



Strengthening Sanitation Markets in Informal Settlements in East African Cities

Introduction

This policy brief reports on an investigation of three case study cities, Kigali (Rwanda), Kampala (Uganda) and Kisumu (Kenya), to identify how sanitation markets in East Africa can be made to function more effectively and provide residents with more adequate services, services that meet their needs and are affordable. It is based on a mixed method approach where 1794 households from Kigali, 1666 households from Kampala and 1927 households from Kisumu were surveyed. This was complemented by qualitative research involving 83 focus group discussions, 99 interviews and 3 deliberative forums.

In East Africa over half the urban population live in insanitary and overcrowded conditions in informal settlements - 55% in Kenya, 63% in Uganda and 68% in Rwanda. Some researchers have argued that improving sanitation in the informal settlements of Sub-Saharan Africa requires that sanitation markets are strengthened. According to the basic principles of supply and demand, a market without available goods occurs for two main reasons: either, because there is insufficient demand for the goods; or because demand is so high that supply has run out. Although demand is important in sanitation, a key component of sanitation market is supply.

There are seven, factors relating to supply; product, price, place, promotion, policy, partnership and people. In this policy brief, we are mainly concerned with three of these factors - product, price and promotion. The product can be an item (e.g. a latrine) or a service. Services which are

needed in informal settlements include construction/installation of sanitation facilities, supply of sanitation products, repair/maintenance of facilities, emptying services, transportation/treatment/safe disposal of waste and education/ sensitization of the community about good hygienic practices. However, there is insufficient private sector involvement in the sanitation sector because of lack of a commercial market, low creditworthiness and low potential for income generation. Promotion of sanitation might include something which helps to get the customers' attention and convince them to buy the product or make use of the service. However, often the key users of the services, particularly women who are traditionally involved in the health of a household, are not aware of the services available.

Research Findings

Our findings show that there are similarities and strong differences between the three case study cities in terms of sanitation markets in the case study settlements. While construction and emptying services are more available in Kampala, and to a lesser extent in Kisumu, organic solutions are mostly available in Kigali. The findings from the qualitative research suggest that the main providers of services are informal sector workers, shopkeepers selling building materials and artisans offering building and emptying services. Generally, the materials required for building a facility were available in the informal settlements although materials were said to be very expensive in Kigali because most building materials are imported. Artisans are available to build latrines but they are general builders rather than specialists in sanitation. However, while these artisans are organized into cooperatives in the settlements of Kigali, there was no evidence of a coordinated market in any of the settlements of Kampala and Kisumu but rather a fragmented network of informal service providers.

The findings also indicate that there is a serious deficit of trained workers in Kigali which means that charges are high. The emptying services are available in all three cities but only operators with vacuum trucks provide service in Kigali, restricting use to better-off households living in accessible locations and not those living in informal settlements. In Kampala and Kisumu, manual and mechanical emptying services are available although the former is the more frequently available. However, in Kisumu the informal manual emptiers observed that they do not advertise their services because they are operating illegally. In all three cities, service providers were found to rely on word of mouth rather than advertising. Generally, in all case study settlements, the use of sanitation products and services remains limited compared to their availability. Barriers to the use of sanitation products/services and possible solutions to constraints for these barriers are summarized in Table 1.

Table 1: Key Constraints and Operational Solutions for Sanitation Market

Constraint	Cause	Solution
Lack of promotional activities (All cities)	Inadequate marketing	Strengthen supervision and inspection by community health workers on household sanitation facilities
Lack of skills by residents and service providers (All cities, especially in Kigali)		Provide training to service providers and establish demonstration sites to provide a range of options such as pit digging services, superstructure building, use and maintenance of latrines, increase awareness on various sanitation products and services
Lack of awareness of existing sanitation products/services (All cities)		
Limited availability of sanitation products and services (All cities)	Weak supply system and poor planning	Strengthen management and supply and provide supervision
Insufficient money and limited access to finance by households and sanitation entrepreneurs (All cities, especially in Kampala and Kisumu)	Insufficient money allocation and undeveloped finance system	Facilitate access to finance, by encouraging microfinance institutions to lend for sanitation
		Create demand for faecal waste for example as manure, biogas
Weak demand for existing sanitation products and services by residents and service providers (supply-side) (All cities)	Household resources and willingness /ability to pay	Develop and promote appropriate finance schemes Choose improved technologies with low costs or enhance willingness to pay through income generation from re-use of wastewater and nutrients
	Limited cash flow/livelihood demands- associated with poverty	Apply micro-finance options and strengthen social support protection (e.g. ubudehe) in Kigali, plus other social-based mechanisms (if any) to suit the local context
Limited infrastructure (Poor road access, sewerage, etc.)	Insufficient cross- sectoral action due to poor planning	Promote small trucks and motorbikes offering small services to decrease costs
Lack of space		Promote cross-sectoral collaboration and strengthen coordination and planning at the local level

