

## Towards citywide sanitation in Lusaka: The next phase of non-sewered sanitation

Topic Brief | February 2018



# Executive Summary

Lusaka has made huge strides in introducing faecal sludge management (FSM) services for low-income consumers, particularly thanks to the efforts of the city's utility, Lusaka Water and Sewerage Company (LWSC).

WSUP has worked closely with Lusaka's water and sanitation stakeholders, including LWSC and Lusaka City Council (LCC), for a number of years. In particular, LWSC and WSUP have worked together to provide improved on-site sanitation facilities and FSM services to lower-income peri-urban areas (PUAs) of Lusaka. Thanks to funding from Bill & Melinda Gates Foundation (among others), LWSC has been able to improve sanitation access in a number of PUAs with WSUP's support, using context-specific service delivery models, tools and guidelines that have contributed to the strengthening of the urban sanitation sector as a whole.

The advent of the multi-million-dollar Lusaka Sanitation Program (LSP), led and implemented by LWSC and funded by international donors such as the World Bank and African Development Bank, provides an opportunity to consolidate and scale up the positive FSM pilots and small-scale projects in operation across Lusaka. This publication examines sanitation and FSM in Lusaka as the LSP begins, and how LWSC and WSUP's experiences in the city so far are contributing to the LSP as Lusaka moves towards citywide improved on-site sanitation and FSM service provision.

Beginning by outlining FSM in Lusaka as it is now and the projects that WSUP has been involved in to date, the publication then describes the structure and three major focuses of the LSP in relation to LWSC, particularly on-site sanitation improvement and institutional capacity building. Finally, the future design of urban on-site sanitation and FSM in Lusaka is examined in more detail.

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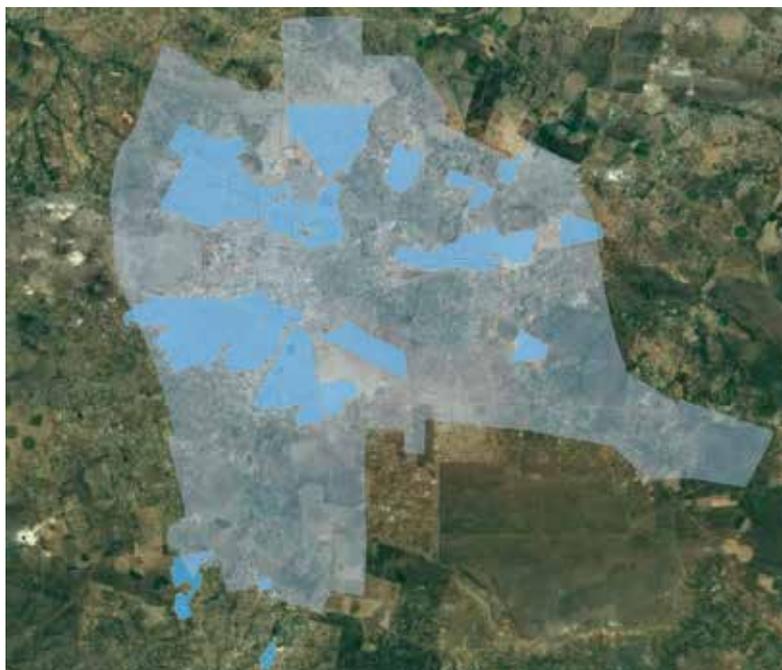
# 1. Sanitation in Lusaka: the current landscape

## 1.1 Disparities in sanitation access

Access to safe and hygienic sanitation services in Lusaka is highly dependent on social and geographical factors. The city is split between central districts and their surrounding informal neighbourhoods, commonly referred to as 'Peri-Urban Areas' (PUAs).

Lusaka's PUAs are more urban in character than the term 'peri-urban area' implies (see Figure 1). Most of the city's population live in Lusaka's 33 PUAs (almost 70% in 2007), which surround the smaller, planned central districts. Densely populated, the populations of Lusaka's PUAs are still growing (the city's average population growth rate was 4.6% per year from 2000-2010<sup>1</sup>), but lack the infrastructure vital to sustainable and equitable development, such as passable roads, in-home water points or centralised/small-bore sewer networks. Whether Lusaka's residents can access improved sanitation services and infrastructure is highly correlated to whether they live in the centre of Lusaka or in the city's PUAs.

Figure 1: Lusaka and its PUAs (highlighted in blue)



<sup>1</sup> Central Statistical Office (2012) 2010 Census of Population and Housing: National Analytical Report. Lusaka, Zambia

