack of a regulatory framework for small scale service providers, who play a critical role in filling the gap where public service providers have failed. While manual pit emptying is considered illegal by several local authorities, there are no regulations for mechanical emptying and FSM services in Kenya. The 2016 KESHP recognises the above challenges and provides for the development of appropriate policy guidelines and standards, regulation and enabling institutional arrangements to address them, but these remain to be developed.

Insufficient data. Information on the sanitation sector in Kenya is insufficient or out-dated in many areas, including population data, mapping of current levels of service provision, revenue streams and consumer demand. This lack of data limits effective planning and the efficiency of service provision, particularly to low-income areas where the information gap is greatest.

Characteristics of informal settlements. Informal/unplanned settlements are characterised by high population density and limited space, making some areas inaccessible to sewer systems and/or exhauster tankers. The settlements are also characterised by unclear ownership and insecure land tenure patterns which drive down demand for sanitation facilities.

Lack of political prioritisation. The sanitation sector still suffers from a lack of visibility and political champions (except in Nakuru County where the County Governor has been declared a sanitation champion). As a result, strong policies have not translated into increased investment in urban sanitation, let alone in pro-poor urban sanitation improvements.

7 Sector trends

Despite the above challenges, recent trends, events and initiatives have the potential to bring substantial positive changes to the sector.

Buzzwords. The urban sanitation sector is filled with concepts and buzzwords which indicate the approaches, strategies and priorities of policy and decision makers. The most common buzzwords and concepts currently used by practitioners, service providers, researchers and development partners include: pro-poor services; low income urban settlements; informal settlements; sanitation value chain; sanitation marketing; faecal sludge management; resource recovery; 3Rs (reuse, recycle and recovery); subsidies; social enterprise; universal access; human centred design; appropriate technology options; social connection policies; to (at) scale; sustainable sanitation financing; market based sanitation services; public private partnerships; rights based approaches; claiming rights; mandated institutions; devolved sanitation services; decentralised services; cost-effective services; affordable services; allocative efficiency; trunk infrastructure; performance-based approaches; social inclusion; equity; and Output-based Aid (OBA).

The new policy framework. Kenya's dedicated Environmental Sanitation and Hygiene Policy and Strategic Framework has clearly articulated a national vision and targets for sanitation. It provides a comprehensive framework, which has integrated lessons from best practices. For example, the policy recognises a wide range of technologies, from low-cost technologies (or "service-based" technologies such as toilets with cartridges) to sewerage. This enables county governments and development partners to roll-out different options tailored to the needs of urban residents. The policy also emphasises the need to allocate funds to sanitation from different sources, including counties' own revenue, and to address the whole of the value chain.

WSPs' increased involvement in non-networked sanitation. The Safisan project and other projects focused on developing WSP's onsite sanitation services show that WSPs can be attracted to serve low-income areas, provided 1) the business models involved can generate profits; and/or 2) financial incentives are provided in the form of grants. As professional water operators, WSPs can potentially offer solutions for improved sanitation services.

8 Opportunities for influencing the urban sanitation sector

Based on the above findings, the authors suggest the following research opportunities for generating evidence for pro-poor urban sanitation services:

- Research on 1) the cost of delivering sanitation services in selected counties, and 2) the share that should be covered by public institutions, in order to provide an advocacy basis for increased funding allocation;
- In line with the above, identify the total funds allocated to sanitation from different financing sources (taxes, tariffs and transfers) in research analogous to the TrackFin exercise led by the World Health Organization (WHO) in countries including Ghana, Mali and Madagascar;
- Research current planning and budgeting processes and practices for urban sanitation in selected counties, and formulate recommendations for improvements. These recommendations could feed into national guidelines for planning and financing of urban sanitation services for low income urban areas;
- Identify factors of demand for improved sanitation services, with a focus on women's current and potential future role in the decision-making process for household-level investments;
- Identify the barriers PSP in urban sanitation services, looking particularly at current costs incurred by service providers in tax compliance and licensing fees;
- Together with other sector actors (including the ministries concerned and development partners), assess current strategies for incentivising WSPs and SMEs to provide pro-poor sanitation services, including through tax-based incentives (tax breaks) and output-based grants;
- Conduct a baseline study on the approaches, practices, opportunities and barriers to the provision of market-based sanitation solutions for informal settlements in Kenya.

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