Survey on WASH service levels and the enabling environment for provision of sustainable services in Kampala

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Abstract: This study seeks to illustrate the service levels and enabling environment for the provision of sustainable Water, Sanitation and Hygiene (WASH) services in Kampala Uganda. It highlights opportunities, challenges and offers insights to the measures that are required in advancing Water, Sanitation and Hygiene services in the city. This paper has relevance to and provides a benchmark for performance assessment, learning and measurement of progress towards sustainability of WASH services in Kampala. The paper also forms the basis upon which the Sustainable Water, Sanitation and Hygiene project jointly implemented by WaterAid Uganda and Kampala Capital City Authority will be measured. The survey is based on variable approaches with evidence gathered from quantitative data, interviews and literature review.

Keywords: Water, Sanitation, Hygiene, Education, Health, Uganda

Executive Summary

Background

This report summarizes the findings of a e survey conducted to establish the WASH service levels and enabling environment for the provision of sustainable services in Kampala. The baseline information will be used during the implementation of the SusWASH project which targets to address key systematic challenges affecting WASH service provision and sustainability in Kampala City. The results of the baseline survey will provide a benchmark for performance assessment, learning and measurement of progress towards sustainability of WASH services in Kampala. The SusWASH project is being implemented by WaterAid in collaboration with Kampala Capital City Authority (KCCA). The project is being implemented in 12 Public Schools and 10 peri-urban communities/ cells in Kampala.

Methodology

Questionnaires were administered in households, Public Schools and the respective communities where the households and the schools are located. mWater mobile data collection tools were utilized for data collection. A total of 546 questionnaires were administered in the selected project areas. The breakdown of the questionnaire categories is as follows: 512 Households; 12 Schools and 22 Communities. The study employed both quantitative and qualitative methods using both primary and secondary data sources, including surveys, key informant interviews (KII), focus group discussions (FGD), and document review. The quantitative data was analyzed using MS excel.

Key Findings

Community and Schools

The total population in the targeted project area is 38,884 in the households and 11,446 in Schools. The findings revealed that 80.0% of the households use piped water supply from NWSC mostly as yard taps and kiosks. 38% of the premises have water on premises; 48% take less than 30 minutes to fetch water while 14% taken more 30 minutes to fetch water in one round. 66% of the schools have access to piped water supply. The rest use protected

springs, wells etc. The water points in all the schools are within the grounds apart from Kansanga Primary where the water point is within 500m of the institution. Overall, 44% of households indicated that water is typically available throughout the year while 67% of the schools indicated that water is always available throughout the year. The findings reveal that the water supply situation in the communities and schools is relatively reliable. The average per capita water consumption in the communities is only 17.7 L/Cap/day which is relatively. From the survey, 18.6% of respondents don't contribute to the upkeep of the water sources. Contributions towards system O&M is important for sustainability. Over 80% of the schools indicated that they have WASH committees in their schools, however less than 30% receive refresher trainings on WASH issues and this affects their effectiveness. In Schools inadequate financing for WASH O&M activities is also a constraint.

Over 45.6% of the households share a sanitation facility. Pit latrine with slab is the predominant type of sanitation facility in the project communities. Manual FS emptying accounts for 11% of all the emptied facilities whereas 89% used cesspool trucks. The survey revealed that 94.7% of the FS was transported away after emptying whereas 2.7% was buried onsite and 1.8% was left in the open. For schools, the flush/pour flush toilet is the most common (7/12 schools). Bio-latrines are in use in Kansanga primary. The computed pupil: stance ratio for the project schools varies from 7 (Uganda School for the deaf-Ntinda) to 158 (Kibuye Primary School). Some of the issues with school latrines include: Appropriate anal cleansing materials are only in 8/12 schools; About 30% of the schools toilets were found unclean. About 3.5% of the respondents indicated lack of access to spares for toilet maintenance/upgrade whereas 13.5% had access to spares. Access to spares seems not to be a major constraint to toilet maintenance. Solid waste is mostly collected by a municipal truck of a private truck authorized by KCCA. The same trend was found in schools. However, illicit dumping of solid waste was observed in some parts of the communities.56% of the respondents indicated the presence of an active group in the communities to undertake sanitation promotion. The survey shows that most (87.2%) of the latrine facilities were constructed by the owners.

