WSUP | Water & Sanitation for the Urban Poor

Situation analysis of the urban sanitation sector in Ghana

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Executive summary

Ghana is a fast-growing economy that has made notable progress in reducing poverty.

A country of 27.4 million, Ghana is a lower middle-income economy where GDP growth has been fuelled by the discovery of off-shore oil in 2007. Industry, including crude oil, cocoa and mining, accounted for 49% of GDP in 2013. The recent drop of commodities' prices created a large fiscal deficit and slowed economic growth. Ghana's national level of monetary poverty fell by more than half (from 56.5% to 24.2%) between 1992 and 2013. Urban poverty is generally lower than in rural areas (10.6% versus 37.9%). Economic disparities persist between the north and the richer south. Although the country has made good progress in reducing gender inequalities in various sectors, women generally have limited decision-making authority. The country is hailed as one of the most stable democracies in Africa. Elections held in 2016 brought to power the leader of the New Patriotic Party, Nana Addo Dankwa Akufo-Addo.

Ghana is a decentralised country, with 216 Metropolitan, Municipal, and District Assemblies (MMDAs) that are local government authorities. There are currently six Metropolitan Assemblies, including Kumasi, Cape Coast, Accra, Tema, Tamale and Sekondi-Takoradi (agglomerations of 250,000 or more). MMDAs have autonomy for planning and budgeting, based on local priorities and guidelines provided by the National Development Planning Commission (on planning) and from the Ministry of Finance (on budgeting and expenditure reporting). The main source of funds for MMDAs is central government transfers, sourced from different funds and Internally Generated Funds (IGF).

Urban infrastructure has not kept pace with cities' expansion and high levels of rural-urban migration.

Ghana is one of the most urbanised countries in Africa: an estimated 53% of the population lived in towns and cities in 2014. Recent urban growth has consistently averaged 3.5%, with some cities experiencing higher levels of growth (4.8% in Kumasi). Urban boundaries are still being shaped and districts and new municipalities continue to be created. The largest cities in Ghana are Kumasi (1.8 million), Accra (1.7 million), Sekondi-Takoradi (632,000) and Tema (310,000).

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Slum areas are part of the urban landscape in Ghana. In Accra, slums are situated within and around the city's current boundaries where peri-urban areas were absorbed by the city's expansion. Slum areas are characterised by high population density and lack of basic services: entire families live in single rooms in "compound houses" that often lack sanitation facilities and water supply. Although poverty is a common feature of many slum residents, income levels vary.

Only a fraction of urban residents use improved sanitation facilities as per the JMP definition, but transport and treatment services are developing.

The vast majority of urban residents (73%) rely on shared sanitation facilities that can be either compound toilets (shared by a few households) or public toilets (usually fee-paying and accessible to all). The JMP estimates that only 20% of urban residents have individual improved facilities. Open defecation is practiced by 7% of urban dwellers. Most toilet facilities (including individual toilets) are onsite technologies. Sewered facilities serve a small fraction of urban residents. Only three main cities have a sewerage network: Accra, Tema and Kumasi. In Accra, there are only 1,100 connections. Tema reports about 23,000 official connections to the sewer system.

Faecal sludge management services (related to onsite sanitation facilities) are beginning to develop. Municipalities, together with private operators, increasingly offer emptying services, in the form of mechanical suction and manual collection. However, treatment services remain inadequate: in Accra and Kumasi, an estimated 72% and 43%, respectively, of the sludge produced ends up untreated in the environment or the sea.

Well-developed legal, policy, and strategy frameworks exist but need to be fully implemented.

Until 2016, the water and sanitation sectors in Ghana had been characterised by a clear divide between institutional responsibilities for water and sanitation services. Water services fell under the responsibility of the Ministry of Water Resources, while sanitation was under the Environmental Health and Sanitation Directorate (EHSD) of the Ministry of Local Government and Rural Development (MLGRD). EHSD was in charge of policy formulation and implementing national level activities. Within MLGRD, the Office of the Head of Local Government Service (OHLGS, formerly Local Government Service Secretariat) has the responsibility to ensure local authorities are staffed with the qualified personnel and to provide the relevant capacity building for staff to deliver on their mandate. Regulatory functions were shared by EHSD, Ghana Environmental Protection Agency (EPA) and the MMDAs, under the oversight of the Ministry of Environment, Science and Technology (MEST).

Soon after his election in December 2016, President Nana Akufo-Addo announced the creation of a Ministry of Sanitation and Water Resources, among other reforms. As of January 2017, consultations were still taking place to determine the implementation modalities of these reforms.

At local level, MMDAs have the responsibility to implement the sanitation policy and strategy. Metropolitan and Municipal Assemblies (MMAs), which have large urban areas, have set-up Waste Management Departments. All MMDAs usually have Environmental Health Units. Service providers include MMDAs themselves; although the policy states that services should be delegated to private operators, many MMDAs remain involved in service provision, usually public toilet management. Private sector provision is developing. In Accra and Kumasi in particular there are over 100 privately-operated vacuum trucks registered with the two assemblies. Such services are not appropriate for low-income areas that large trucks cannot access. Donor-supported initiatives include business models for alternative and decentralised sanitation technologies involving social enterprises. One such enterprise is Clean Team in Kumasi (supported by WSUP): this business offers portable toilets for rent and associated maintenance services, including emptying. The model has yet to scale up, however. NGOs are also involved in service provision, mainly through hygiene promotion and sanitation marketing activities.

Sanitation has not been a public funding priority and households bear the bulk of the costs.

TrackFin, which Ghana has been implementing since 2014, provides indicative figures on public expenditure on sanitation. It estimates that domestic public expenditure on sanitation (excluding households) amounted to GHS 49 million (USD 11.3 million) in 2014. By comparison, Ghana's commitment to the Sanitation and Water for All High Level Meeting was to allocate 0.5% of GDP (at least USD 150 million per annum) to sanitation. The bulk of national expenditure (USD 466 million) came from households, mostly for expenditure on pay-per-use public toilet facilities.

In recent years, donor funding for urban sanitation has increased. The World Bank is supporting the Government of Ghana to implement a sanitation project (with a faecal sludge management component) for low-income areas of Accra. The Dutch Embassy is also supporting a number of urban sanitation projects. Most donor-funded interventions have so far focused on large cities with populations of over 200,000. In line with Ghana's policy, recent programmes give prominence to private sector participation. However, donors are testing multiple and sometimes conflicting approaches. For example, the World Bank and the Dutch Embassy have been supporting the provision of indirect and direct subsidies to households, while other donors are relying on software approaches only, such as urban CLTS.

From lack of prioritisation to insufficient demand and limited supply, barriers to developing pro-poor sanitation services remain significant.

Sanitation has been at the bottom of the government's priorities, whether at national level or local level. Perhaps this lack of prioritisation (and therefore inadequate funding) mirrors insufficient demand among urban residents for improved services, partly due to an entrenched reliance on and acceptance of public toilets. A major hurdle to overcome is the high cost of improved facilities in urban areas, which ranges from USD 230 to USD 1,000 depending on the technology. However, alternative, cost-effective and decentralised solutions still need to gain buy-in from policy makers. More research on factors of demand is needed in order to inform policy going forward, including investment costs, the role of women and vulnerable groups in influencing decisions, and the potential of innovative low-costs solutions.

Contents

Acronyms and abbreviations	5
Acknowledgements	5
Background	5
1 Country context	6
1.1 Socio-economic context	6
1.2 Political context	6
1.3 Commitment to development and to pro-poor services	7
1.4 Administrative set-up and decentralisation level	7
2 Access to urban sanitation services	10
2.1 Urbanisation situation	10
2.2 Slum characteristics	11
2.3 Access to basic sanitation	11
2.4 Access to transport and treatment services	12
3 Legal and policy framework for urban sanitation	14
4 Institutional arrangements for urban sanitation	15
4.1 National and local level institutions	15
4.2 Service providers	17
5 Financing arrangements for urban sanitation	21
5.1 Government and international transfers	21
5.2 Tariffs	23
6 Key barriers to developing pro-poor urban sanitation services	25
7 Sector trends	27
8 Opportunities for influencing the urban sanitation sector	29
9 Bibliography	30

Acronyms and abbreviations

AMA	Accra Metropolitan Area
CLTS	Community-led Total Sanitation
CONIWAS	Coalition of NGOs in Water and Sanitation
DACF	District Assemblies Common Fund
DESSAP	District Environmental Sanitation Strategy and Action Plan
EHSD	Environmental Health and Sanitation Directorate
EPA	Ghana Environmental Protection Agency
GHS	New Ghana Cedi
GSGDA	Ghana Shared Growth and Development Agenda
IGF	Internally Generated Funds
LGPCU	Local Government Project Coordinating Unit
MESTI	Ministry of Environment, Science, Technology and Innovation
MMAs	Metropolitan and Municipal Assemblies
MMDA	Metropolitan, Municipal, and District Assemblies
NDPC	National Development Planning Commission
OHLGS	Office of the Head of Local Government Service
PPP	Public-Private Partnership
PSP	Private Sector Participation
WASH	Water, sanitation, and hygiene

Note: 1 Ghanaian New Cedi (GHS) = USD 0.023 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 Ghana 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

Ghana is a West African country with a population of 27.4 million and one of the fastest growing economies in Africa.[1] Ghana's GDP growth averaged 7% per annum in the ten years to 2013, partly fuelled by the discovery of important off-shore oil reserves in 2007. Since 2010, the country has belonged to the lower middle-income group of countries, as per the World Bank classification. Agriculture and services each accounted for nearly a quarter of GDP in 2013. Industry (including crude oil, cocoa and mining) accounted for 49% of GDP.[2]