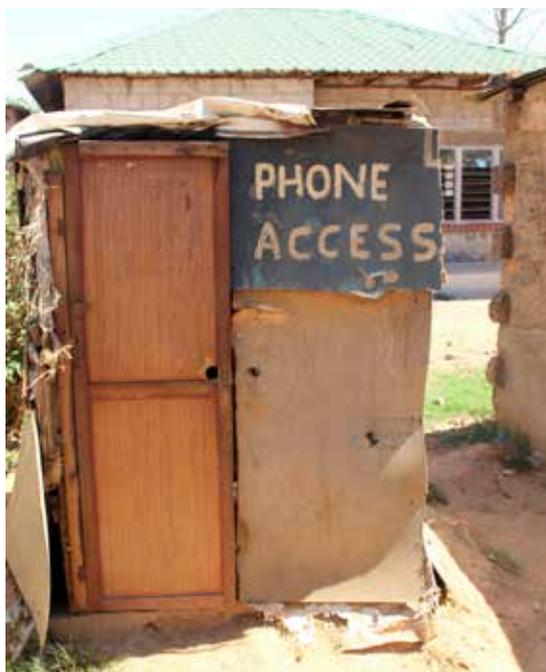
## 1.2 Sanitation service provision in Lusaka's PUAs

The lack of off-site WASH infrastructure in PUAs is not bridged by adequate on-site sanitation infrastructure (like improved toilets connected to septic tanks) or by efficient, clean and affordable on-site sanitation services (such as vacuum tankers that safely collect, transport and discharge sludge from latrines and tanks). A high water table means that groundwater is frequently contaminated, particularly as poorly constructed pit latrines leach their contents into the surrounding soil or overflow during the rainy season, affecting shallow wells and boreholes; recurrent outbreaks of diseases such as cholera are common in Lusaka. Extending sewerage networks to the PUAs would be a solution, but this is very unlikely to happen in the short and medium-term due to high cost and rapid unplanned urban expansion. In response, LWSC has developed an on-site sanitation strategy; they recognise that FSM services will have to be provided in areas that will not have access to a sewer network in the foreseeable future.

Those offering on-site FSM services using vacuum tankers (the majority of which are run by private businesses) only tend to do so in central districts. This is partly due to ease of access, as these planned districts are more spacious and have better roads than their peri-urban counterparts, but also because vacuum tanker owners feel more certain that they will recoup their costs if they concentrate on those living in more 'formal' areas.

## 1.3 Water Trusts and FSM

WSUP's experiences working with LWSC in Chazanga and Kanyama, however, demonstrate that financially viable services can be developed for low-income customers. Chazanga Water Trust (CWT) and Kanyama Water Trust (KWT) are contractually delegated to provide water and sanitation to residents in their respective PUAs by LWSC, the overall mandate holder for water and sanitation in Lusaka city. With support from WSUP, since 2012 LWSC has established pit emptying services (through CWT and KWT) staffed by contract workers, targeted at and funded by low-income residents. With oversight and technical support from LWSC, the Water Trusts manage the entire FSM chain from pit



emptying to disposal and reuse of the treated sludge as a manure. The sludge collected from pits in the PUAs is safely transported to decentralised transfer stations (of which there are now two in Kanyama and one in Chazanga), where it is partially treated in anaerobic digesters. The remaining solids are transported to drying beds for further treatment. The transportation is facilitated by privately-owned vacuum tanker operators. However, this is only the case in Kanyama where the treatment plant and drying beds are in different locations. Chazanga, on the other hand, has a compact system and all treatment and drying is in one location.