For households, only 33% had hand washing facilities inside or near the toilet; 13% of the cases indicated that the hand washing facility was in the Kitchen; 26% indicated elsewhere in the household and 27% admitted as not having hand washing facilities. Only 15% of the hand washing facilities in the Kitchen have both soap and water and only 28% of the toilets have hand washing facilities with soap and water.Seven (7) out of 12 Schools have both water and soap at the hand washing facilities. Hand washing facilities in 10 of the school are accessible to those with limited mobility or vision. Whereas 11 Schools have facilities accessible to the smallest children at School. Over 40.8% of the responses indicated that hand washing with soap at after defecation is common in the community. However, about 14% indicated that hand washing with soap at critical times is not common in the community.Over 95% of the household respondents indicated that they treat their drinking water by boiling. However, 43% of those who indicated boiling could not be confirmed through observation.A significant number (12.9%) store drinking water in clean containers but without lids which exposes the water to contamination.Two of the schools don't treat water and they advise the pupils to pack their own drinking water from home.The analysis shows that 56.3% of the toilets in the households in the project area were clean whereas 39.3% of the toilets were not clean but are in use.The respondents indicated that 24% of children defecate in toilets. Other households use a combination of methods to deal with children waste. Only 2% of the responses indicated that no good food hygiene practices are maintained in the community. Thorough cooking is the most (39%) reported practice of maintaining food hygiene in the project area. 46.7 % of the respondents had access to hygienic, safe and private facilities to practice good menstrual hygiene. Both Water and soap are available in the girl's toilet cubicles for menstrual hygiene management in 8 of the schools. Seven out of the 12 schools indicated that they had WASH standards and guidelines to help them in the day to day management of WASH activities.

Capacity Assessment for KCCA and User Feed back

About 4.6% of KCCA's budget is dedicated to WASH. About 40% of the Water and Environment budget is for solid waste management including maintenance of landfill and garbage trucks. The current KCCA strategic plan ends in 2019. It has some elements of WASH captured but are not adequate to address the WASH needs in the city. Regarding minimum WASH standards, KCCA has draft minimum standards for sanitation technologies. However, the standards do not cover all aspects of WASH in the city. There is no proper M&E system for monitoring community WASH aspects. Most of KCCA monitoring is based on complaints received or enforcement.

Some of the mechanisms through which WASH in schools is supported include: Government of Uganda grants to the schools are sent through KCCA; Project based capacity building for schools is undertaken by KCCA and partners; Training of head teachers; Peer to Peer learning; Training on bio-toilets technology has been carried out

in schools that have received toilets of this kind; KCCA provides technical backstopping to schools that request for it. KCCA coordinates with players in WASH using the following different platforms such as KWSF; KPTF; Membership on Project steering committees; having MoU with WASH NGOs working in Kampala.Some of the areas to improve in the WASH information management systems include: Updating of GIS based WASH monitoring platform for schools; Upgrade of the GIS database for sanitation facilities; Further optimization of the tracking system.

The participation of KCCA in the Joint Water and Environment review was low in the previous year. Absence of sufficient WASH data for Kampala in the sector report is a hindrance to accessing further financing and collaborating with other actors. Some of the capacity challenges faced by KCCA include: Understaffing within the Public health and Environment directorate; Limited WASH financing; Absence of a detailed Physical Development master plan for Kampala; Lack of equipment/tools for to undertake independent water quality tests, faecal sludge analysis etc.; Lack of a research department

The mechanisms in place for communities to raise WASH issues with KCCA include: i) The toll free platforms (including e-mail; Socio Media; and telephone) ii) Through the Local Leaders iii) KCCA has an open door policy where clients walk into the offices and their complaints are captured and forwarded to the relevant staff.