As such, Ghana's economy is affected by global fluctuations in commodity prices. The drop of gold and cocoa prices (the country's two main export commodities) and the 2014 oil price crash (which reduced oil revenues by half) have led to an increase in government borrowing in 2014/2015, creating a large fiscal deficit. Economic growth contracted to less than 4% in 2014/15; but IMF loan packages are expected to help Ghana return to strong growth from 2017. At the same time, the transition to middle-income status has been accompanied by a reduction in aid inflows from OECD countries in absolute and proportional terms, from a peak of 16% of GNI in 2004 to just over 3% in 2014.[3]

Economic development did translate into fast poverty reduction, but inequalities increased (although Ghana fares better than other countries in the Gini index).[4] Between 1992 and 2013 Ghana's national level of monetary poverty fell by more than half (from 56.5% to 24.2%).[5] Households in urban areas have a much lower average rate of poverty than those in rural areas (10.6% versus 37.9%). At the regional level, the Northern, Upper East, and Upper West regions continue to have the highest poverty rates. The Northern region now makes up the largest number of poor people of any of Ghana's ten regions (1.3 million). The highest levels of inequalities are within some regions of the country. The Upper West region has the highest level of inequality in the country and the largest increase in inequality since the 1990s. The lowest level of inequality is found in the Greater Accra region. This means that some districts, communities or groups of people in certain regions, especially in the North, are being left behind and are missing out on recent economic growth.[6] Ghana is also making slow progress in reducing gender inequalities. Although women represent nearly half of the workforce (with a female to male labour participation rate of 94%), women's voice in public life and decision-making remains generally undermined: only 10% of seats in Parliament are held by women (compared with an average of 20% for similar middle-income countries).[7]

1.2 Political context

Ghana is hailed as one of the most stable democracies in Africa. The country is a multi-party parliamentary democracy headed by a president elected for a four-year mandate. The 2016 elections brought to power the leader of the New Patriotic Party (the opposition party during the previous

[1] World Bank, World Development Indicators 2015
[2] Ghana Statistical Service 2014
[3] World Bank 2015
[4] The Gini index is a measure of income inequalities. When ranking Sub-Saharan countries according to the average Gini index over the last 20 years, Ghana occupies the bottom 20% of the Gini distribution and its index is amongst the lowest of rapidly growing African economies (Clementi, Molini & Schettino 2016).
[5] Ghana uses two poverty lines: an upper one, below which an individual is considered to be unable to meet all their food and non-food needs, and a lower poverty line, below which an individual is considered unable to even meet their food needs. The upper poverty line is set at GHS 1,314 (USD 306) per adult per year for 2013, and households below it are simply referred to throughout this paper as living in poverty. The lower poverty line is set at GHS 792 (USD 185) per adult per year, and households below it are referred to throughout as living in extreme poverty.
[6] Cooke, Hague & McKay 2016
[7] World Bank, Gender Data Portal: Ghana, World Bank Data, 2017, http://datatopics.worldbank.org/gender/country/ghana

mandate), Nana Addo Dankwa Akufo-Addo. The other main political parties are the National Democratic Congress (of the defeated President John Dramani Mahama), the People's National Convention, the Progressive People's Party and the Convention People's Party.

Ghana's political framework is affected by clientelism, which can be based on ethnic origins, family ties, political party allegiance and religion. The main ethnic groups are the Akans (the largest group, representing 48% of the population), the Mole-Dagbani (originally from the North, representing 17%), the Ewe (mostly in the southeast, 14%) and the Ga-Dangme (7%).[8] Even in multi-ethnic slums (such as Nima in Greater Accra), ethnic clustering remains a reality. Historically, family lineage (sometimes in contrast to the performance of government) has also been a decisive factor in the selection of leaders, including at local levels. Christianity has emerged as a powerful force in Ghanaian politics (over 70% of Ghanaians consider themselves Christians). Finally, while local assembly members are formally apolitical - the Local Government Act (Act 462) states that district assembly elections are non-partisan in nature - members have close ties to political parties.[9]

1.3 Commitment to development and to pro-poor services

Ghana's development objectives are expressed in long-term and medium-term development plans. The government is currently implementing the Ghana Shared Growth and Development Agenda (GSGDA) II for the 2014-2017 period. The National Development Planning Commission (NDPC) leads the preparation of the country's development plans. GSGDA II recognises sanitation as a key national development issue (Box 1).

The government is also holding consultations for the preparation of the Long-Term National Development Plan (LTNDP) for 2018-2057. Addressing rapid population growth and urbanisation through improved service delivery and urban planning are likely to be at the heart of the new LTNDP.[10] Although the development of "pro-poor" services is not explicitly targeted, the forthcoming long-term development plan acknowledges the need to build safe, well-planned and sustainable communities. It explicitly recognises the need to enable equitable access to basic services (including sanitation) and to address slums' poor environment. However, as the LTNDP was being drafted under a previous government, there is a risk that the government elected in 2016 could halt the process.

1.4 Administrative set-up and decentralisation level

Ghana has ten administrative regions and 216 local authorities with fiscal, legislative, and political autonomy. Since the promulgation of the Local Government Act in 1993, Ghana is actively engaged in a devolution process. Local authorities in Ghana are known as Metropolitan, Municipal, and District Assemblies (MMDAs). Depending on their population size, local authorities are:

- Metropolitan Assemblies (population over 250,000);
- Municipal Assemblies (population over 95,000); or
- District Assemblies (population over 75,000).

There are currently six Metropolitan Assemblies (Kumasi, Cape Coast, Accra, Tema, Tamale and Sekondi-Takoradi), 49 Municipal Assemblies and 161 District Assemblies. As the country defines urban areas as agglomerations of 5,000 or more, all 216 districts include urban (or urbanising) areas.

[8] Ghana Statistical Service 2015a
[9] Awal & Paller 2016
[10] National Development Planning Commission 2016

Box 1: Sanitation in Ghana's medium-term development plan

Sanitation in GSGDA II (2014-2017) is broadly understood as "environmental sanitation", referring to solid waste as well as industrial and household waste (e.g. liquid waste and grey water). GSDA II recognises that only marginal gains have been achieved with regard to sanitation over previous years. It recognises the total economic cost of natural resource degradation and poor environmental management including poor sanitation (estimated at 10% of GDP at least). It specifically highlights poor sanitation in coastal areas, calling for the following strategies to be implemented: increasing resource allocation for the implementation of Environmental and Sanitation plans in coastal districts; enhancing institutional capacity to enforce the regulations and guidelines on waste discharges; conducting community scale water supply and sanitation training and assessment of needs for individual and public supply points and sanitation facilities; strengthening the regulatory environment to provide sufficient deterrent for sanitation and pollution offences; and increasing investment in infrastructure for waste management through Public-Private Partnerships (PPPs).

Source: National Development Planning Commission 2014

All MMDAs have the same political structure: they are headed by a Chief Executive and are governed by elected assemblies. Their roles and functions are presented below:

- District Chief Executives are responsible for the executive and administrative functions of the district assembly. The newly elected government has promised to make the position of Chief Executive of the MMDAs an elected office. To date, Chief Executives are appointed by the President of Ghana (with approval from the District Assemblies by at least two-thirds of Assemblies' representatives), and they are the representatives of the central government in the district;
- District Assemblies are elected by universal vote every four years. Assembly members are elected for each electoral area and form the Local Assembly for each MMDA. They have the mandate to advise the Chief Executives on key areas such as development planning and social services. They also pass by-laws and approve expenditure of the MMDA. They are required to meet a least three times a year. Elected members form two-thirds of the Assembly members and the president appoints an additional third.

In addition, each MMDA is sub-divided into zonal councils, with no legislative power, representing urban, small towns and rural areas within the districts. Some members of the zonal councils are appointed by the President and others are elected.

MMDAs have autonomy for planning and budgeting, based on local priorities and guidelines provided by the National Development Planning Commission (on planning) and from the Ministry of Finance (on budgeting and expenditure reporting). Each MMDA is required to prepare a four-year MTDP. The MTDP provides the basis for annual plans (also known as annual "action plans"), which can be reviewed every year based on evolving circumstances and priorities. As of January 2017, the national planning guidelines did not refer to planning for liquid waste sanitation. Each district is required to prepare a District Environmental Sanitation Strategy and Action Plan (DESSAP) (see section 4 below), but these usually focus on solid waste management.

The main sources of funds for MMDAs are central government transfers, sourced in different funds and Internally Generated Funds (IGF) (Box 2). Overall, IGF currently amount only to 10% of MMDAs' revenues. The District Assemblies Common Fund (DACF) is the most important source of funds, transferred by the central government to MMDAs to cover running costs as well as investments. In practice, DACF disbursement is often unpredictable and central government deductions (for various other activities) represent a huge loss for MMDAs, which limit MMDAs' capacity to execute planned projects.

Box 2: Central government transfers to local authorities

Transfers from the central government to MMDAs are sourced from three main funds:

- **The District Assembly Common Fund (DACF):** under the Constitution, the DACF should receive at least 7.5% of national revenue. Funds are shared among all District Assemblies based on a formula approved by the Parliament, including indicators on health, education, water (excluding sanitation) services and tarred road coverage. In 2013 and 2014, about 50% of the DACF were allocated as "direct transfers" with District Assemblies, which retained full discretion over the funds' usage. In this case, funds are transferred to District Assemblies' bank accounts via the Bank of Ghana based on instructions from the DACF's administrator. The DACF also provides "indirect funding" whereby MMDA-procured goods and services are paid from the DACF to the supplier on MMDA request. DACF transfers represent the largest source of funds for MMDAs.
- **The District Development Fund (DDF):** the DDF is mainly a donor basket fund (80%). The DDF provides two types of grants (1) a Capacity Building Grant which is unconditional and distributed evenly to all MMDAs every year. It is supposed to be used for capacity building activities such as training, workshops, conferences and essential office equipment; (2) an Investment Grant, which is allocated based on performance and meant for construction and major rehabilitation works. Performance assessments have taken place since 2008 for all MMDAs with 2006 performance as a baseline. The assessment is conducted by independent consultants and uses a Functional and Organisational Assessment Tool (FOAT) to evaluate if the MMDA has met the minimum standard on eight criteria related to administrative practice, such as financial management, procurement, records management etc. The results of the FOAT are made public.
- **The Mineral Development Fund:** Funds are transferred based on a fixed percentage of the mineral royalties collected by the central government. The allocation to a district or a traditional authority (the two entities overlap) is based upon the tax revenues of the mining entities operating within that district or authority.