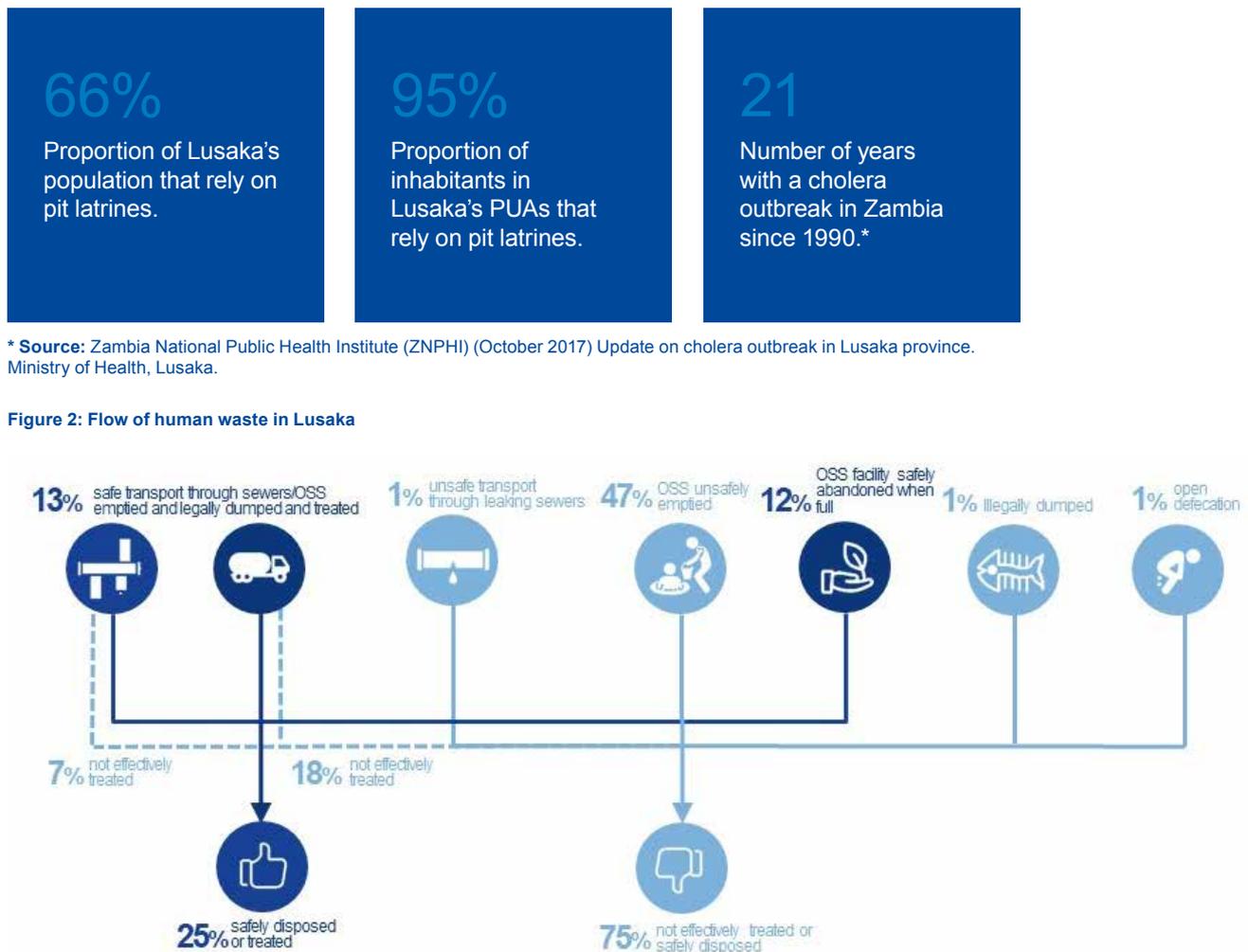
The pricing structure of the pit emptying businesses is designed to respond to the lower incomes of the areas which the Water Trusts serve. Three pricing bands were developed after service uptake and willingness-to-pay levels were determined in 2012, so households and businesses could choose from three fixed prices: removing 12 drums of sludge costs 250 Zambian Kwacha (just under US\$ 25), 24 drums costs 380 ZMW (US\$ 37) or 32 drums cost 450 ZMW (US\$ 44). This balances affordable payment options for customers with some degree of cost recovery for Water Trusts. However, these pricing bands must be updated to match inflation in Zambia so that the Water Trusts can become profitable.<sup>2</sup>

<sup>2</sup> WSUP (2017) Balancing financial viability and user affordability: An assessment of six WASH service delivery models, 12-13

The establishment of these pit emptying services, alongside the development of the appropriate infrastructure for transfer and treatment of the collected sludge, means that Chazanga and Kanyama residents can access a safely managed FSM chain that can be scaled up further if operational improvements are made. Already, CWT and KWT have expanded service access to around 52,400 people. By December 2017, 3,500m<sup>3</sup> tonnes of faecal sludge had been safely collected from latrines, transported and treated. There is significant growth potential since the three treatment plants are not yet running at full capacity (which is an estimated 1,000 tonnes each).

## 1.4 Remaining service gaps

Chazanga and Kanyama are the only PUAs with safe and affordable FSM. Other PUAs remain underserved by either manual pit emptiers or vacuum tanker operators, although the latter are sporadically hired by LWSC or Lusaka City Council (LCC) in response to cholera outbreaks to empty pits when judged necessary. Residents are forced to deal with full pits themselves or use informal pit emptiers, bypassing formally organised, safely managed services that protect public health. It is estimated that nearly 30,000 tonnes of sludge are produced in Lusaka every year – much of which remains in pit latrines which become unusable, are buried, or which overflow during Zambia's long rainy season, contaminating groundwater and contributing to the spread of diarrhoeal diseases such as cholera (see Figure 2).



\* Source: Zambia National Public Health Institute (ZNPHI) (October 2017) Update on cholera outbreak in Lusaka province. Ministry of Health, Lusaka.

Figure 2: Flow of human waste in Lusaka

Source: Adapted from Water and Sanitation Program (2014) Lusaka SFD/faecal waste flow diagram. World Bank.

## 2. Major WSUP activities in Lusaka from 2012-2017, and next steps

WSUP's main focus under the Bill & Melinda Gates-funded (BMGF) programme in Lusaka was to activate the market for on-site sanitation. Over a period of six years, this objective translated into several major activities:

- Supporting LWSC to develop and strengthen affordable and viable pit emptying services and treatment sites in Chazanga and Kanyama (delivered and managed through the PUAs' respective Water Trusts).
- Improving on-site sanitation data collection in Kanyama, which provides information that can be used by Water Trusts, sanitation enterprises and municipal health authorities.
- Working with sanitation stakeholders like LWSC and LCC to develop clear policies, guidelines and frameworks for on-site sanitation and FSM.

These projects, initiated and developed alongside LWSC, demonstrate significant improvements in on-site sanitation and FSM in areas that have previously been underserved. Given that on-site sanitation will continue to be a fact of life for the many thousands of people living in Lusaka's PUAs, the impetus now must be to expand, replicate and further develop these activities so that they can benefit people throughout the city for years to come. LWSC, thanks to the LSP, now has the means, support and drive to do so.