At the City Authority Level, KCCA responds to citizen demands and complaints by taking the required corrective action or improvement depending on the nature of the issue at hand. In most of the public health related complaints, response stops at taking the corrective action. For complaints which are sent to KCCA in writing/letter form, the response is also usually given back in writing. However, there is no specific timeline within which such a response would be expected by the concerned citizen.

KCCA has some citizen engagement platforms that are used for engagements not only in WASH but also other services provided by the Authority. The most relevant for the WASH sector is the toll free customer centre where citizens can call in any time of the working days and their complaints are picked up.

Conclusion

The baseline findings will go a long way to inform the SusWASH project further, underscoring particular areas which require emphasis. Some of these include: Improvement of water quality monitoring for point water sources; Construction of relevant WASH facilities in selected Schools; Financing options for construction of improved household sanitation facilities; Training of WASH user committees in communities and Schools; Provision of facilities and education on MHM; behavior change communication or awareness creation on toilet cleanliness; management of children faeces; water treatment and storage in both schools and communities; appropriate hand washing facilities; hand washing with soap and water at critical times among other things. KCCA will also need support in strengthening WASH monitoring and Evaluation systems and improvement of the Citizen engagement platforms in place. The baseline findings have been used to provide baseline information required for the SusWASH results framework

Introduction

A major reason for slow progress in WASH access in Uganda is the lack of sustainable service provision and use. Investments in infrastructure are failing to provide reliable and secure WASH services because of inadequate maintenance, use, weak management and ineffective governance. The bigger picture becomes even more challenging when consideration is given to factors and trends with the potential to impact on future provision of, and demand for, WASH services, such as population growth, urbanisation, water scarcity, increasing energy costs and climate change. It is notable that many of these factors are outside the control of WASH sector professionals. The simple fact is that the WASH sector is struggling to meet current demands for basic WASH services let alone for higher levels of service but most challenging of all, sustain these services. It is probable, given current trends that the scale of the challenge will increase, both in absolute numbers and in complexity.

WaterAid Uganda (WAU), with funding from the H&M Foundation, is implementing a 3-year Sustainable WASH Services (SusWASH) project aimed at addressing systemic blockages that affect the sustainability of WASH services in Uganda. During a project start-up meeting held in November 2017, the water sector was found to be more ‘transitioned’ than the sanitation/hygiene sector, which was found to be ‘fragile but strengthening’. In terms of priority building blocks, accountability and coordination were both found to be very weak. The project baseline will seek to deepen analysis on these blockages including strategic planning, monitoring and service delivery to inform

project implementation and future measurement of change. Establishing a baseline for the project will be important to track future progress and changes towards sustainability of WASH service provision.

Rationale for the Survey

The SusWASH project will address key systemic challenges affecting WASH service provision and sustainability in Kampala City. These include the limitation of user voice on quality and reliability of services linked to weak dialogues among the city leadership, lack of one WASH Plan to guide investments on WASH and inadequate coordination of actors by Kampala Capital City Authority (KCCA) to contribute towards one WASH plan. This is worsened by inadequate appreciation of full life cycle costs which affects maintenance and sustainability of WASH infrastructure; inadequate and unreliable data to inform planning, budgeting, targeting and reporting on WASH in the city at national level by KCCA; inequalities in access to WASH, and inadequate or absence of standards, comprehensive behaviour change package and guidelines especially in schools and communities.

Objectives of the Assignment

The study is intended to generate and triangulate data on demography, WASH service levels (as per the SDG JMP categorization), current hygiene practices, the enabling environment for sustainability of WASH services, WASH accountability, governance and social participation. The results of the baseline survey will provide a benchmark for performance assessment, learning and measurement of progress towards sustainability of WASH services in Kampala and nationally as a whole. The specific objectives of the assignment as extracted from the Terms of Reference are to:

1. To assess service levels for water, sanitation and hygiene in schools and households, the use of these services and verify the quality of existing service level data
2. To monitoring assess current capacities and the enabling environment in terms of planning, budgeting, and coordinating WASH services at KCCA and key WASH line ministries and agencies
3. To identify existing mechanisms for users to provide feedback and hold WASH service providers and duty-bearers to account in Kampala and assess their strength and effectiveness.