MMDAs also perceive **Personnel Emolument and Administration Charges Payments** to cover the cost of some staff of the MMDAs and the Traditional Councils, who are on the central government payroll.

Sources: http://www.commonfund.gov.gh/ and Certan, Ronsholt, Mackie & Hegbor 2013

2 Access to urban sanitation services

2.1 Urbanisation situation

Ghana is one of the most urbanised countries in Africa. An estimated 53% of the population lived in towns and cities in 2014.[11] An estimated 53% of the population lived in towns and cities in 2014.[12] The country has urbanised rapidly: since 1984, the urban population has increased from four to 14 million, with an estimated 37.9% of urban dwellers living in slums. Recently, urban growth has consistently averaged 3.5%, with some cities experiencing higher levels of growth (4.8% in Kumasi, for example).

The regional capitals of the 10 regions are the most populous cities in each region. Cities' boundaries are constantly evolving. In 2000, the Greater Accra Metropolitan Area consisted of three districts, namely the Accra Metropolitan Assembly, Tema Municipal Assembly and the Ga District Assembly. The three assemblies were sub-divided on three occasions, in 2003, 2008 and 2012. In 2017, Greater Accra consisted of twelve assemblies made up of two metropolitan assemblies, nine municipal assemblies and one district assembly. Similar subdivisions have been implemented in Kumasi, Tamale and Sekondi-Takoradi. For example, in Kumasi, Asokore-Mampong was part of the metropolis until 2012 when it was carved out and a new municipality was created.

This creation of new municipalities creates a shift in cities' populations. It is therefore difficult to assign growth rates. Newly created municipalities are usually located at the periphery of older cities and have very high growth rates, as in the core of densely populated cities. The largest cities of Ghana in population size are presented in Table 1 below.

Table 1: Ghana's largest cities

	City	Population in 2013
1	Kumasi	1,827,014
2	Accra	1,795,115
3	Sekondi-Takoradi	632,382
4	Asokore-Mampong	323,009
5	Tema	310,853
6	Teshie-Nungua	242,120
7	Tamale	239,465
8	Ashaiman	203,052
9	Koforidua	197,535
10	La-Dadekotopon	194,812
11	Obuasi	176,648
12	Cape Coast	174,933
13	Ga South*	451,180
14	Ga West*	234,584

Source: Ghana Statistical Service 2015b.
**Cluster of new communities in peri-urban Accra, west of the city.*

[11] World Bank, World Development Indicators 2015
[12] World Bank, Population living in slums (% of urban population) - Ghana, World Bank Data http://data.worldbank.org/indicator/EN.POP.SLUM.UR.ZS?locations=GH. The population living in slums is the proportion of the urban population living in slum households. A slum household is defined as a group of individuals living under the same roof lacking one or more of the following conditions: access to improved water, access to improved sanitation, sufficient living area, and durability of housing as per the UN-Habitat definition.

While large cities like Accra, Kumasi, and Sekondi-Takoradi will continue to grow in the near future, important socio-political developments are likely to be observed in regional urban centres like Tamale, Tema, Ashaiman and Cape Coast.[13]

2.2 Slum characteristics

Urban infrastructure development has not kept pace with the expansion of cities and rapid rural-urban migration. In many areas, entire families live in single rooms rented in 'compound' houses that usually lack basic sanitation and water supply.[14] The figures are similar for most urban centres, especially the regional capitals. These communities do not have a formal designation but are sometimes referred to as 'low-income urban communities' and areas as 'slums'. It is important to note that not all residents living in these communities qualify as 'poor', although most slum residents are poor.

Slum areas are usually scattered across the cities. In Accra for example, there are traditional low-income communities located along the coast and close to the central business district. These communities, which have settled in these areas since before the independence, have retained some of their traditional rural customs and have been fully integrated into the city. In other parts of central Accra, migrants from the so-called 'Zongo' community have settled. The Zongo community speaks Hausa predominantly and is of Muslim origin. Another group of low-income communities is located on the outskirts of the city: these are the peri-urban low-income areas where new rural migrants are settling.

Many low-income areas have benefited from slum upgrading projects, albeit on a limited scale, which aim to improve the delivery of basic services. In particular, major roads and drains have been constructed to facilitate access. Some interventions also focused on the provision of public toilets at strategic locations depending on the availability of space. Since the policy in Ghana is that households must finance their own facilities, there have been limited interventions to improve household sanitation facilities. Improvements in water supply services have also been provided in recent years. The World Bank-funded Greater Accra Metropolitan Area (GAMA) Sanitation and Water Project aims to support Ghana Water Company Limited (GWCL) to extend its services to low-income areas and to develop onsite sanitation services. Low-income customers are targeted through proxy indicators, such as over-crowding.

2.3 Access to basic sanitation

Ghana failed to achieve its Millennium Development Goal (MDG) for sanitation, having set the target to achieve 54% coverage in improved sanitation but only reaching a modest 15% (JMP 2015). In urban areas, a marginal increase of 7% was achieved, as coverage increased from 13% in 1990 to 20% in 2015. Shared toilet facilities, which are considered unimproved by the JMP are currently the main sanitation facilities for households in Ghana. About 73% of urban dwellers rely on such facilities, which come in two main types:

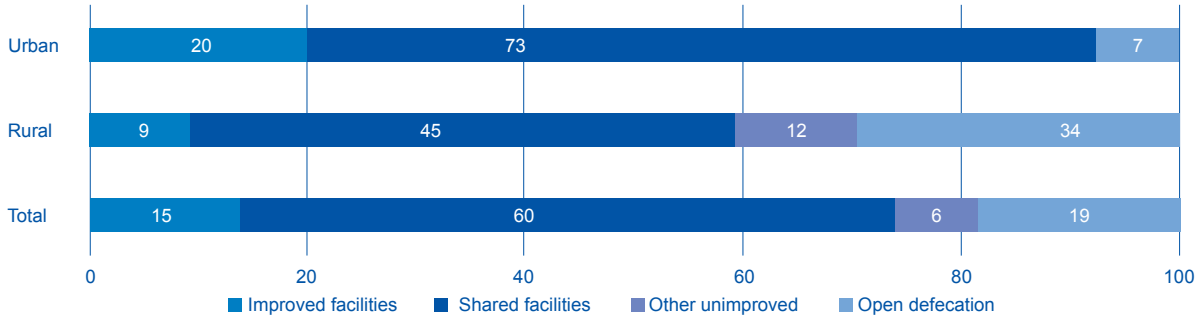
- 'Compound toilet': a facility shared by several households living in a single compound (or residence); and
- Public toilet: a facility located strategically within a large community, used daily by community members; public toilets are usually located where space is available in low-income areas, but it is not uncommon for residents to walk up to one kilometre to reach the facility.[15]

[13] World Bank 2015
[14] According to the 2010 population and housing census, Ghana Statistical Service 2012
[15] There is no data on the average distance that urban households have to walk; this is an estimate from authors' knowledge of the urban sanitation situation in Ghana.

Open defecation remains present in some urban areas, although the urban average is lower than the national average. The JMP estimated that 7% of urban dwellers practice open defecation (Figure 1). About 7% of households rely on 'bucket latrines' or plastic bags, which are discharged into the nearby environment.[16] Research on users of fee-paying public toilets in Accra found that the majority of users were adult men, suggesting that children and women were potentially more at risk to resort to open defecation or use bucket latrines.[17]

Most toilet facilities (including individual toilets) are onsite technologies. Sewered facilities serve a small fraction of urban residents, as further presented below. The main types of toilet facilities are VIP latrines and septic tanks (for public toilets and better-off households). In recent years, ecosan-type toilets have also been introduced. These include the 'Biofil'[18] toilets introduced in a number of interventions as the technology does not require excavating for the construction of a tank or pit for the excreta produced. As of February 2017, the Biofil technology had yet to scale-up, in part due to the limited capacity of the local supplier to market the product at scale.

Figure 1: Access to an improved sanitation facility in %



Source: JMP 2015

2.4 Access to transport and treatment services

Sewerage services are present only in three main cities: Accra, Tema, and Kumasi, serving only a small percentage of the population. In the Accra metropolis (inner city), less than 20% of the land area is sewered. The network is concentrated in the business district and the Dansoman area, a typical middle-income area. Accra Metropolitan Assembly (AMA) reports about 1,100 connections.[19] Tema has the largest proportion of urban residents connected to a sewerage network, with about 23,000 official connections. Tema Waste Management Department estimates that there may be an additional 2,000 households that are illegally connected to the system.[20] In recent years, Kumasi developed decentralised sewerage networks serving about 300 households in Asafo (a middle- to low-middle-income district in the city centre). Akosombo, a small town managed by the Volta River Authority (responsible for production of electricty from the Akosombo dam), is 100% sewered. Ghana's sewer treatment plants are not fully functional. In Accra, the majority of sewage that reaches treatment plants is not adequately treated.