**Image:** Re-use of treated sludge produced by Kanyama Water Trust. **Credit:** Gareth Bentley

### 3. Towards citywide sanitation

The sanitation map of Lusaka is, to date, uneven; multiple service providers operate in central areas rather than across the city, and although policies and a framework are in place (thanks to the Ministry of Water Development, Sanitation and Environmental Protection - MWDSEP), their implementation is not fully underway. This will need to change in order to encourage new sanitation entrants or innovations that the rapidly expanding city requires.

However, great strides are being made to provide minimum service levels, regulations and guidelines for OSS and FSM. The national regulator – National Water Supply and Sanitation Council (NWASCO) – is leading this process with various stakeholders in the sector. In February 2017, a technical working group was created, of which WSUP is a member, to develop minimum standards and guidelines for OSS and FSM (see Section 4.1). With the creation of the new MWDSEP, the WASH sector is receiving more visibility and significant support from stakeholders.

LWSC and other stakeholders in the city, such as Lusaka City Council, are very aware of the negative consequences of inadequate sanitation. As a ‘full-service’ utility (albeit one that does not directly provide the full range of citywide water and sanitation services), LWSC is committed to extending sanitation to PUAs and improving WASH access city-wide. So far, the utility has found it too costly to extend sewers beyond the small core of the city that is connected to their network, to conduct on-site sanitation interventions in the PUAs, or to support the private sector to address the FSM service gap in its stead.

Critical to addressing this situation is the Lusaka Sanitation Program (LSP): a significant development in the city’s sanitation story. With financial backing from the World Bank, the European Investment Bank, the African Development Bank and the KfW<sup>3</sup>, and led by LWSC, the LSP is a major first step towards implementing the Government of Zambia’s Lusaka Sanitation Master Plan, which aims to achieve 100% improved sanitation coverage (both off-site and on-site) by 2035.<sup>4</sup>



**Image:** An LWSC water kiosk in Linda, supported by WSUP and Wasser für Wasser.  
**Credit:** Gareth Bentley

With a budget of around US \$350 million altogether (the World Bank component is around US \$68.5 million), the LSP will be the main vehicle of change in Lusaka for the foreseeable future. There are three pillars to the LSP (see Figure 3). Of these, the latter two are especially important for the large unsewered population of Lusaka: developing on-site sanitation infrastructure and service provision, and strengthening the capacity of LWSC.

WSUP’s previous experience in supporting FSM service delivery in two PUAs plays a key role in creating viable solutions for this segment of the population.

**Figure 3: The three major pillars of the LSP**



<sup>3</sup> Kreditanstalt für Wiederaufbau

<sup>4</sup> <http://www.lwsc.com.zm/projects/lusaka-sanitation-project/>

### 3.1 Expanding sewerage networks

Only about 10-20% of the city is currently connected to sewerage services. The LSP is to upgrade the existing sewerage system infrastructure and expand the system to some unserved areas. LWSC projects that an additional 4,100 new connections will be provided, equating to around 33,000 beneficiaries.<sup>5</sup> They do not plan to connect the remainder of Lusaka to sewers by the close of the LSP, hence the additional objectives to strengthen the capacity of LWSC to deliver on-site sanitation, and to encourage the development of the market for FSM service provision.

### 3.2 Strengthening sanitation institutions

The LSP prioritises technical assistance to LWSC from the World Bank and other stakeholders. This assistance will be designed to ensure that the utility can establish the financing, asset management, monitoring and training necessary to assure the long-term development of sanitation systems beyond the lifetime of the LSP (due to end in 2021).

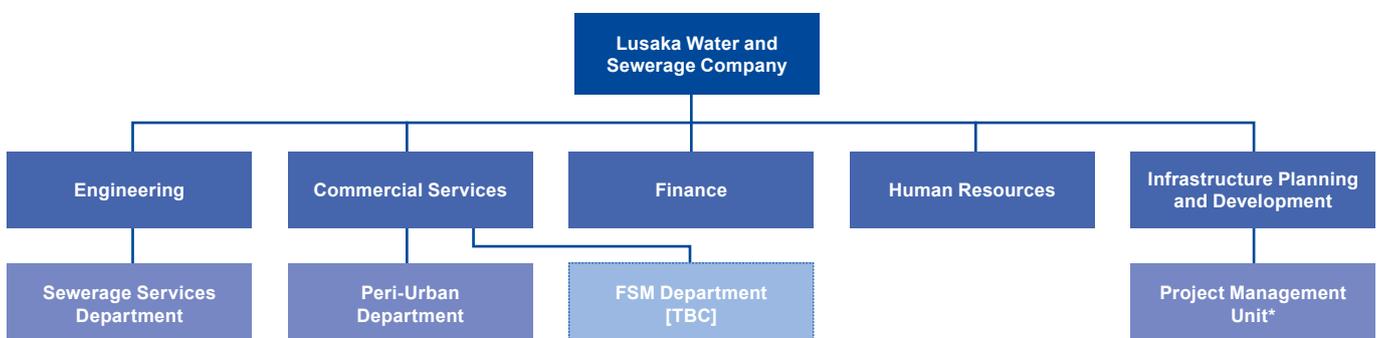
LWSC's experience has so far been limited to traditional water and sewerage service provision. The LSP therefore explicitly aims to improve LWSC's capacity for on-site sanitation to match its experience of off-site sanitation (see Figure 4).

