

Subsidies for faecal sludge emptying: lessons from Kampala and Lusaka

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Figure 1 – Source: KCCA

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Summary

Globally, most cities in low-income countries have limited or no access to centralized sewers. Households in these cities, especially those living in Low-Income Settlements (LISs), have a high degree of reliance on On-Site Sanitation (OSS) systems– septic tanks or pit latrines, which require periodic emptying to function properly. However, due to the high cost of emptying, many OSS may only get emptied once in 5–10 years as opposed to the recommended once in 2–3 years, or are simply abandoned when full, posing risks to public health and the environment. The emptying market is also often underdeveloped and dominated by informal service providers.

To address the issues of low demand for emptying and unsafe emptying practices, the cities of Kampala and Lusaka have experimented with subsidy models for faecal sludge emptying. Kampala piloted a voucher-based subsidy that targeted the most vulnerable households, whereas Lusaka adopted a self-selected targeting approach aimed at increasing overall emptying demand while gradually phasing out the subsidy. This case study describes the two models, the context for their design, how each model is influencing emptying outcomes and the lessons learned.

Overview

Geographical information

Country: Uganda

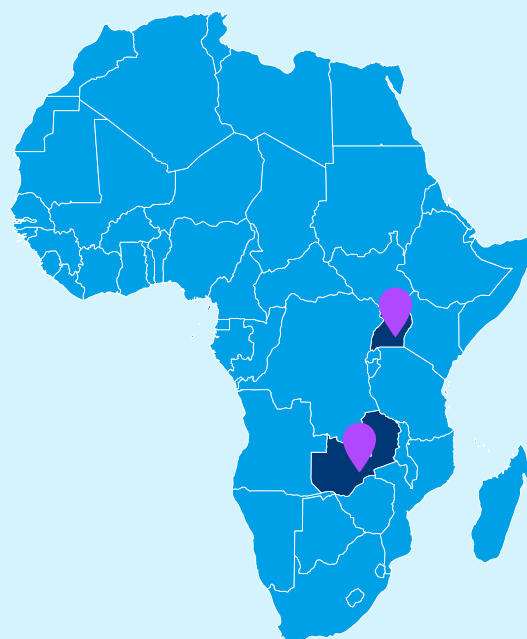
City: Kampala

City population: 1,600,000

Country: Zambia

City: Lusaka

City population: 2,600,000



Problem

- Kampala and Lusaka are large capital cities in Sub-Saharan Africa with at least 60–70% of their population living in Low Income Settlements (LISs), where the predominant form of sanitation access is OSS facilities that need periodic emptying for environmental and public health safety.
- Due to the high cost of pit emptying, households traditionally abandon pits when full. However, this practice is no longer feasible in densely populated areas due to space constraints. Many households have thus turned to informal pit emptying services which are unsafe.
- Lack of formalized emptying services in LISs further creates challenges around service quality and unsafe practices, such as illegal dumping.

Solution

- Lusaka and Kampala have chosen to tackle the emptying challenges through contracting models with subsidies. Kampala offers a voucher-based subsidy that targets the most vulnerable households, whereas Lusaka provides a blanket volumetric subsidy for all eligible households (residing in LISs and using pit latrines) through performance-based contracting of service providers. These models are meant to address the emptying issues by increasing demand and affordability for emptying, while formalizing the emptying market to ensure service quality and safety.

Problem

Kampala and Lusaka are big capital cities in Sub-Saharan Africa with more than half of their population living in LISs, which are densely populated and unplanned informal settlements with limited access to sanitation services. The predominant form of sanitation access in these LISs is pit latrines, many of which are unlined or partially lined pits, as they are more affordable than septic tanks. Table 1 summarizes the basic sanitation scenario in these two cities.

Table 1: Population and OSS access.

	Kampala	Lusaka
Population	1.6 million	2.6 million
% of population in low income settlements	60%	70%
% of population relying on pit latrines	75%	64%
% of population relying on septic tanks	23%	22%
Number of community toilets in the city	790	No information

Some of the major sanitation challenges in these LISs, especially around faecal sludge emptying, include high number of households sharing a toilet and poor toilet standards and designs. The high frequency of use results in toilets filling up quickly; however, households are often unwilling or unable to pay for emptying services, and many of the pit latrines in LISs are inaccessible by emptying services due to narrow streets. Moreover, the increasing space constraint in the LISs means that it is becoming less feasible to abandon pits when they are full.

The difficulty of emptying in LISs is further exacerbated by the high cost of pit emptying and the lack of formalized services in LISs. Compared to septic tank emptying, pit latrine emptying tends to be more expensive due to the higher labour intensity, as the faecal sludge content of pits is usually more concentrated with less water content and unsuited for removal through vacuum trucks. Many households hence construct very large pits that take a long time to fill up and engage informal emptiers when the pits are full. Informal services are often associated with poor service quality and unsafe practices such as illegal dumping. Hence, the cities need to increase demand and affordability for emptying while formalizing the emptying market to ensure service quality and safety.

Solution

Table 2 summarizes the different emptying subsidy models developed by Kampala and Lusaka. Kampala started the programme during the COVID-19 pandemic as an emergency emptying initiative to control the potential spread of viruses through human waste, and the programme evolved through the seven rounds of emptying to date. On the other hand, the programme in Lusaka has been operating continuously under the same overall design, enabled by a dedicated donor grant budgeted for 2.5 years of programme costs. In both cities, the contractors receive the subsidy from the city government/utility upon satisfactory completion of the services.