[16] Ministry of Local Government and Rural Development 2010
[17] Peprah et al 2015
[18] Biofil is a Ghanaian technology which uses macro-organisms such as worms and insects to break down faecal waste. It can be used dry or wet and is linked to a leach field or infiltration trench (www.biofilcom.org)
[19] However, data on the number of connections in this area was not available at the time of writing this report.
[20] Communication with Accra and Tema Waste Management Departments

Faecal sludge management services (related to onsite sanitation facilities) are only slowly developing in urban Ghana. Municipalities, together with private operators, increasingly offer emptying services, in the form of mechanical suction and manual collection. A Shit Flow Diagram prepared for Greater Accra's wastewater and faecal sludge services in 2010 (see Annex 1) estimated that 82% of faecal sludge produced was being emptied, either mechanically or manually. The remaining 18% is being dumped directly into the environment through overflowing latrines or open defecation. A Shit Flow Diagram prepared for Kumasi (see Annex 2) indicated that 75% of the population use emptying services.[21]

Developing and implementing emptying and treatment services that safely manage human excreta remains a major issue. In 2010, in Greater Accra, an estimated 56% of the sludge was being emptied in a manner that posed a health hazard to those emptying as well as to residents, in addition to environmental hazards caused by the pollution of water bodies and direct discharge of untreated waste. Several municipalities operate faecal sludge treatment plants, including in Accra, Kumasi, Sekondi-Takoradi, and Tamale. However, although faecal sludge is being transported to the plants, the treatment processes are inadequate. In Accra, although over 80% of the total sludge produced reached faecal sludge treatment plants, only 8% of the total sludge was being safely treated, i.e. 72% of the sludge produced in Accra ends up in the neighbouring environment or in the sea (after it has reached treatment plants).[22] The Shit Flow Diagram prepared for Kumasi showed that over 80% of the sludge produced and contained is safely emptied (i.e. in a manner that did not pose immediate threats to households and operators); however, only 57% of the total sludge is adequately treated.[23]

[21] Furlong & Mensah 2015
[22] Nikiema 2016
[23] Furlong & Mensah 2015

3 Legal and policy framework for urban sanitation

The main legal act governing the provision of sanitation services is the Local Government Act (Act 462), which assigns MMDAs the responsibility to provide sanitation services. The Local Government Service Act allocates the responsibility to provide technical assistance for MMDAs and regional councils so as to enable them to perform their functions to the Local Government Service, which is the national body responsible for personnel in the assemblies. Based on these two acts, MMDAs are mandated to prepare infrastructure development plans and to implement them. Other critical legal acts include the banning of "bucket latrines". Manual emptying and disposal of faecal sludge have also been declared a human rights abuse by the Supreme Court (even though many urban areas are not accessible to trucks). All municipalities are therefore expected to ensure that these practices are eradicated.

The main policy and strategy documents relevant to urban sanitation are presented in Table 2 below:

Table 2: The main policy and strategy documents for urban sanitation in Ghana

Policy and strategies	Key points
Environmental Sanitation Policy (2010)[24]	– Covers all aspects of environmental sanitation, including solid waste, liquid waste, excreta, industrial wastes, health-care, and other hazardous wastes – Recognises the need to provide inclusive sanitation services, especially to protect the vulnerable, women, and children – Allocates responsibilities between ministries and local governments – Promotes private sector participation (PSP) and NGOs' involvement in the delivery of sanitation services – Acknowledges the challenge of urban sanitation (including excreta management, referred to as 'liquid waste') and the lack of planning – Makes households responsible for financing their own household facilities
National Environmental Sanitation Strategy and Action Plan (NESSAP 2010)[25]	– Recognises that communal and public facilities will continue to be an important aspect of excreta management for some time to come – Proposes franchising the management of public toilets and the provision of cesspit emptying services by private operators – Recognises the need for appropriate low-cost treatment and disposal facilities for faecal sludge
Strategic Environmental Sanitation Investment Plan (SESIP 2012)[26]	– Provides a financing plan for implementing the NESSAP – Proposes an increase in the annual allocation of the DACF to MMDAs to fund their financing gaps (from 7.5% to 15%) and 'ring-fencing' the amount for environmental sanitation (including solid waste) programmes – Proposes the establishment of a national revolving fund for household sanitation to be managed by microfinance institutions

Although the above policy and strategies recognise the importance of the safe management of human excreta (beyond containment), they do not provide clear strategies for improving services, especially in urban areas. As pointed out in Ghana's AMCOW Country Status Overview, these strategies show substantial reliance on the private sector playing key roles in the delivery of services, but clear strategies and innovative mechanisms still need to be put in place to ensure that the private sector can be engaged. While the current strategy claims that implementation of community-led total sanitation (CLTS) is likely to enhance accelerated coverage, it does not address how this will work in practice in urban areas, given constraints on land, house ownership, and the heterogeneous character of urban dwellings.[27]

[24] http://www.ircwash.org/sites/default/files/MLGRD-2010-Environmental.pdf
[25] http://www.ircwash.org/sites/default/files/MLGRD-2010-National.pdf
[26] http://wcghana.com/reports/strategic_environmental_sanitation_investment_plan.pdf
[27] WSP 2011

4 Institutional arrangements for urban sanitation

4.1 National and local level institutions

The December 2016 presidential elections brought institutional reforms to the water and sanitation sectors. Soon after taking office, President Nana Akufo-Addo announced the creation of a Ministry of Sanitation and Water Resources, amongst other reforms. As of January 2017, consultations were still taking place to determine the implementation modalities of these reforms. It is likely, however, that the new Ministry will retain some structures that were already established and which are presented below.

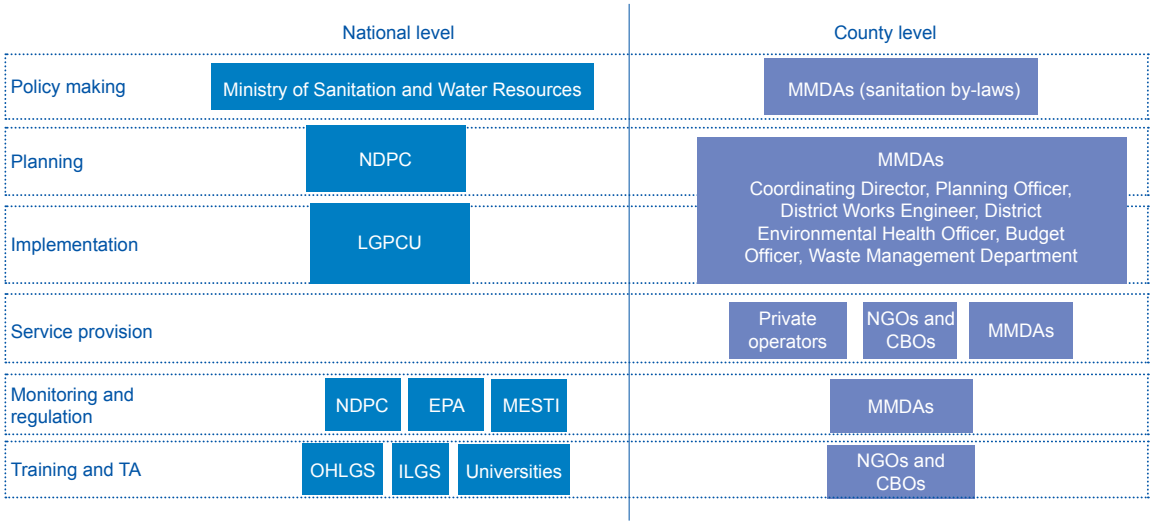
Until 2016, the water and sanitation sectors in Ghana were characterised by a clear divide between institutional responsibilities for water and sanitation services. Water services fell under the responsibility of the Ministry of Water Resources, while sanitation was under the Environmental Health and Sanitation Directorate (EHSD) of the Ministry of Local Government and Rural Development (MLGRD). EHSD was in charge of policy formulation and implementing national-level activities (for example, EHSD led nationwide communications campaigns promoting hygiene and sanitation and monitoring the progress towards the MDG for sanitation). Within MLGRD, the Office of the Head of Local Government Service (OHLGS, formerly Local Government Service Secretariat) has the responsibility to ensure local authorities are staffed with qualified personnel and to provide the relevant capacity building for the staff to deliver on their mandate. Training is provided by the Institute of Local Government Studies (ILGS).

Sector experts have welcomed recent reforms which saw the creation of the Ministry of Sanitation and Water Resources. These reforms are seen as a recognition of the sanitation crisis in the country and indicate a political will to address them. EHSD had been chronically underfunded, relying almost entirely on donor funding for its staffing and implementing its mandate (see also section 5 below). Until recently, most of EHSD's effort has been focused on rural sanitation, with little to no attention to urban sanitation. As a result, there has been little oversight of Metropolitan and Municipal Assemblies' targets and almost no guidance on how to achieve targets that have been set.

Regulatory functions for the sector should, in principle, be fulfilled by EHSD, Ghana Environmental Protection Agency (EPA) and the MMDAs, under the oversight of the Ministry of Environment, Science, Technology and Innovation (MESTI). EHSD is mandated to ensure all environmental sanitation activities are carried out in accordance with the law. However, EHSD is faced with a shortage of qualified staff and a lack of financial resources and therefore cannot fully implement its regulatory functions. While EPA is mandated to regulate the discharge of effluents from wastewater treatment plants, many assemblies continue to discharge effluents illegally (as many do not have treatment plants operating in their districts). MMDAs regulate sanitation services through by-laws. However, passing these by-laws can be a lengthy process, requiring resources and inputs (in order to convince assembly members), causing delays. Finally, the capacity of the Environmental Health Officers in enforcing sanitation regulations at local level is sometimes hampered by the interference of political and social leaders. Environmental Health Officers also face logistical challenges in undertaking monitoring and regulation activities, due to a lack of allocated resources.

The institutional set-up for urban sanitation services is captured in Figure 2. Although most functions (from policy making to training) have dedicated national and local level institutions, the implementation of these functions is challenged by the lack of resources allocated to sanitation. For example, although in principle the Local Government Project Coordinating Unit (LGPCU) is mandated to provide support to MMDAs implementing infrastructure projects (including sanitation), its involvement in the urban sanitation sector is limited because investments are limited. Universities, such as the Kwame Nkrumah University of Science and Technology (KNUST), are involved in training and building sector capacity.