### 3.3 Developing on-site sanitation

The LSP recognises that connecting all of Lusaka to a centralised sewer network is not feasible in the foreseeable future. Importantly, the ongoing reliance on on-site sanitation amongst PUA residents is explicitly recognised, and the World Bank notes that investing in on-site sanitation will have a greater impact on public health than investing in sewerage collection, given the expense of extending the network and the difficulty of recovering costs through tariffs.<sup>6</sup> Accordingly, improving the decentralised sanitation chain in PUAs is a significant aspect of the LSP's design. New and upgraded FSM service providers and infrastructure (such as improved septic tanks and toilets) will serve an estimated thousands of on-site facilities, which will in turn benefit around 450,000 people in PUAs. These will be supported by four FSM treatment plants and 10 new decentralised wastewater treatment systems.

Improving on-site sanitation services on offer to lower-income consumers will require engaged and proactive service providers focused on customers, especially at the front end of the sanitation chain - those constructing and selling upgraded latrines, emptying septic tanks and pit latrines, and transporting sludge to transfer and/or treatment sites. Designing and applying sustainable service delivery models that can deliver those services and infrastructure at scale will catalyse the market for sanitation products.

Figure 4: LWSC organogram



\* PMU takes the lead for the implementation of the LSP. They work closely with staff from the SSD and the PUD, alongside as other municipal, national and international stakeholders.

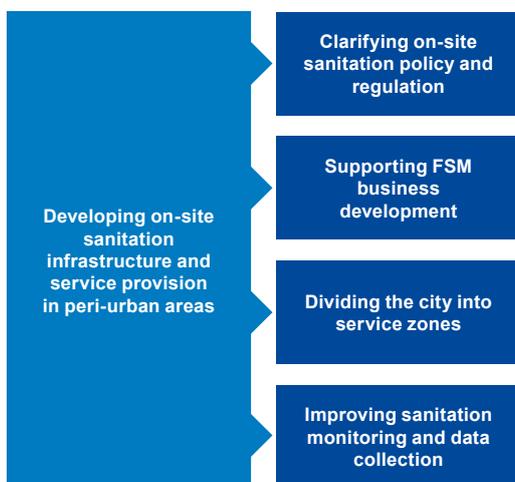
<sup>5</sup> <http://www.lwsc.com.zm/projects/lusaka-sanitation-project/>

<sup>6</sup> <http://documents.worldbank.org/curated/en/991071468184429548/pdf/PAD1204-PAD-P149091-IDA-R2015-0102-1-Box371422B-OUO-9.pdf>

## 4. Delivering safely managed FSM in Lusaka: renewed focus on on-site sanitation

This section focuses on the on-site sanitation improvement pillar of the LSP. Numerous cross-cutting and mutually supportive activities are in development; while the detail of how these will be implemented is still in flux given the early stage of the LSP, the projects outlined here aim to achieve citywide progress in FSM and OSS over the next few years. WSUP is involved through its ongoing programmatic activities and support to LWSC in developing and implementing a business plan for the FSM market in Lusaka and support to a team developing sanitation marketing strategies for Lusaka. The last two components are being delivered by WSUP Advisory, WSUP's consultancy arm.

Figure 5: Planned on-site sanitation improvement activities in Lusaka



The LSP will require citywide public and private collaboration in FSM and OSS, led by LWSC and international practice as well as prior experiences delivering improved sanitation services in areas like Chazanga and Kanyama as demonstrated by WSUP and BMGF's work. Perhaps the most innovative aspects of WSUP's support will be in helping LWSC continue its journey from being a utility that directly delivers services to becoming the facilitator for an efficient market for service delivery. This will require a thoughtful market design, alignment of incentives of the various actors in on-site sanitation service delivery and a citywide approach.



Image: A Water Trust team in Kanyama assess a pit latrine.

Cross-sector capacity strengthening of this scale will require multiple stakeholders to coordinate efforts in Lusaka, including public bodies, FSM businesses and the donor community. The combination of a utility that has the mandate to improve provision and the willingness to do so, alongside significant large-scale infrastructure investment and dedicated efforts to build the capacity of LWSC, means that 2018 is a turning point for sanitation in Lusaka.

### 4.1 Clarifying OSS policy and regulation

There is strong high-level commitment in Lusaka and Zambia to achieve national sanitation targets and Sustainable Development Goal 6. In 2017, the LWSC board approved a new on-site sanitation strategy. WSUP has been asked to help refine and develop this strategy and to incorporate it into the corporate strategy of LWSC.

