

Outcomes and Lessons Learned from Implementing Sanitation Safety Planning



Introduction

Sanitation is one of the most significant development challenges in Kampala today. The city is the capital of Uganda, and has a rapidly growing population and economy. The current population of Kampala is 1,5 million, but this is estimated to almost double during daytime hours, due to the influx of commuters. Over 60% of the city population lives in informal settlements characterised by unplanned infrastructure and inadequate access to key social services, including but not limited to, sanitation and waste management. The centralised sewerage system serves only around 6-8% of the population of Kampala, which means that the majority are reliant on on-site sanitation services.

Sanitation Safety Planning (SSP) is a step-by-step risk based approach that was developed by the World Health Organization (WHO) to assist in the implementation of the 2006 WHO Guidelines for Safe Use of Wastewater, Excreta and Greywater. The SSP approach involves identifying health risks in the sanitation system, implementing an improvement plan and conducting regular monitoring. SSP can also support the planning phase of sanitation-related measures. (for more information please see the SSP manual available at http://www.who.int/water_sanitation_health/sanitation-waste/wastewater/sanitation-safety-planning/en/). SSP is still a rather new approach, and the success in implementing it in Kampala will provide a valuable learning opportunity for similar cases. To ensure best practice exchange for other cities, this document reflects on the outcomes and lessons learned in Kampala.



Training of KCCA Environmental and Health Inspectors in using the revised inspection tools

Approaches

The National Water and Sewerage Corporation (NWSC) is the utility responsible for Kampala's water supply and sewerage system; however most of the population are served by on-site sanitation, which is under the mandate of the city administration, Kampala Capital City Authority (KCCA). The combination of systems and responsibilities is complex, but with clear mandates. For example, although both municipal solid waste and faecal sludge collection and transport is under the mandate of KCCA, the treatment of both FS and sewerage is under the mandate of NWSC. A more detailed overview of the sanitation situation in Kampala can be seen in Figure 1, a Shit Flow Diagram (SFD) for the city shows that 54% of the excreta are safely contained or reused/treated, while 46% are unsafely managed.

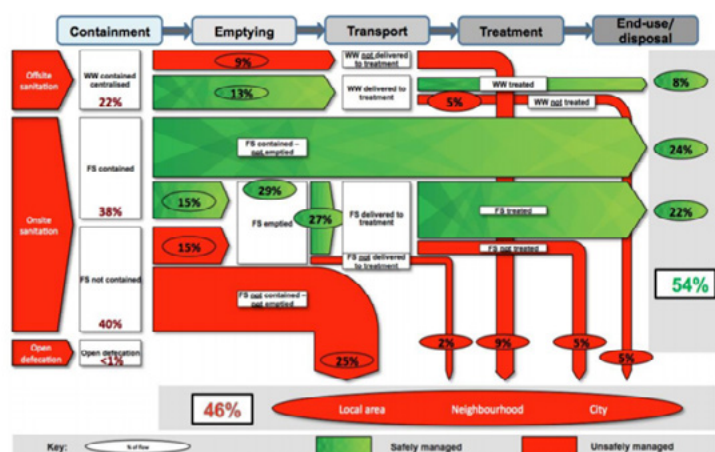


Figure 1, Flow diagram of excreta in Kampala, a SFD, visualising how only 54% of the excreta is safely managed (Data collected in 2016, from sfd.susana.org).

In addition to the city authority and the utility, other key stakeholders are two pit emptiers associations, the Ministry of Health, the Ministry of Water and Environment, civil society and various NGOs. SSP in Kampala has so far consisted of two complementary phases, the first one focusing on a wastewater treatment plant, while the second focused on the sanitation service chain from toilets to the treatment plant (i.e. faecal sludge collection and transport, including the communities). The first phase was focussed on research and gave input to the SSP manual, as well as informed priority interventions in the second phase. The goal of the second phase was to further test the practicality of the outcomes of the SSP approach and to see to what extent it could affect and improve daily operation and monitoring.

NWSC, the Makerere University School of Public Health and Swiss Tropical Health Institute piloted SSP in the first phase, which was supplied with data from environmental and epidemiological surveys. This pilot focused on the Nakivubo catchment area, which receives most of the domestic and industrial wastewater from the central division. The treated effluent of a sewage treatment plant is collected in the Nakivubo channel, which leads to the Nakivubo wetland, where approximately 600 people pursue urban farming for their livelihood. Informal settlements exist along both sides of the wetland and about 4 km from the discharge point, water is pumped and treated to supply Kampala city with drinking water.