Figure 2: Institutional set-up for urban sanitation services



Source: Authors

Note: The Ministry of Sanitation and Water Resources was created in January 2017, incorporating EHSD - previously within the Ministry of Local Government and Rural Development. Environmental Protection Agency (EPA; Ministry of Environment, Science, Technology and Innovation (MESTI); Institute of Local Government Studies (ILGS); Office of the Head of the Local Government Service (OHLGS); Local Government Procurement Coordination Unit (LGPCU); National Development Planning Commission (NDPC).

The National Development Planning Commission is responsible for planning and monitoring all development activities. The Ghana Shared Growth and Development Agenda 2014-2017 (the medium-term development plan of the country) has a number of Focus Areas for various development targets, including for sanitation (see Box 1 above). NDPC provides guidelines for the development of the MMDAs' medium-term plans for sanitation known as District Environmental Sanitation Strategy Action Plans (DESSAPs), as presented below.

At the local level, MMDAs are responsible for implementing the sanitation policy and strategy. As decentralised entities, they plan their activities based on available resources and priorities. MMDAs have sub-committees in charge of planning and identifying priority areas: the Development Planning Sub-committee, Social Services Sub-committee and Works Sub-committee, among others.

Metropolitan and Municipal Assemblies (MMAs), which have large urban areas, have set up Waste Management Departments. MMDAs usually have Environmental Health Units. The Waste Management Department and the Environmental Health Units are responsible for implementing sanitation activities. The MMDAs' Waste Management Departments are usually tied to the operations of municipal facilities, while Environmental Health Units are more involved in the enforcement of environmental regulations and health and hygiene promotion activities.

MMDAs have recently been mandated to prepare District Environmental Sanitation Strategy and Action Plans (DESSAPs) as strategies for tackling sanitation and the local level. As the elaboration of DESSAPs became one of the indicators for receiving funds under the DDF, many MMDAs have produced such plans. However, DESSAPs usually focus on solid waste (a more visible issue) and remain unclear as to which specific strategies will be put in place for MMDAs to achieve their sanitation objectives. In reality, despite their mandate, most MMDAs do not prioritise sanitation. Environmental regulation fails to be effectively enforced and services are not adequately monitored. Changes are slowly emerging as some city leaders recognise the importance of addressing sanitation, as in Kumasi (Box 3).

Box 3: Kumasi: a national and regional pioneer

Kumasi is one of the few cities that has made substantial improvements in sanitation services over the last 10 years. The city has almost eradicated open defecation; many public toilets are well-managed (over 50% of the city's public facilities are managed by private operators). Kumasi is now tackling the challenge of improving household sanitation. Kumasi Metropolitan Assembly (KMA) started focusing on sanitation with the implementation of the Kumasi Strategic Sanitation Programme (supported by UNDP and the World Bank).

Through the programme, both onsite and offsite sanitation services across the sanitation value chain improved. Comprehensive reforms were also passed, and the Waste Management Department was established, allowing for the development of a strategic sanitation plan for the city. The programme also brought together a team of well-resourced, young, highly skilled, and committed professionals.

The strategic sanitation plan drew a pathway for the implementation of an integrated approach to urban waste management, addressing the different segments of the service chain from waste collection and the containment of excreta to their disposal or treatment and reuse or recycling. Although certain segments of service show major progress (e.g. waste collection, public toilets, transport of waste and faecal sludge), others remain affected by profound challenges. The faecal sludge treatment plant does not perform well and, more generally, KMA and its partners face chronic difficulties to properly operating and maintaining all treatment facilities (i.e. sewerage and faecal sludge treatment plants and the landfill site).

Source: Tiberghien 2016

4.2 Service providers

Sanitation services are provided by MMDAs themselves, private operators and NGOs or CBOs involved in the sanitation sector. A description of these service providers is presented below.

MMDAs. Although the Environmental Sanitation Policy expects MMDAs to delegate service provision to the private sector and only oversee services, many MMDAs remain involved in direct service provision. Apart from sanitation and hygiene campaigns, many MMDAs construct and manage public toilets. MMDAs usually appoint a caretaker to operate the facilities (mainly to clean, ensure emptying, and repair the facilities). Other MMDAs (more rarely) provide emptying, transport, and treatment services (for those equipped with treatment facilities). In Greater Accra and Kumasi, for example, the Waste Management Departments operate the sewerage systems as well as the treatment plants.

Private operators. Despite the policy, private sector participation (PSP) in the delivery of sanitation services is limited, especially in low-income areas. There are artisans and masons involved in the construction of household and public toilets. In large cities, several operators own vacuum trucks for septic tank emptying. In Accra and Kumasi in particular, there are over 100 vacuum trucks registered with the two assemblies. In Accra, there are two associations of vacuum truck operators: one, based at Lavender Hill, has around 45 members with about 70 trucks; the second, at Achimota, has about 50 trucks. Kumasi also has about 60 vacuum truck operators. These operators also provide services in surrounding areas, including smaller MMDAs. Many public toilets are managed by private operators, although reports indicate poor service levels (Box 4).

Box 4: The management of public toilets

Public toilets located within low-income communities serve as the primary facility for many residents. Most public toilets are constructed on 'sanitary sites,' which are government-owned lands allocated for the construction of toilets. Public toilets (constructed by local authorities) are either managed by the local authority or delegated to private operators (usually local influential individuals) through franchises or lease-type contracts. There is, generally, fierce competition among local leaders and political entities to obtain these contracts. Some, but few, public toilets have been constructed on private land and are privately-owned and managed. Regulation over public toilets maintenance is weak. Although data on public toilets' profitability is very limited, competition among private actors to manage them indicates that they can generate attractive profits. However, informal reports and the few studies conducted on public toilets point to very poor management (and weak enforcement of environmental regulations). A study conducted in three low-income areas of Accra, observing 21 public toilets, including privately-managed facilities, showed that between 40% and 88% of public toilets had faeces visible on floors, walls and doors. Public toilet customers interviewed generally expressed dissatisfaction over their cleanliness and services that were provided. The level of cleanliness of toilet facilities was attributed to the level of care that toilet operators showed for the toilets' customers. Focus group discussions with residents of these three neighbourhoods also highlighted that public toilets, as currently designed and maintained, were not adequate for children, the elderly and disabled customers, leading to many resorting to open defecation and use of plastic bags.

Source: Peprah et al 2015

Faecal sludge services are mainly contracted for public toilet facilities or household facilities which can be accessed by trucks in the most well-off parts of the cities. Manual emptying performed by individuals is very common. Such services are contracted by households themselves or MMDAs for emptying public toilets. Only a few operators are involved in treatment services. In November 2016, a faecal sludge treatment plant in Accra was commissioned by the President and constructed under a PPP arrangement with Sewerage Services Ghana Limited, an affiliate of Zoomlion. In Kumasi, a number of decentralised sewage treatment plants servicing areas like Asafo and Chirapatre are managed by private sector entities. Overall, the legal and regulatory framework for PSP in sanitation services is weak and is not conducive to PSP at scale and in a sustainable manner (Box 5).

Box 5: A weak legal and regulatory framework for PSP in sanitation services

Ghana adopted a national policy for Public-Private Partnerships in 2011, but the Draft Bill on PPP (prepared in 2013) that will put in place the legal framework for PPPs remains to be approved by Parliament. Until approval of the Bill, the Policy is the main guidance document for PPPs.

However, the Policy only provides guidelines on concession contracts, in which the private sector is handed the operations and management of government-owned infrastructure over a period of time with investment obligations for extending and/or rehabilitating the infrastructure. Lease (including franchise-type), management and service contracts (which are less risky for the private sector as they generally do not entail investment obligations) are not considered in the national PPP framework. However, in the short to medium term, sanitation services, especially for the poor, are likely to attract the private sector only under less risky contracts (e.g. lease contracts, as opposed to concession contracts).

In addition, the national policy remains to be translated into guidelines for specific sectors, including sanitation and water, whereby service authorities (MMDAs who are the assets owners and have the prime responsibility to ensure services) can contract private operators under an approved regulatory framework.

There are no contract types specifically designed for sanitation services (which would be approved by EHSD and which MMDAs could use); there are no national guidelines on tariffs settings (e.g. for operating public toilets or faecal sludge emptying services); MMDAs' responsibilities with regard to services regulation are also ill defined. As a result, private operators involved in sanitation services operate with little accountability.

The development of PSP is also constrained by factors related to the lack of demand for urban sanitation services. Lack of demand is due to unwillingness to pay (for example, landlords are not willing to invest in sanitation facilities for their tenants, while tenants are reluctant to invest in home improvements) and affordability constraints (see section 5.2 on tariffs). In addition, the lack of adequate and attractive technologies for low-income and high density areas also hinders the development of urban sanitation markets. Some international and local NGOs are testing new PSP models for urban sanitation involving technologies suitable for low-income urban areas. One of these models is the WSUP-supported Clean Team model. Although developed as a demand-responsive approach, the model faces challenges and is yet to scale up (Box 6).

NGOs. Traditional local NGOs have been mobilising communities in low-income areas to demand that duty-bearers play their roles, including the provision of basic sanitation services. There are a few examples of religious bodies providing toilets for schools as part of their responsibility. NGOs involved in WASH have formed a membership organisation, the Coalition of NGOs in Water and Sanitation (CONIWAS). CONIWAS currently has nearly 100 members and undertakes advocacy work for WASH and hygiene promotion as well as training. One of the most prominent local NGOs involved in pro-poor sanitation is the People's Dialogue.

Box 6: The Clean Team model

WSUP supported the development of the Clean Team model for sanitation services in the low-income areas of Kumasi. The approach was developed following market research to identify households' needs and aspirations. The technology behind the model is a domestic urine-diverting cartridge toilet service and is rolled out through a local social enterprise (Clean Team, a WSUP subsidiary). Households rent a portable toilet with odour-control from Clean Team, who then collects the waste two to three times per week. The waste is then transported to the municipal treatment site. The model has been designed to cope with to the prevailing tenancy and space availability constraints. In May 2016, WSUP reported more than 1,300 households served by Clean Team in Kumasi, corresponding to about 64,000 users (about 2.5% of the population).