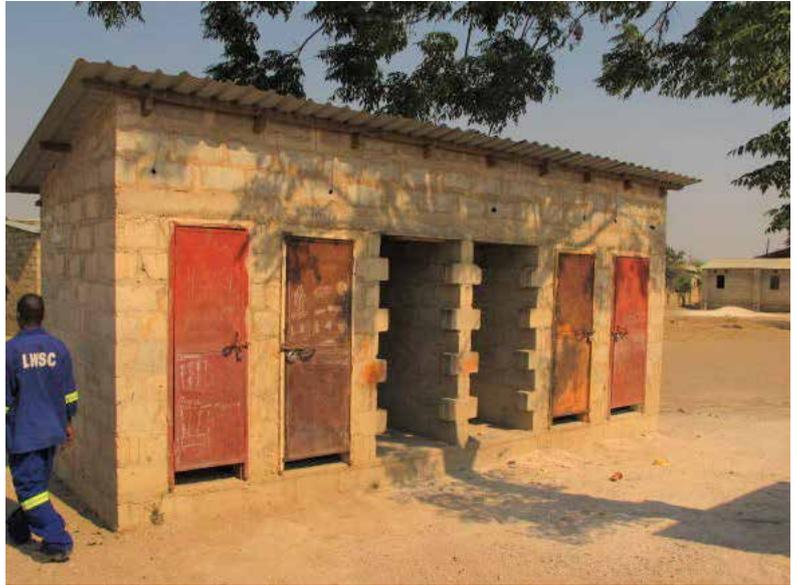
However, gaps in policy and regulation regarding on-site sanitation and FSM remain. While the Zambia Environmental Management Agency (ZEMA) is mandated to issue emptying and

transport licenses for vacuum tanker operators, no such licenses exist for manual operators. The only formalised manual emptiers are those operating under CWT and KWT. Vacuum tanker operators obtain permits to discharge waste at LWSC's Manchinchii wastewater treatment plant, but there are no proper checks to ensure that only those with valid licenses use the facility. Overall, the regulatory environment is porous, with no overarching pricing structure that would ensure cost recovery and affordability of services offered to consumers, and unsafe emptying practices are highly plausible. The problem is compounded by the fact that dumping fees are not based on volume of sludge discharged but rather the capacity of vacuum tankers.

In response to these challenges, NWASCO is in the process of developing standards for regulating OSS and FSM, alongside major national stakeholders (including LWSC, Lusaka City Council, MWDSEP, ZEMA and the Water Resources Management Authority). This new draft framework for urban sanitation will cover on-site sanitation and FSM. WSUP and GIZ are supporting this process. The exact content and wording is still under discussion, but as it currently stands, the framework will introduce minimum standards for the design of residential toilets, pit emptying procedures and storage and/or treatment facilities, and a procedure for licensing faecal sludge removal. Sanitation service providers would also receive institutional support, with NWASCO potentially taking on the responsibility for providing guidelines for licensed water and sanitation providers' annual business plans, updating tariffs and working with MWDSEP to introduce financial mechanisms to encourage new entrants.

## 4.2 Supporting FSM business development

WSUP's partnership in Lusaka with BMGF focuses on supporting and expanding the FSM services offered by LWSC through Kanyama and Chazanga Water Trusts, and so catalysing the urban on-site sanitation market. The overarching aim for WSUP in Lusaka is to improve the wider regulatory, policy and business environment to encourage business and consumer confidence in FSM service provision. There are clear areas of overlap between the LSP's objectives and WSUP's work in Lusaka so far. For example, the success of the WSUP-supported pit emptying



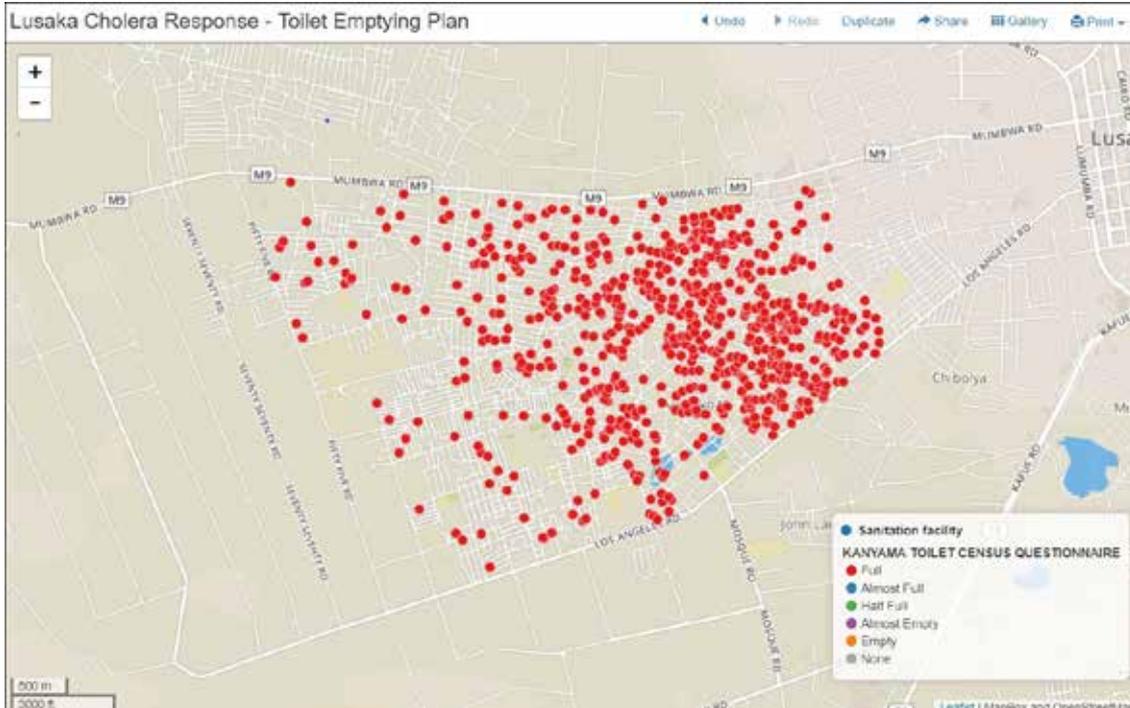
**Image:** Shared sanitation facilities in John Laing, Lusaka