Overall, the main reason given by owner-occupiers for not using services and products was cost, although this varied across the three cities and also varied for different products and services. In Kigali and Kisumu, for example, the cost was said to be the main barrier to building an improved sanitation facility. Findings are generally in line with findings from the previous research in African countries. For example, a study conducted in South Africa identified high cost as the biggest factor preventing households from benefiting from improved sanitation. Furthermore, households are provided with sanitation products and services that they do not want to buy. This concurs with findings from another study conducted in Bangladesh, Indonesia, Peru and Tanzania where some residents did not purchase improved sanitation facilities because they do not find available options attractive enough.

The findings also show that because of the increase in population in the informal settlements combined with limited land, the space available for constructing new traditional pit latrines is becoming more and more limited especially in the informal settlements of Kigali and Kampala. This is supported by a study conducted in Nairobi, Kenya where it was argued that it is not feasible to provide individual sanitation facilities in high-density slums with limited space. It must be noted that the barriers go beyond marketing issues; some settlements are geographically rugged and contain difficult terrain, with numerous rocks present in the subsoil, forcing many people to settle for shallow pits as opposed to deeper ones. Lack of vehicular access makes it impossible for service providers to use trucks to empty latrines.

Addressing the range of constraints with a suite of interventions is likely to be more effective than targeting single constraints. Some of the constraints related to the lack of skills by residents and service providers can be addressed by a combination of education programs and support to develop emptying services until they can affordably serve all. In addition, it is important that residents are aware of the availability of sanitation products and services and the process to access these are clear and user-friendly. To be effective however, changes will need to be accompanied by appropriate communication. Other strategies may include using marketing materials and branding to spread information on proper waste management at the household level e.g. posters, radio dramas. Addressing the constraints related to the limited

infrastructure (poor road access, sewerage, etc.) and lack of space requires in the long-term national and local planning and broader cross-sectoral action.

In the short-term, contextualized technologies (for example MAPET and Gulper) that take space and emptying difficulties into consideration are needed. However, emptying services are often associated with waste disposal. The establishment of transfer stations in the settlements was recommended by other studies because they enhance resource recovery and re-use of faecal sludge. However, evidence from the findings reveals that there is a lack of understanding and skills among informal providers (such as manual emptiers) about the appropriate way of disposing waste and the construction of various latrine technologies, which could be improved through training. However, training alone is not enough to build the capacity of the informal providers to upscale the delivery of improved sanitation. What is also required is more information on the available financial systems and lower-cost appropriate technologies through information centers or san-marts.

Conclusion and Findings Implications

First, noticing the mismatch between demand and supply, sanitation intervention should be focused on the households rather than the suppliers of sanitary products. This involves understanding consumers' needs, desires, habits and the circumstances required for a facility to be acceptable and meet the needs of users rather than what fits the supplier. However, a focus on only one side of the demand supply market by either increasing the demand for sanitation services or availability of the services may create a mismatch that is likely to undermine sustainability of the sanitation services. Evidence in other low-income countries shows that the provision of facilities does not guarantee proper usage. There is thus a need to empower users with knowledge to enable a change in behavior, create demand for services, facilitate establishment of supply chains and improve the planning and implementation of hygiene and sanitation projects to ensure appropriate hardware interventions.

Second, since the use of voluntary CHWs and youth in national service (URUGERERO) have enabled critical financial and human resource bottlenecks to be at least

partially overcome, there is a need for Governments to continue organizing the community for their own-development (Kigali-Rwanda), organize communities to come together and build their sanitation facilities (Kampala-Uganda and Kisumu-Kenya).

Third, since faecal sludge end products have market potential -with fertilizers and energy producing options showing the greatest revenue potential, Government policies should pave the way for private companies and community initiatives to play a stronger role in the recovery and recycling of nutrients and energy from faecal sludge (All cities).

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Further Reading

This policy brief is drawn from the peer-reviewed article published in Habitat International (ISSN: 0197-3975), entitled 'Sanitation markets in urban informal settlements of East Africa', Tsinda A. et al., which can be accessed in the link below:

(<http://www.sciencedirect.com/science/article/pii/S0197397515000867>)