Study Area

The project areas were selected in close collaboration with KCCA. KCCA has a number of other ongoing interventions in WASH in the city and their input was necessary to avoid duplication of interventions/resources.The selection of Schools was based on the prevailing sanitation needs such as the high pupil/toilet stance ratio. Consideration was also given to schools that cater for people with special needs such as the deaf. Another factor considered was public schools that have not received many interventions in WASH. The selection also targeted to have at least 1 school per division. The selected project schools are summarized in Table 1-1.

Table 1-1: Selected Project Schools

#	School Name	Division	Parish/Ward	Village/Cell
1	Uganda School for the Deaf- Ntinda	Nakawa	Ntinda	Village 12
2	Mulago School for the Deaf	Kawempe	Mulago II	U.E.B Zone
3	Buganda Road Primary School	Central	Nakasero III	Buganda Road
4	Kampala High School	Central	Old Kampala	Kitamanyangamba
5	Nateete Muslim P/S	Rubaga	Nateete	Church
6	Nateete Muslim High School	Rubaga	Nateete	Central B
7	Railway Children Primary School	Makindye	Nsambya Railways	Railway B
8	Kibuye Primary School	Makindye	Lukuli	Kanisa
9	St Ponsiano Kyamula P/S	Makindye	Salaama	Kyamula
10	Mirembe Primary School	Makindye	Luwafu	Boston
11	Katwe Martyrs Primary School	Makindye	Katwe II	Kevina
12	Kansanga Primary School	Makindye	Kansanga-Muyenga	Masaana

The project communities were selected based on the model villages earmarked by KCCA where WASH services are most wanting. A total of 10 cells (2 per division) were selected and the details are shown in Table 1-2. Appendix D shows the location of the selected project areas.

Table 1-2: Selected Project Communities[1]

Division	Parish/Ward	Village/Cell	Estimated number of households
Makindye	Lukuli	Kanisa	406
	Kibuye I	Kapeke	338
Central	Kisenyi III	Luzige	583
	Kagugube	Kivulu I	544
Nakawa	Mbuya 1	Kiwanataka	490
	Naguru	Go-Down 3	273
Rubaga	Kabowa	Wankulukuku	1,781
	Lungujja	Wakaliga zone 7	793
Kawempe	Makerere III	Kigundu zone	960
	Kawempe I	Mbogo zone	1,397
Total			7,565

Methodology

In order to achieve the objectives of the assignment, the following activities were undertaken:

Preliminary stakeholder Engagement

A preliminary stakeholder engagement was held on 9th May 2018 at KCCA. The meeting comprised of Water Aid staff and KCCA staff from different directorates. The purpose of the meeting was to: i) Present the methodology for undertaking the assessment; iii) Selection of Project areas and iv) Have a common understanding of the objectives of the assignment.

Data collection

Population/household data for the relevant project areas was obtained from the 2014 National Population and Housing Census Report whereas other information such as records of key institutions was obtained from KCCA's directorate of Education. The secondary data obtained was used to plan for the primary data collection exercise.The mobile data collection tool utilized was mWater. The tool is widely used by WaterAid and is robust enough to allow for tracking of indicators during different stages of the project implementation.
The data collection tools were utilized:

- Household Questionnaire
- Institutional Questionnaire
- Community Questionnaire

The Post Implementation Monitoring Surveys tools used by WaterAid were modified and tailored to suit the SusWASH baseline data requirements. A training for data collectors was undertaken to: i) ensure that they understood the objectives of the assignment, ii) ensure that they understood the meaning and rationale of each question, iii) discuss the methodology of the survey and iii) ensure that they would be able to conduct the survey on their own using mwater App. Twelve data collectors undertook the survey. The data collectors were given access to the questionnaires in mwater using smart phones. Pre-testing was undertaken by the data collectors to ensure that they were acquainted with the use of the mobile data collection tool in administering the survey. Questionnaires were administered in households, Public Schools and the respective communities where the households and the schools are located. A total of 546 questionnaires were administered in the selected project areas. The breakdown of the questionnaire categories is as follows: 512 Households; 12 Schools and 22 Communities