Despite the model being tailored to low-income areas' spatial and income characteristics, the model has yet to reach scale. One possible explanation is that the model, although responding to a need, is not a model that people aspire to and is too close to "bucket latrines" for many households. The model is also failing to convince policy makers, who see such "service-based" solutions as interim only. [28]

Source: https://www.cleanteamtoilets.com/

[28] According to some respondents' opinion.

5 Financing arrangements for urban sanitation

5.1 Government and international transfers

The main sources of public funds (excluding donor funding) for urban sanitation are allocated through:

- Government transfers to MMDAs;
- MMDAs' expenditure from own funds (using local revenues or IGF); and
- Government transfers to national institutions responsible for sanitation (mainly EHSD).

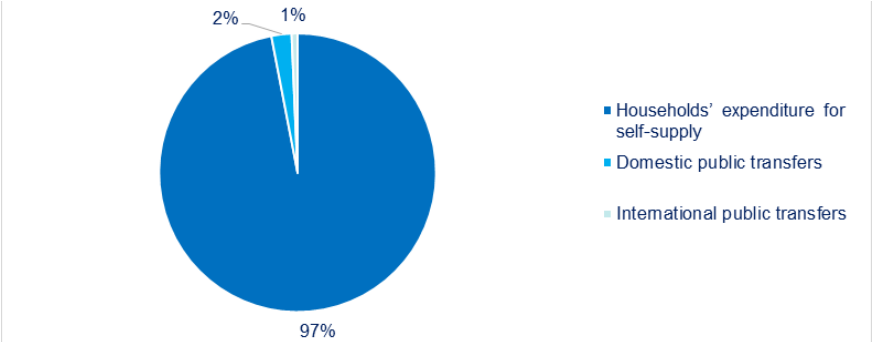
As decentralised entities, with fiscal and legal autonomy, MMDAs have full discretion over the use of their funds. There is no legal obligation for MMDAs to allocate funds to sanitation and there are no earmarked transfers (except in the context of specific donor-funded activities) for sanitation. In addition, sanitation is not specifically reported in MMDAs' reports on actual expenditure. As a result, without thorough research at MMDA level, there can only be assumptions about the levels of public expenditure on sanitation.[29]

The TrackFin exercise, which Ghana has been implementing since 2014, provides indicative figures on public expenditure on sanitation. TrackFin estimated that the total expenditure on water, sanitation, and hygiene (WASH), including domestic funds allocated by the Government of Ghana, international transfers by development partners, household expenditure on tariffs and self-supply, was GHS 4,509 million (USD 1 billion) in total in 2014. Excluding household expenditure, WASH expenditure represented 1.07% of Ghana's GDP in 2014. Sanitation expenditure represented 48% of total WASH expenditure or GHS 2,162 million in 2014 and urban sanitation specifically represented GHS 1,260 million or 28% of total WASH expenditure.[30]

Ghana is far behind its commitment to the Sanitation and Water for All High Level Meeting to allocate 0.5% of GDP (at least USD 150 million per annum) in public funds to sanitation. In order to identify public expenditure on sanitation (which is the responsibility of decentralised MMDAs), TrackFin made the assumption that 15% of DACF that is transferred to MMDAs is used for sanitation (an assumption that still needs to be verified). Based on this assumption, TrackFin estimated that domestic public expenditure on sanitation amounted to GHS 49 million (USD 11.3 million) in 2014. This represents only 2% of total national expenditure on sanitation. The bulk of national expenditure came from household expenditure (Figure 3).[31] More detail on household expenditure is provided in section 5.2.

[29] In 2017, EHSD commissioned a research project to identify the level of expenditure on sanitation in selected MMDAs in the country.
[30] The results of the 2016 TrackFin exercise (which looked at public expenditure in 2014) were not yet published at the time of this report writing. Results from the 2014 exercise can be accessed here: https://www.slideshare.net/TrackFin/13-track-fin-ghana
[31] In Sub-Saharan Africa, TrackFin has only been piloted in Ghana and Mali (the results of Mali were not publicly available as of February 2017). It is therefore difficult to compare Ghana's results with trends in other countries.

Figure 3: National expenditure on sanitation



Source: Esseku 2017

Box 7: Main donor programmes for urban sanitation

World Bank. In 2013, the World Bank launched a USD 150 million grant project for improving water supply and sanitation in low-income areas of the Greater Accra Metropolitan Area (GAMA). USD 60 million was to be allocated to urban sanitation. The project is funding the development of infrastructure and the roll-out of software activities to generate demand. It includes the provision of an output-based subsidy to private operators involved in toilet construction to reduce toilet costs for households, while enabling operators to generate attractive revenues. In addition, the project is financing the construction of faecal sludge treatment plants and the rehabilitation of existing wastewater treatment plants. The International Finance Corporation (IFC) assisted MMAs in engaging with the private sector for delivering services. Despite its ambitious and innovative set-up, as of February 2017, the project was struggling to reach the anticipated target of 250,000 beneficiaries with improved sanitation. Among the main challenge identified is the high cost of household latrines, despite subsidised rates.*

Dutch Embassy. In 2014, the Dutch Embassy initiated the Ghana-Netherlands WASH Programme (GNWP), which focuses on integrated urban water and sanitation in selected municipalities with an indicative budget of Euros 200 million up to 2020. The programme includes support to MMAs to prepare master plans for sanitation (including solid waste), the conducting of urban CLTS and the promotion of Public-Private Partnerships. The programme provided seed funding for the establishment of a revolving fund (managed by Fidelity Bank and SNV) that enables households to acquire facilities at an affordable rate.

UNICEF. The international organisation (who until recently was mostly active in rural sanitation) also initiated an urban sanitation programme in 2015, in partnership with GNWP, to be implemented in Ho, Tamale and Ashaiman, with an overall budget of USD 7 million. UNICEF is testing three different approaches to create demand for improved sanitation, including urban CLTS.

UK Department International Development (DFID). DFID launched in 2016 a competition among Ghana's urban municipalities to plan and implement sustainable sanitation plans. The overall prize purse is GBP 1.43 million (USD 1.78 million).

AfDB. Finally, AfDB has been supporting the Accra Metropolitan Assembly to extend and rehabilitate its sewerage network system since 2006.

Sources: World Bank 2013 and Ghana-Netherlands WASH Programme (GNWP) http://www.gnwp.nl/. *The World Bank GAMA project has not yet been evaluated. These challenges have been highlighted by respondents contacted for this research.

As presented in Figure 3, international transfers also represented a fraction of national expenditure on sanitation in 2014. Although TrackFin did not disaggregate international transfers allocated to rural sanitation from those allocated to urban sanitation, it can be assumed that in 2014, the majority of donor-funded sanitation projects have focused on rural areas. Urban sanitation recently gained the attention of large donors. The main donors involved in urban sanitation as of January 2017 are the World Bank, the African Development Bank (AfDB), Royal Netherlands Embassy, and UNICEF. Most donor interventions for urban sanitation have so far focused on large cities with populations of over 200,000. In line with Ghana's policy, recent programmes give prominence to PSP in the delivery of sanitation services. However, as presented in Box 7, donors are testing multiple, and sometimes conflicting, approaches. For example, the World Bank and the Dutch Embassy have been supporting the provision of direct and indirect subsidies to households, when other donors are relying on software-only approaches, such as urban CLTS.

Several other international NGOs are supporting the development of sanitation, including WSUP, WaterAid, World Vision, Plan International, Cities Alliance, and Catholic Relief Services.

The trend for future donor involvement indicates that since Ghana has reached lower middle income status, many development partners are phasing out from the water and sanitation sector. It is likely that by 2020, few donors will be involved in the sector and there will be a shift from grant-based projects to loans (likely to stay at concessional rates) to fund sanitation.

5.2 Tariffs

As previously highlighted, households' expenditure on sanitation is by far the largest, amounting to 97% of overall funds allocated to sanitation in 2014. In order to identify household expenditure, TrackFin used results from the Ghana Living Standards Survey conducted in 2012/13. The survey disaggregated expenditure on urban sanitation by expenditure on toilets (i.e. private facilities), on public toilets, and toilet paper. Results from the survey show that most of urban dwellers' sanitation expenditure was allocated to public toilets in 2013.

Table 3: Household expenditure on sanitation

	Urban		Rural		Total	
	GHS million	USD million	GHSmillion	USD million	GHS million	USD million
Expenditure on private toilets	138	32	40	9	178	41
Public toilets	719	166	586	136	1305	302
Toilet paper	65	15	17	4	82	19
Total	922	213	643	149	1566	362

Source: Esseku 2017 based on IHSN 2014

The overall expenditure indicates that urban households in 2013 spent at least USD 213 million on sanitation, of which nearly 78% was allocated to the use of public toilets. This is the case when only access to sanitation facilities (and toilet paper) has been taken into account, i.e. excluding expenditure of faecal sludge emptying, transport, and treatment services.