teams in Chazanga and Kanyama and the operation of the decentralised transfer and treatment facilities in these two informal settlements demonstrated to LWSC that these models could be replicated in Lusaka's other PUAs as part of the LSP.

For this level of scale-up to happen, extensive market development will be required to support LWSC, some Water Trusts, private vacuum tanker operators and other entrepreneurs to transition to become mature service providers delivering FSM and OSS services across the city. While the prevalence of on-site sanitation facilities and the lack of safe emptying services (private or public) in Lusaka means that there is a gap in the market for FSM and OSS businesses, entrepreneurs face structural barriers that result in a high cost of entry and uncertainty over the long-term viability of sanitation businesses. Residents in peri-urban areas who want to upgrade their toilets or hire a formal pit emptier cannot access those products or services easily, as the market may not be responsive to their needs.

In 2017, WSUP rapidly surveyed the existing private sector landscape in Lusaka to assess the appetite and ability of businesses like plumbers and solid waste managers to start working in FSM. The survey identified enthusiasm about expanding into on-site sanitation service delivery, but also uncovered fundamental gaps that need to be bridged; many companies, for example,

Figure 6: Lusaka cholera response: Toilet emptying plan, November 2017



Source: Kanyama Toilet Census Questionnaire, mWater. LWSC.

cannot access the level of funding required to move into FSM.<sup>7</sup> The findings from this survey, however, can feed into LWSC's planning and strategy, allowing the utility to identify entrepreneurs who need support and potentially offer capital for the necessary equipment.

One sub-project within the LSP will evaluate the current business potential for FSM services in Lusaka, develop a clear and extensive FSM business plan with LWSC, and assess alternative service delivery models and the viability of various PPP and franchising options for FSM service delivery. WSUP Advisory is working with LWSC and other sanitation stakeholders to develop internal knowledge of FSM service provision across the sanitation chain and increase its capacity to implement appropriate reforms to unlock private sector entrance and support.

The LSP will also support extensive sanitation marketing across the city to promote the adoption and construction of good quality emptiable household toilets and the utilisation of formal pit emptying services.

Under the LSP, LWSC also plans to develop a call centre that would handle all customer enquiries, requests for connections and services and complaints. This could significantly improve the flow of information to customers and service providers and improve the operation of the market.

### 4.3 Dividing the city into service zones

Unregulated and uncontrolled competition from informal emptiers and tanker operators undermines the ability of service providers to scale up their services. The LWSC sanitation strategy proposes supporting FSM service delivery by dividing Lusaka into geographic 'zones' where FSM service providers such as manual pit emptiers and vacuum tanker operators would work exclusively in assigned areas. A similar approach has been successfully adopted for solid waste management by Lusaka City Council. These zones would include a mix of customers (residents, businesses and industries) and allow for economies of scale and the introduction of cross-subsidies by service providers to increase their customer base.

<sup>7</sup> Ndaba S (2016) Rapid assessment of existing and potential private sanitation businesses. Lusaka, Zambia. WSUP

In time, this would improve operational efficiency, contributing to improved margins and returns. LWSC and other stakeholders are currently considering how exactly the city will be divided, but zones could be aligned with pre-existing administrative divisions or linked to existing/planned disposal and treatment facilities.

#### 4.4 Improving monitoring and data collection

Lusaka's peri-urban residents are reliant on on-site sanitation facilities, but providing FSM services and products at scale will require more detail about customers and their facilities than is currently available. Public authorities like LWSC, LCC and ZEMA need data on on-site sanitation systems to monitor services offered in the city and protect public health. LCC, for example, has information on addresses and property rates, but no data on on-site sanitation systems, their location and their condition.

To bridge the data gap, WSUP has led on the creation of a data collection and visualisation tool that provides information on toilets in Kanyama, including location, owners, number of users, status of their super-structure and sub-structure, and details on emptying history. WSUP collected demographic information and logged details of the structures and emptying processes through questionnaires, while GIZ funded and collected geo-spatial data so the questionnaire information could be tied to a map displaying the precise location of each toilet. The Toilet Tracker now displays the status of around 16,500 toilets and latrines, so Kanyama's sludge levels can be seen at a glance.