[1] Projected from Uganda National Population Census figures – UBOS (2014)

Sample size determination

The number of Schools for the project were selected based on the criteria described in section 1.4. A total of 12 Schools were selected and information on schools was only collected from the same.A total of 10 communities (cells) were selected for the project area. The details of the areas are shown in section 1.4. The household sample size per community was computed using the following equation:

$$n = \frac{\left(\frac{P[1-P]}{\frac{A^2}{Z^2} + \frac{P[1-P]}{N}} \right)}{R}$$

Where:

n is the sample size required
N is the number of households
P is the estimated variance, as a decimal = 0.3
A is the precision desired, expressed as a decimal = 10%
Z is based on confidence level = 1.6449 for 90% confidence
R is the estimated response rate, as a decimal = 1.0

The number of households per community/cell were estimated from the projected households as shown in Table 2-1. The sample size, n (Table 2-1) from each community was calculated using the following equation[2]:

Table 2-1: Household Sample Size per Community

Division	Parish/Ward	Village/Cell	Calculated Sample Size	Actual Sample size
Makindye	Lukuli	Kanisa	50	51
	Kibuye I	Kapeke	49	39
Central	Kisenyi III	Luzige	52	35
	Kagugube	Kivulu I	51	53
Nakawa	Mbuya 1	Kiwanataka	51	50
	Naguru	Go-Down 3	47	53
Rubaga	Kabowa	Wankulukuku	55	57
	Lungujja	Wakaliga zone 7	53	54
Kawempe	Makerere III	Kigundu zone	54	56
	Kawempe I	Mbogo zone	55	64
Total			516	512

The total number of households sampled was 512. In Luzige and Kapeke, the targeted number of households could not be obtained due to the fact that the areas are densely populated and some households have been turned into commercial premises.

Demography

Households: The average household size established from the baseline survey is 5.14 for the project area. The average household size for Kampala is 3.64 (UBOS, 2014). The difference is explained from the fact that the project area in the lower income areas of Kampala which typically have higher household occupancy than the high income areas. The total household population in the project area is 38,884. The breakdown of the number of household and population per community is shown in Table 1-2.

[2] Source (Watson, 2001)

Schools: The ten schools selected for the project have a total enrolment of 11,446 and 53% of these are girls. The only two boarding schools are for pupils with special needs i.e. the blind.

Table 3-1: Enrollment in the selected project schools

School Name	Type of school	School Enrollment		
		Girls	Boys	Total
Buganda Road P/S	Day	1,305	1,221	2,526
Kampala H/S	Day	877	553	1,430
Kansanga P/S	Day	572	536	1,108
Katwe Matrys P/S	Day	174	135	309
Kibuye P/S	Day	494	452	946
Mirembe P/S	Day	335	330	665
Natete Muslim H/S	Day	473	489	962
Natete Muslim P/S	Day	255	245	500
Railway Children P/S	Day	570	526	1,096
SFD Mulago P/S*	Boarding	95	89	184
St. Ponsiano P/S	Day	787	713	1,500
USFD Ntinda P/S*	Boarding	131	89	220
Grand Total	Day	**6,068**	**5,378**	**11,446**

Service Levels: School and Community Water Access

Community**:** At the household level, piped water supply is the most (80.8%) used type of water source in the project areas. Table 3-2 summarizes the water sources used by households in the sampled project areas. Overall, most (51.8%) of the residents used piped water located in their yards; 6.1% have piped water inside their dwellings; 22.9% have piped water at the public taps/kiosks. The unprotected water sources serve 1.4% of the households. Other non-piped improved sources (Boreholes and Rainwater) serve 2.7% of the sampled households.