Poor urban residents tend to pay the most to access sanitation services and affordability appears to be a challenge for the development of improved sanitation services. A survey of 1,976 households in three Municipal and Metropolitan Assemblies (Ho, Ashaiman and Tamale), commissioned by UNICEF Ghana found that the average household expenditure on sanitation represented 1.8%, 8%, and 5% of households' monthly income, respectively. Expenditure (relative to income) was the highest in Ashaiman, the most urbanised district (situated in Greater Accra) and the lowest in Ho, which has more rural features. Over 64% of Ho's households did not have a private

toilet facility, compared with 82% and 83% in Ashaiman and Tamale, respectively; those without private toilet facilities in these two districts used public toilets and/or practiced open defecation. Some households (as in Ho) do not pay any fees for using public toilets. In Tamale, most residents pay GHS 0.2 (20 *pesewas*) (USD 0.04) on a pay-as-you-go basis; in Ashaiman, most residents pay GHS 0.5 (50 *pesewas*) (USD 0.1). The survey also found that 38% of all households had no intention to install improved sanitation facilities. Of these, 48.9% reported costs as a constraint. Other reasons included households' tenancy status, which discouraged them from making the investment.[32]

In urban areas, the cost of improved household facilities is forbiddingly high for many residents (in part due to high standards imposed by environmental regulation). In Accra, for example, the cheapest technology (a pit latrine with a slab and vent pipe) costs GHS 1,000 (USD 229), representing over 125% of a poor household's income. However, these more affordable technologies have been banned by some MMDAs because of the unpleasant odours they generate when overused, which is the case in crowded compound houses. For long-lasting solutions (with adequate septic tank suitable for communal toilets), households may have to spend USD 1,000 for a toilet facility.[33] At the same time, financial services (which could enable households to spread the costs of their investments over time) are unaffordable for the poor. In February 2017, the interest rate set by the Bank of Ghana was 25.21%.[34]

Households (as well as public toilet operators) also face substantial costs for desludging services. The current fee for a 5m^3 vacuum truck ranges between GHS 180 (USD 41) and GHS 250 (USD 57) and between GHS 200 (USD 46) and 300 (USD 69) for a 10m^3 truck. A major factor affecting the price is the distance travelled by the vacuum truck to empty the toilet facility and to discharge at an approved tipping point. The current fees charged for discharge at tipping points are between GHS 15 (USD 3.4) and GHS 25 (USD 5.7).

[32] CAFFORD Consult 2015
[33] Based on respondents' information.
[34] Financial services for the poor are usually available from microfinance institutions or traditional banks with a microfinance branch. Interest rates applied by microfinance institutions surpass rates applied by traditional lending institutions due to the high risk involved and to cover additional administrative costs generated by the management of multiple small loans.

6 Key barriers to developing pro-poor urban sanitation services

The sections above have identified some of the key challenges faced by the urban sanitation sub-sector, especially for delivering pro-poor services. Key barriers to urban sanitation are summarised below:

Lack of support and guidelines to MMDAs to develop improved and sustainable sanitation services. Despite a National Environmental Sanitation Policy and a Strategy that set ambitious targets for the country, the support structure to MMDAs for the planning of sanitation services is quasi non-existent outside donor projects. As guidelines do not specify requirements for liquid waste sanitation, most MMDAs focus on solid waste services. As highlighted above, although the private sector is seen as key to deliver services, there are no guidelines endorsed by concerned ministries and agencies for the sanitation (and water) sector to implement PPP projects.

Lack of investment of central government funds to sanitation. Ghana's sanitation policy suggests that households should bear the cost of investing in individual facilities. As per the Sustainable Development Goals (SDGs), the development of sustainable sanitation services requires investments beyond basic sanitation (or the containment of human excreta) and in market segments where the private sector is not likely to be attracted due to poor financial viability. However, studies indicate that the Government of Ghana has under-prioritised investments in sanitation. As an example, in 2015 the Ministry of Water Resources and Housing received a government grant of GHS 198 million (USD 45 million) from the Annual Budgeted Fund Amount (ABFA), which is the allocation from petroleum revenue designated by the Petroleum Revenue Management Act to be spent on infrastructure development. This transfer represented 28.55% of the resource envelope to the Ministry of Water Resources and Housing. In comparison, the total envelope allocated to MLGRD by the government (in which sits EHSD) was GHS 47 million (USD 11 million).[35]

Lack of space and technological challenges. As in many densely populated areas, the lack of space is a challenge for the construction of household facilities. Communal or shared toilets appear to offer solutions in the short- to medium-term. However, as highlighted below, communal toilets come with a high cost. With the lack of regulation for public toilets tariffs structure and maintenance, public toilets can be poorly maintained and not emptied on a regular basis. This deters households from using public facilities and many resort to open defecation. In coastal communities, high water tables present some technological challenges.

Cost of toilet facilities and services. One of the major challenges affecting the delivery of household toilets in urban areas in Ghana is their high cost. Due to the unavailability of sewerage systems, onsite systems which require relatively expensive onsite storage mechanisms (septic tanks or ventilated improved pits) are necessary. These options usually cost up to USD 1,000 to install, which is prohibitive for low-income households. Considering that the average annual household income for those within the three lowest income quintiles range between GHS 6,571 (USD 1,516) and GHS 14,823 (USD 3,420), investing in household facilities would represent between 66% and 29% of a household's annual income. An added challenge is that many households rely on the informal economy, which means that income is generally earned on a daily basis. Introducing monthly payments (e.g. to repay credit for a toilet facility or for emptying services) is therefore challenging. Collecting money daily or weekly for those offering sanitation services also comes with high operating costs.

[35] CONIWAS 2015

Historical prevalence of public toilets. Although hard empirical evidence is lacking on the subject, many sector practitioners consider Ghanaians' long history with (and acceptance of) public toilets to be an important factor behind the slow take-off of improved (i.e. private) sanitation facilities, despite numerous interventions. Although affordability and land tenure are also at play, the use of public toilets is also an issue of preference for some users, who prefer to allocate their limited resources to other investments or activities (deemed more critical or with an obvious return on investment, such as education). There seems to be an entrenched perception that public toilets are acceptable and fulfil their purpose: public toilets are entrenched into the lives of urban dwellers to the point that social norms have become attached with their use. For example, influential residents (or those from powerful families) often do not queue to use them.

Identifying sanitation solutions that are suitable and aspirational for low-income residents and policy makers. Because of the challenges of lack of space and affordability, some NGOs, like WSUP, are testing 'service-based' solutions as in the Clean Team model. In such solutions, households are not only provided with a product (a toilet facility) but also a range of services (emptying, transport, and treatment). Even though such solutions address many of the challenges of urban sanitation, they are yet to be rolled-out at scale. A perception among users and policy makers is that such simplified solutions are 'interim' solutions and to some extent, a step backwards in service levels.[36]

Lack of enforcement of environmental regulation. Despite strict environmental laws, many landlords are reluctant to invest in toilet facilities for their tenants, while tenants are reluctant to see their rent go up because of additional toilet facilities. The enforcement of the environmental law by municipal Environmental Health Officers is generally weak, however. Health Officers have little incentive from their management to carry out enforcement activities (which can also hinder political ambitions of local Assembly-men).

Low demand for improved toilet facilities affects the whole sanitation value chain. The result of many of the above factors (high costs, lack of enforcement, lack of space) is that households generally do not express demand for improved (private) toilet facilities. As a result, the sanitation value chain presents limited market opportunities for private operators. Although there is a dynamic private sector involved at all stages of the sanitation chain (from toilet construction to treatment, as in Kumasi), low demand for services is affecting the viability of sanitation as a business. Unlocking demand for improved facilities is therefore key to attracting and sustaining private operators, in addition to public investments in sanitation infrastructure.

Priority to solid waste. Most Assemblies give priority to solid waste rather than human excreta management. Uncollected solid waste is seen as a greater challenge since heaps of uncollected solid waste are visible to all and are usually associated with public outcry. However, 'liquid' sanitation is less visible since excreta usually flows in drains or is hidden in plastic bags. For most politicians, the mention of sanitation brings to mind solid waste. Hence, the limited resources available for the waste management departments are spent on solid waste rather than on sanitation.

Lack of urban planning. Urban centres in Ghana are rapidly expanding into areas that are lacking adequate municipal services such as sanitation, water supply, roads, and electricity. Urban expansion is largely unregulated. Houses are being built (generally on private lands) without enforcement of housing regulation. The result of this unplanned expansion is the rapid accumulation of inadequate accommodation (which are 'sleeping quarters' rather than homes) lacking toilets or any internal plumbing. The sprouting of these new unplanned urban agglomerations is an added challenge for service authorities, who are tasked to provide basic services such as sanitation.

[36] This assessment was made by several respondents.

7 Sector trends

Despite the above challenges, recent trends, events, and initiatives have the potential to bring substantial positive changes to the sector. However, these developments should also be assessed in the context of the looming exit of several development partners from the water and sanitation sector.

Buzzwords. Liquid waste sanitation is not yet prominent among the concerns of low-income urban residents or a priority in their aspirations. As a result, discussions on sanitation in the sector mainly occur among a restricted circle of sector practitioners and experts. Among sector actors there is an increased recognition that the sanitation challenge goes beyond household facilities and that the whole value chain of sanitation services needs attention. Innovation, PPP, urban CLTS and sanitation marketing are among some of the other buzzwords in the sector.

The change in government in 2017. The new ruling party included water for all and improved access to sanitation in its manifesto. This is a new and positive development, although the government has yet to identify the financial resources that will be allocated and the approach for service delivery. The setting up of the new ministry is seen by sector stakeholders as a step in the right direction. Additionally, the setting up of the Ministry of Inner City and Zongo[37] Development is expected to help with urban renewal and redevelopment of low-income urban communities, a process which would have improved access to sanitation facilities as an integral part of the process. It is expected that for the new interventions to be effective, strong collaboration is needed among the various new and old ministries (particularly between MLGRD, the Ministry of Sanitation and Water Resources and the Ministry of Inner City and Zongo Development) to avoid duplication of efforts.

The implementation of TrackFin and other initiatives to identify expenditure in sanitation. Since 2014, the government has been collaborating with WHO to track financial flows to the water and sanitation sector. The exercise (which has published results for the financial year 2014, see section 5.1 above) has enabled the identification of public funds allocated to sanitation and revealed the massive gap between Ghana's commitments and actual expenditure. These findings can therefore provide a stronger basis for advocating an increased allocation to sanitation. The research launched by EHSD in 2017 to identify actual expenditure (and improve the reporting process on sanitation expenditure) in selected MMDAs should provide an accurate picture of MMDAs' budgets for sanitation, including what is allocated from domestically generated funds.