With support from GIZ, LCC is currently preparing to collect additional data information in three additional PUAs: Chazanga, George and Chawama. The data could provide contextual detail about the sites of planned interventions under the LSP, particularly if data collection is expanded to include other PUAs as planned and data management is properly codified within LWSC or LCC. The implications for public health in Lusaka are significant: already, data collected in Kanyama was used to design the city's response to a recent cholera outbreak; LWSC were able to identify the source of the outbreak in Kanyama and proactively empty full pits safely before they overflowed and contributed to the spread of the disease (Figure 6).

As part of the business development support to LWSC, WSUP will also assist in the development of a monitoring and evaluation approach to an FSM market serviced by multiple service providers.

##### 4.4.1 What data collection reveals about sanitation practices in one PUA

The information collected through the questionnaire portion of the data collection process provides an interesting overview of Kanyama residents' access to sanitation, and their attitudes towards emptying, costs and service provision. While the data has not yet been fully analysed, some immediate patterns are apparent. For example, around 11,000 people who have never emptied their pits say this is because their pits have never been full. This is by far the most popular reason for not emptying pits but stands in contrast to another finding: around 80% of the surveyed toilets were more than half full and ready for emptying. Of those, 4,000 were already completely full or almost full (see Figure 7).

This disparity could be due to any number of reasons. The data collection survey was completed during the rainy season; demand for KWT's emptying service spikes beforehand as customers proactively empty their pits before the water table rises, and spikes again just after the rains as the groundwater levels are at their highest.

Figure 7: Map showing location of toilets in Kanyama, colour-coded by fullness



Source: Kanyama Toilet Census Questionnaire, mWater. LWSC.

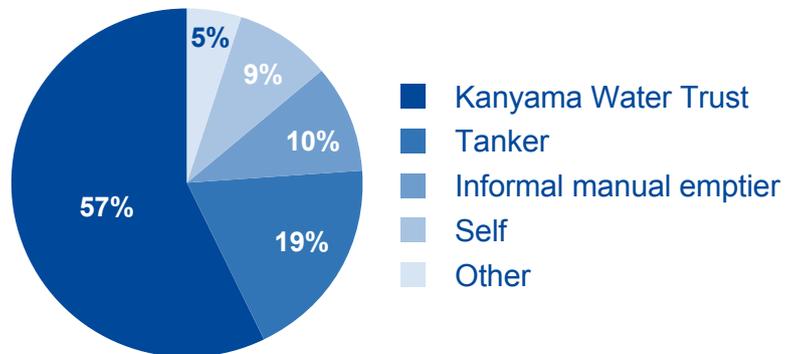
Alternatively, if pit latrines were constructed within the last two or three years, they may not yet be full; pits may have filled up and could have been buried or abandoned rather than emptied (while this is technically defined as a 'safe' way of disposing of faecal sludge by the JMP, WSUP does not recommend this in urban or peri-urban areas where space is limited and groundwater levels are high, as this could result in groundwater pollution or subsidence); unlined pits could be leaking into the ground at a faster rate than expected in some areas; residents could be paying informal manual emptiers to remove sludge and dispose of it in an unofficial dumping site or emptying their latrines themselves (if this is the case, they may understandably be withholding that information); or the resident may change residences every few years and will not empty their pit before moving.

#### 4.4.2 Targeting customers

Information like this is invaluable for sanitation service providers such as KWT, toilet construction companies, artisans and other sanitation actors. Not only can they monitor immediate demand and target potential customers based on the fullness of their pits or whether their latrines could be upgraded to pour-flush latrine models, but they can project demand for emptying months into the future and plan accordingly. For small organisations operating in a challenging and unpredictable sector, this information could result in cost efficiency savings that could push them into profitability and scale-up.

Capturing this data provides an overview of the primary bodies involved in pit and tank emptying in Kanyama. For the most part, the answer correlates with the findings above: few had reportedly emptied their toilet. However, of those who had emptied their toilet, Kanyama Water Trust took the major market share (57%, see Figure 8).

Figure 8: Toilet emptiers operating in Kanyama



Source: Kanyama Toilet Census Questionnaire, mWater. LWSC.

## 5. Conclusion

The focus, resource and expertise now coalescing in Lusaka could result in significant and widespread improvements to sanitation, public health and management capacity across the entire city over the next few years. While it is impossible to predict whether these ambitious aims will be fully realised, the clear presence and commitment of LWSC and its senior management bodes well for the potential sustainability of the numerous projects and programmes currently taking place.

LWSC aims to replicate projects established and developed by WSUP with support from Bill & Melinda Gates Foundation and Comic Relief, such as the FSM services run by LWSC through the Water Trusts in Chazanga and Kanyama. These activities were a significant step in Lusaka's journey towards citywide sanitation - demonstrating the need for on-site sanitation and FSM to be institutionalised, strengthened and made into a sector that was open, accessible and responsive to need.

Based on these experiences, WSUP will continue to work closely with LWSC and other sector partners, focusing on building institutional knowledge, buy-in and capacity to deliver and expand access to improved on-site sanitation services for everyone that will not be connected to sewers in Lusaka for the foreseeable future.



Image: An LWSC employee talks to residents in Chazanga

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