Table 3-2: Main sources of Water for Households

Community Name	Borehole or tubewell	Cart with small tank/drum	Piped into dwelling	Piped into public tap or basin	Piped into yard/plot	Protected dug well	Protected spring	Rainwater	Unprotected dug well	Unprotected spring	Grand Total
Wankulukuku			3	11	31	1	11				57
Kivulu I				43	9			1			53
Mbogo zone			4	6	52			2			64
Kapeke				11	14		14				39
Luzige			1	11	21		2				35
Kanisa		1	10	11	29						51
Wakaliga zone 7					31		21		1	1	54
Kigundu zone			5	3	36	3	9				56
Kiwanataka	9		6		27		3		5		50
Go-Down 3	2		2	21	15		13				53
Grand Total	11	1	31	117	265	4	73	3	6	1	512
Overall	2.1%	0.2%	6.1%	22.9%	51.8%	0.8%	14.3%	0.6%	1.2%	0.2%	

The findings are consistent with the National Housing and Population census figures for Kampala where the reported piped water supply access of 82.5% (UBOS, 2017).Location of water point and time taken to collect drinking water was also assessed in survey. Table 3-3 shows that 38% of the households have water at their premises, 48% take about 30-minutes to fetch water and 14% taken more than 30 minutes.

Table 3-3: Time taken to collect water

Location of water point	Grand Total
On premises	38%
Less than 30 minute round trip (including walking to and from the house and queuing)	48%
More than 30 minute round trip (including walking to and from the house and queuing)	14%

Schools: Most (33%) of the schools have piped water into yard/plot. All the schools have an improved source of water supply as shown in Figure 3-1.

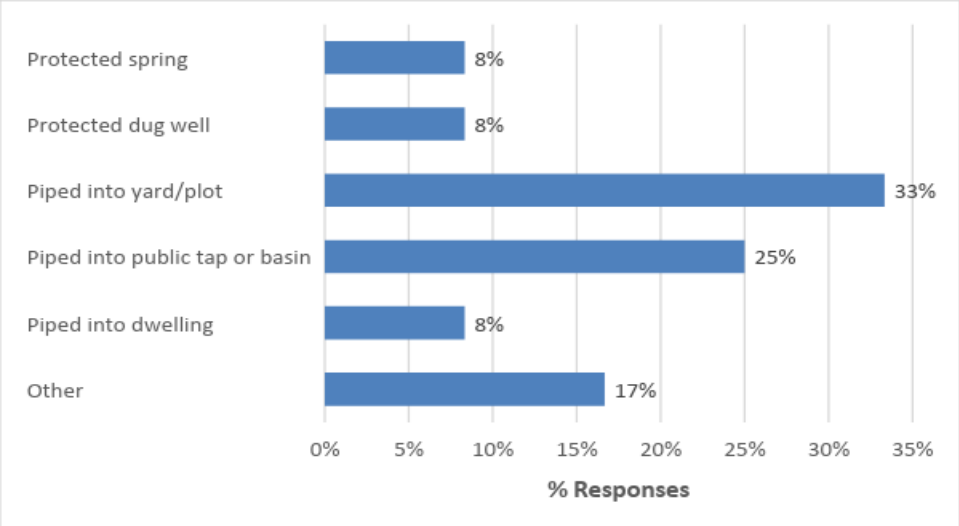

Figure 3-1 Water Sources for Schools

The water points in all the schools are within the grounds apart from Kansanga Primary where the water point is within 500m of the institution. Drinking water accessible to children with limited mobility or vision and also to the smallest children at the schools except at Katwe Martyrs primary school.

Functionality and Reliability

Community**:** At the time of the survey, 94.7% of the households had water available from their water sources whereas about 5% did not have water available. This is an indication of a high functionality rate for the water sources. However, when asked about availability of water throughout each day in the past 2 weeks, only 77% of the respondents indicated as having water consistently as shown in Table 3-4 below. Go-down 3 village is the most affected with water not being available for 45% of the respondents in the past 2 weeks. The residents in Kiwanataka and Kapeke also without consistent water in the last 2 weeks was 38% which is also significant.

Table 3-4: Availability of water every day in the past 2 weeks

Community Name	Not available	Available
Wankulukuku	9%	91%
Kivulu I	4%	96%
Mbogo zone	31%	69%
Kapeke	38%	62%
Luzige	29%	71%
Kanisa	16%	84%
Wakaliga zone 7	22%	78%
Kigundu zone	9%	91%
Kiwanataka	38%	62%
Go-Down 3	45%	55%
Overall	23%	77%

The respondents were also asked if drinking water from the main source was typically available throughout the year. Overall, 44% indicated that water is typically available, 55% indicated that it was mostly available and 1% indicated that it was not available. The above findings show that whereas the water sources are available, there is some bit of unreliability of the water supply. This is typical is some areas of Kampala where rationing of water supply takes place.