The second phase, supported by the GIZ and the Swiss Development Cooperation, focused on the Kamwokya II ward, its community, and the emptying and transportation of faecal sludge from the on-site sanitation facilities to the treatment plant. Whereas SSP implementation at community level was at pilot scale, other aspects were integrated at city level; eg stakeholder engagement, collection and transport (public and private operators) and disposal and treatment at the two treatment plants. Kamwokya II ward was selected because of its informal settlement structure within a low lying reclaimed wetland area with a high water table. The ward is also densely populated, congested and characterized with poor sanitation. Most of the residents have little or no income, and access to emptying services is very low. Therefore, it is one of Kampala's high risk areas urgently in need of immediate action and lessons learnt can largely be applied to other areas.

KEY STEPS IN THE SECOND PHASE OF THE PILOT TO IMPLEMENT SSP IN KAMWOKYA WERE:

- A High Level SSP Sensitization meeting was held. This included all relevant stakeholders in the sanitation sector of the city.
- Sanitation Safety Committee was put in place to develop the SSP for the ward
- Sanitation Safety Plan was finalized and implemented (key control measures identified)
- Revision of KCCA health and environmental inspection tools, to include risk assessment and risk management aspects
- Sanitation Safety meetings were held in Kamwokya for community members



Gulper in full PPE equipment emptying a latrine

Outcomes from SSP in Kampala

One of the first and major outcomes of the SSP implementation in Kampala was from the first phase, which provided input to the development of the SSP manual, which was published shortly thereafter. However, in Kampala, it is the effects of both phases of the SSP pilot combined, that has made an impact, especially with regards to health and awareness amongst users, service providers and regulators along the sanitation chain. To some extent, SSP has also become part of management procedures.

The utility, **NWSC**, reports improved safety of the workers, both with regards to procedures and to the use of personal protective equipment (PPE). This can be attributed to mainly two activities: ensuring PPE is available and properly used, and to regularly communicating policies on health and safety to all workers. Furthermore, there are now specifically designated safety zones at the wastewater treatment plants with access strictly only for those who wear their PPE, and both utility and external sources have reported that PPE was used every time they visited the facilities. A key indicator for the health improvement among the workers is the significant reduction in prevalence of workers with sanitation related diseases. Before SSP implementation, there used to be a high occurrence of infections – and this is now estimated to have dropped by over half.

Among the sanitation workers at **KCCA**, there is also an increased use of PPE, as well as increased proper hygiene practice. Similar to the activities at NWSC, PPE is being provided to all workers who need it, as well as regularly providing sensitization on hygiene and work place safety. In addition to PPE, workers were provided with appropriate equipment, such as soap dispensers, hand washing facilities and detergents. To improve the procedures of their pit emptying workers, KCCA arranged trainings that resulted in a general improvement in correct faecal sludge handling. To further encourage correct approaches, best-behaviour awards have been handed out to outstanding pit emptiers. **Indiscriminate disposal of waste in the city has also been drastically reduced after SSP implementation.**

The second phase emphasized the need to embed SSP into structures and processes along the sanitation chain. It involved the local communities much more with regards to their onsite sanitation systems and at the same time targeted KCCA's monitoring approach with regards to regulation. This SSP implementation therefore included trainings for community members on hygiene sensitization and on proper use, maintenance and construction of appropriate sanitary facilities. It included programmes in schools, highlighting maintenance and safety of sanitary facilities and restricted entry during emptying. And it also addressed the risks that accompany pit emptying and how certain behaviours by toilet users can increase or reduce the associated risks. Although difficult to measure, **improvements in the communities with regards to sanitation infrastructure and hygiene practices can be observed.**

Another result of this second SSP pilot phase is the **revision of KCCA's health inspection tools**. These tools are crucial to the health and environmental inspectors' day-to-day operations, and consist of various checklists for the different kinds of trades and institutions that are being monitored. An intensive training of all KCCA environmental and health inspectors has taken place to familiarize them with SSP in general and the amended tools, specifically.