Urban sanitation projects entering mid-term or final evaluation stages. A number of innovative projects will reach the mid-term stage in the next few months, including the World Bank GAMA project. Evaluation of these projects will bring important lessons for the development of sanitation projects, and particularly shed light on the capacity of PSP and MMDAs' to plan and oversee services.

The strengthening of CONIWAS. CONIWAS (the coalition of local and international WASH NGOs) is emerging as a strong player in the urban sanitation sector. CONIWAS has supported the government to prepare for the Sanitation and Water for All High Level Meetings. CONIWAS is collaborating with WHO on the TrackFin initiative and could play an important role going forward in advocating for increased and better spending on urban sanitation.

Plans for urban regeneration. Increasingly, sanitation is seen as an integral part of the lack of adequate housing, therefore calling for stronger integration between sanitation and housing as part

[37] 'Zongo' refers to settlers originating from Northern Ghana who are predominantly of Muslim faith. One of Accra's biggest slums, Nima, has a high Zongo population.

of slum upgrading interventions in low-income urban areas. A national urban policy was launched in March 2013 to promote inclusive socioeconomic development of Ghanaian urban centres (Box 8). The policy is also supported by key actors, including the Cities Alliance (an international membership organisation) facilitating the implementation of the Ghana Land, Services and Citizenship (LSC) programme. GIZ has also provided support for the policy formulation.

Box 8: The National Urban Policy

The National Urban Policy includes several objectives which directly pertain to sanitation. The policy aims to balance the distribution of urban population through promoting growth in small and medium-sized towns, and promoting urban economic growth through improved urban services and infrastructure. The policy also sets as an objective to improve the quality of urban life, with the following initiatives to be promoted:

- Development and management of infrastructure systems with the appropriate technology needed to provide basic hygienic conditions in towns and cities;
- Preparation and implementation of sanitation action plans for all leading urban centres, including related statutory regulations and bylaws for ensuring effective collection, disposal and treatment of solid, liquid and toxic waste;
- Generation of environmental awareness by increasing mass media public education programmes on sanitation in schools and public places.

The policy advocates for greater planning of greater metropolitan regions and the provision of affordable housing through private sector delivery of affordable housing; the promotion of indigenous building materials and appropriate construction technologies; the provision of social or low-income rental housing through public and public-private partnership arrangements; and the upgrade of slums and dilapidated housing stock, especially in urban areas selected as growth centres.

Source: Ministry of Local Government and Rural Development 2012

Donors phasing out from Ghana's water and sanitation sector. As pointed out in this study, Ghana will soon have to identify ways to finance the sector from its own funds and tap into non-grant based funding mechanisms because of its lower middle-income status. This change of circumstances can be seen as a challenge, but also as an opportunity to strengthen and clarify the policy framework and the institutional set-up for urban sanitation, so as to make the most efficient use of public funds as well as to attract donor funding for lending projects.

8 Opportunities for influencing the urban sanitation sector

Based on this situation analysis, potential research areas for influencing the government and other sector practitioners in developing inclusive sanitation services at scale can be suggested, as follows:

- Identify factors of demand for sanitation services, particularly looking at the correlation between investment costs for households and demand for services and the role of women (as well as children and the elderly) in decision-making in such investments;
- Research users and decision-makers' perceptions of (and preference for) existing low-cost innovative technologies (such as the one deployed by Clean Team) in order to determine whether they can be rolled-out at scale, and how;
- Take stock of experience with PSP in sanitation services and assess the performance, gaps and opportunities in urban sanitation: such an assessment should consider a wide range of service providers, identify shortcomings (both from the private and public side) and make recommendations on adequate contractual arrangements for urban sanitation; and
- Identify whether public toilet facilities can provide safe solutions for households: although the current international policy (as set by the JMP) is to consider public facilities as unimproved, their current importance in providing solutions for low-income residents calls for a greater attention on whether public facilities could provide an acceptable (safe and hygienic) solution and how to improve their management (including through regulatory instruments such as stronger contractual arrangements).

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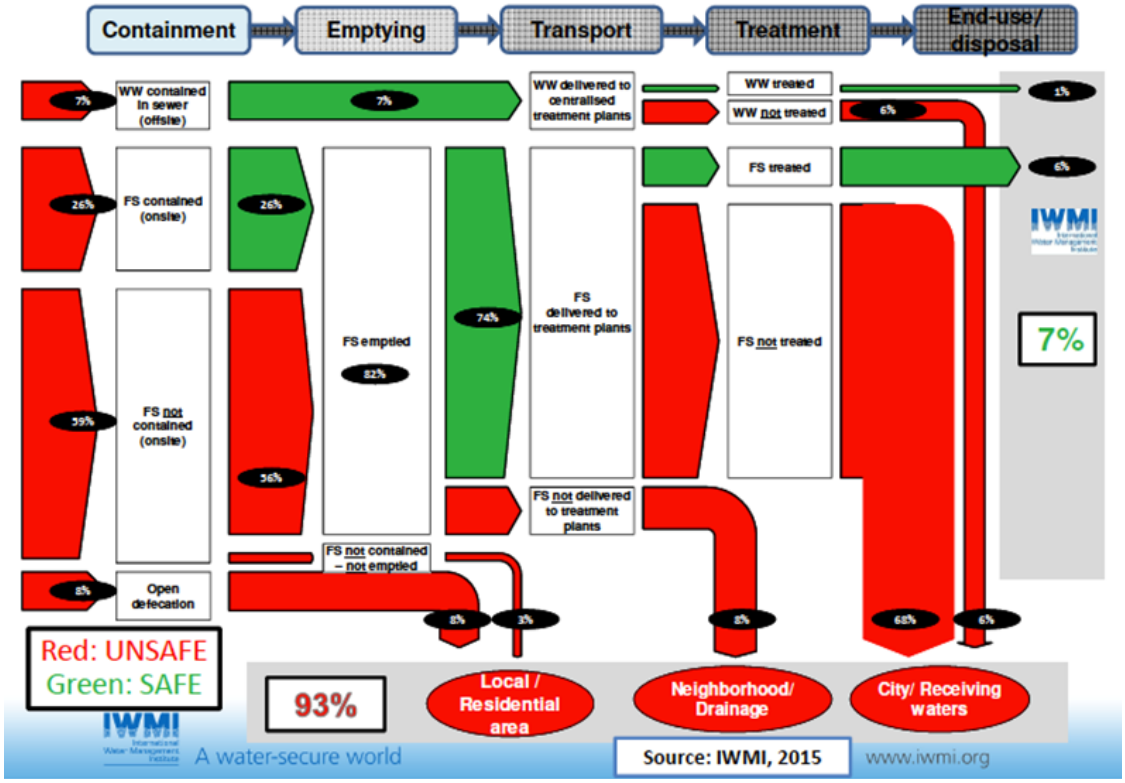
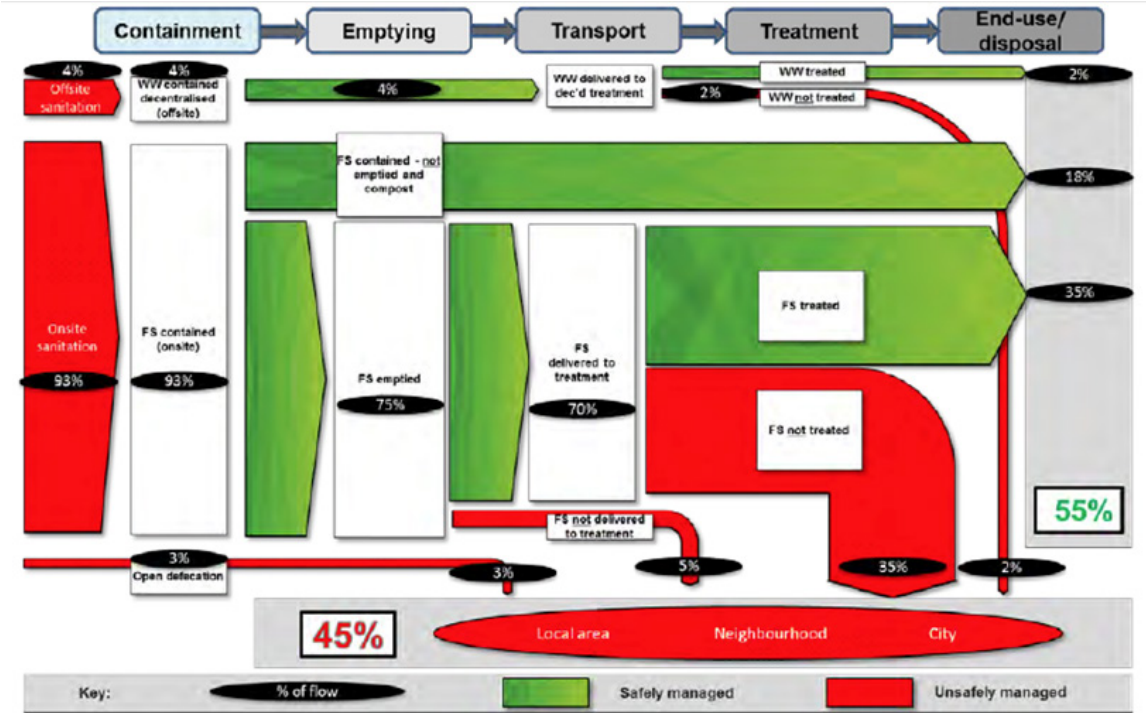
Annex 1: Greater Accra Shit Flow diagram (2010)

This Shit Flow Diagram was produced by the International Water Management Institute (IWMI) in 2015 using data from the 2010 population census.



Annex 2: Kumasi Shit Flow diagram (2015)

This Shit Flow Diagram was produced by WEDC and Kumasi Metropolitan Area in 2015 using data from the 2010 population census.



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