Table 2: Design of the models for emptying subsidy

	Kampala	Lusaka
Start-end date	2020/4 – 2022/6 7 rounds of emptying subsidies	2020/2 – 2022/8 (expected)
Implementor	Kampala Capital City Authority (KCCA)	Lusaka Water Supply and Sanitation Company (LWSC)
Funder	Multiple donors	World Bank, under the Lusaka Sanitation Program (LSP)
Types of OSS eligible	Pits and septic tanks	Pit only
Number & type of service providers (SPs) contracted	10 (1 cesspool SP + 1 gulper SP in each of the 5 divisions)	12 (2 technology neutral SPs + 2 manual SPs in each of the 3 zones)
Includes community toilets?	Yes	No
Subsidy for each beneficiary household (HH)	Rounds 1–3: 1 barrel (160 litres) Round 4: 70% of the cost of 5 barrels Round 5–6: 60% of the cost of 5 barrels for general HHs; 100% for vulnerable HHs Round 7: 50% of the cost of 5 barrels (1000 litres total) or 1 cesspool trip (4 m3) Additional barrels/ trips are paid by HHs at full cost	60-70% of the full cost of emptying a pit, depending on the service provider's bid price
Targeting approach	Geographic + community-based targeting	Geographic + self-selection targeting based on type of sanitation facility used (pits only)
Subsidy activation	Beneficiaries are individually identified by designated teams and approved by KCCA; vouchers are given to beneficiaries for using the subsidy at the time of service	Anyone eligible (living in the peri-urban areas with a pit latrine) can contact the operators directly and pay the subsidized price; no other procedure or proof required

At least 92% of the targeted beneficiaries in Kampala benefited from the subsidies. The shortfall was largely attributable to households misplacing the vouchers given to them and hence unable to schedule the service. This was ameliorated in later rounds due to the shift from a paper-based voucher system to a digital platform. Lusaka has achieved its target of emptying 12,800 toilets by the first quarter of 2022. Figure 3 shows manual pit emptying (using a pitvaq emptying equipment) service provider in Lusaka.



Figure 3 – Manual Emptying in Lusaka, Source: LWSC

Lessons learned

Kampala's voucher system benefited the most vulnerable households in dire need of emptying, whereas Lusaka's broad eligibility criteria encouraged more households to avail the subsidy and was able to achieve some level of economies of scale. As both cities used the ownership of formal licenses as an eligibility criterion for service providers to bid for the contracts, more emptying companies have been seen to make efforts towards formalization.

Meanwhile, both cities shared a set of challenges while implementing their programmes, including costing underestimates by service providers, payment delays by service authorities due to issues such as bureaucracy and structural concerns regarding unlined pit latrines which collapse easily during emptying.

Even though unlined pits are cheaper to construct, the overall cost over a period would be higher for substandard pits because they collapse. This raises a set of important questions – is emptying for the poorest always valuable if the pit has a high risk of collapsing? How do we connect emptying subsidy to OSS upgrades to maximize benefits for the poor and cost effectiveness? Both Kampala and Lusaka have also been working to establish OSS standards and upgrade substandard systems, and their lessons may be valuable for policymakers.

Further reading and references

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- Carsten Glenting / VMAS. 2019. Performance-Based Contracting for Improved Faecal Sludge Management Services in Lusaka: Contracting Strategy Report.
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- KCCA. 2021. Phase III Relief Pit Emptying Report: December 2020 to January 2021.
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- LWSC. 2019. Sample Performance-Based Contract for Improved Faecal Sludge Management Services (FSM) in Lusaka (Technology Neutral).
- LWSC. 2021. Performance-Based Contracting for Improved Faecal Sludge Management Services in Low Income Areas of Lusaka, Zambia (CWIS webinar presentation).
- LWSC. 2021. Performance Scorecard for Operators.
- WSUP Advisory. 2018. Market Assessment Report Consultancy for Faecal Sludge Management: Business Development Support To LWSC.

About the institutions / organisations

Kampala Capital City Authority (KCCA) is the local government of the City of Kampala in Uganda.

www.kcca.go.ug/about-the-authority



Water for People (WfP) is a global non-profit helping improve access to clean water and sanitation, subcontracted by KCCA to implement the programme.

www.waterforpeople.org/uganda

Lusaka Water Supply and Sanitation Company (LWSC) is the water and sanitation utility operating in Lusaka Province, Zambia.

www.lwsc.com.zm/about-us



Monitoring, Learning and Evidence (MLE) partner: **Athena Infonomics** is a data-driven global consultancy, supporting eight cities in Sub-Saharan Africa and South Asia in their Citywide Inclusive Sanitation programmes.

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IWA's Inclusive Urban Sanitation initiative responds to a huge and growing public need - safe sanitation in combination with access to safe drinking water and hygiene underpins good health. The aim of this initiative is reshaping the global urban sanitation agenda by focusing on inclusive sanitation service goals--and the service systems required to achieve them - rather than the traditional singular focus on expanding sewer networks and treatment works. This forms part of IWA's larger agenda to promote inclusive, resilient, water-wise, and sanitation-secure cities.

About the Inclusive Urban Sanitation Stories

The Inclusive Urban Sanitation stories are documenting some of the policies, practices, and approaches that demonstrate how stakeholders especially those in urban areas (e.g., public sector, operators, academics, regulators, and other key actors) are taking part or contributing to Sustainable Development Goal 6 which require water and sanitation concepts and norms to look beyond technology and the usual focus on building infrastructure. Increased focus is on safety, inclusion, environment, public health, and multiple technology solutions tailored to different geographies and socio-economic contexts for building climate-resilient cities. The stories aim to inspire urban stakeholders to discuss ways for advancing inclusive urban sanitation, especially in low- and middle-income countries.

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