SSP in Kampala has been well received to such an extent that it is now high on the agenda of the different stakeholders, especially at KCCA and NWSC. **KCCA has worked intensively on incorporating the approach into its day-to-day operations, and is now looking at up-scaling it across the city as its standardized approach to planning and monitoring. Similarly, NWSC has embraced the SSP approach, as they found it an excellent tool for successful sanitation service delivery and risk management.** The utility reports that applying SSP resulted in improved service delivery and professional operations, both in terms of risk identification along the service delivery chain, and for incremental improvement measures. After the initial pilot and development of the manual, NWSC used the experience to integrate SSP in their operations, and it is now part of NWSC's strategic direction. Implementation is in progress for a detailed SSP within the utility's boundaries of operation (which includes the catchment area, sewage system and treatment of sludge from on-site sanitation).

It is important to keep in mind that a long-term and sustainable uptake of the SSP concept will take years. The main outcome of SSP in Kampala so far is the understanding of the risks in the sanitation sector, and the fact that these risks can be measured, ranked and mitigated through better planning as well as monitoring. However, the long list of outcomes described above demonstrates the benefits of SSP, even though its implementation is still in its early stages.



KCCA Health Inspector issuing a nuisance notice for a filled up pit latrine

Lessons learned

THE KEY LESSONS LEARNED FROM KAMPALA, THAT CAN HELP OTHER CITIES IN IMPLEMENTING SSP ARE:

COMMITMENT FROM THE LOCAL AUTHORITY.

To ensure a city-wide approach, it is necessary to have the city authority, or whoever has the main responsibility and mandate in onsite sanitation in a given city, committed and actively involved. The city authority has been a key driver for the successes seen in the pilots in Kampala.

ENGAGING ALL STAKEHOLDERS AND ENSURING INTERSECTIONAL COLLABORATION.

Because of the cross-cutting issues, the authority alone would never be sufficient, and all stakeholders need to be on-board across the entire sanitation service chain. An important aspect of the stakeholder engagement would be to have key leaders from each stakeholder group involved from the start. The participation from across the entire sanitation chain, as well as the close collaboration of NWSC and KCCA has been extremely important for the success of SSP implementation in Kampala.

CHAMPIONS.

At least one, but preferably a few champions in key organisations, is crucial to ensure the process is moving forward. Champions are extra dedicated and motivated people, with sufficient insight on SSP that take ownership of the process. Champions can also be trained as trainers, or be part of trainings for other cities in the SSP approach.

When it comes to new and complex concepts, there are always hurdles to be expected along the way. In Kampala, one of the main challenges with SSP was the amount of time it took to gather all relevant stakeholders in the sector, and to attract their interest in taking sufficient time to understand and appreciate this new tool. In this context, it was also not always easy to ensure commitment from community members and the private sector to take time off work to attend a training. For this reason, there is still a need to conduct more detailed trainings, which are planned to take place in Kampala in the near future. Based on Kampala's experience, it is suggested that an overview of the value of SSP for each stakeholder should be created, to help explain to stakeholders in other cities how the initial investment of time pays off in the long run.

Conclusion

Looking ahead, all key stakeholders have indicated interest **to implement SSP on a city-wide level in Kampala.**

KCCA is already working towards expanding SSP from the pilot, however this SSP would only be for onsite sanitation. Simultaneously, NWSC is working on a SSP, but only within their mandate. In the future, marrying the two plans into one comprehensive city-wide SSP would be the optimal approach. On a day-to-day basis, the two parts of the SSPs could each be managed separately. However an overview, including all synergies and overlaps, needs to be explored, as well as regular meetings to stay up-to-date.

It has been clearly expressed from the stakeholders in Kampala that they all **find SSP an excellent and useful tool.** This is not only for understanding risks, but also to prioritise investments and time, as well as defining what measures need to be taken to address these risks. The praise of the tool was especially clear from those that were not convinced at the beginning, but that became committed through gradually getting to know SSP. It is well understood that the sanitation service chain, especially in cities, is a complex field with numerous actors and that reusing wastewater or faecal sludge involves health risks. **The brilliance of SSP is that it acknowledges this complexity, and offers a step by step tool to manage the risks.**



Cesspool emptiers receiving training on SSP and the proper use of PPE



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