Schools: At the time of the survey, only 1 school (Railway primary school) did not have water available. The respondents were also asked on availability of water at the schools in the past 2 weeks and 1 year. Table 3-5 summarizes the findings. In the past 2 weeks 75% of the schools had water throughout the period. On an annual basis, 67% of the schools indicated that water is always available while the rest indicated that water is mostly available. The findings reveal that the water supply situation in the schools is relatively reliable.

Table 3-5: Availability of water in schools

Availability- Annual	Availability- Past 2 weeks		Grand Total	% Responses
	No	Yes		
Mostly	0	4	4	33%
Yes	3	5	8	67%
Grand Total	3	9	12	100%
% Responses	25%	75%	100%	

The drinking water points in the schools are shown in Table 3-6. The underserved schools include: Katwe Martyrs Primary, Kibuye primary, Nateete Muslim High School and St Ponsiano Primary school.

Table 3-6: Drinking Water points in schools

School Name	No. of drinking water points eg Taps	No of pupils
Buganda Road P/S	6	2526
Kampala H/S	20	1430
Kansanga P/S	12	1108
Katwe Matrys P/S	0	309
Kibuye P/S	1	946
Mirembe P/S	3	665
Natete Muslim H/S	2	962
Natete Muslim P/S	1	500
Railway Children P/S	12	1096
Mulago School for the Deaf P/S	6	184
St. Ponsiano P/S	2	1500
Uganda School for the Deaf- Ntinda P/S	10	220
Grand Total	75	11,446

Quality

The respondents were asked to rank the quality of water they get from their water sources. On average, 74.4% indicated that the quality of water was good, 22.3% indicated that it was acceptable and 3.3% ranked the water quality (Table 3-7). The issues of concern about the poor water quality were as follows: Colour of the water; Cloudiness; Bad Smell; Bad taste and salty taste.

Table 3-7: Rating of water quality for the water sources by users

Water Source	Rating of Water Quality			Grand Total
	Good	Acceptable	Poor	
Borehole or tubewell	2	7	2	11
Cart with small tank/drum	1			1
Piped into dwelling	18	12	1	31
Piped into public tap or basin	109	6	2	117
Piped into yard/plot	203	60	2	265
Protected dug well	2	2		4
Protected spring	43	24	6	73
Rainwater	2	1		3
Unprotected dug well	1	2	3	6
Unprotected spring			1	1
Grand Total	**381**	**114**	**17**	**512**
% rating	**74.4%**	**22.3%**	**3.3%**	**100%**

NWSC has a routine water quality monitoring schedule for the piped water supply. However, post contamination of the water from dirty customer tanks and pipe bursts are a possible cause. The water quality monitoring of the community point water sources is under the jurisdiction of KCCA but is not regularly undertaken. The customers observations are subjective and more concrete physio-chemical and bacteriological tests should be undertaken periodically to safe guard the communities against consuming unsafe water.Only 2 schools (Buganda Road Primary School and Kampala High School) had tested their water for E.Coli in the past 12 Months.

Quantity

During the baseline study, information about the quantity of water was fetched/used by households and a daily basis was collected. The per capita amount per day was then computed using the household size established during the survey. The per capita water consumption per community from the sampled households is shown in Table 3-8.

Table 3-8: Quantity of Water consumed by households per day

Community Name	Litres/HH/Day	Average HH size	Litres/Cap./Day
Wankulukuku	74.0	4.8	15.3
Kivulu I	87.9	4.5	19.4
Mbogo zone	86.9	4.8	18.1
Kapeke	77.9	6.6	11.8
Luzige	120.0	6.5	18.3
Kanisa	83.9	5.1	16.3
Wakaliga zone 7	123.0	5.2	23.6
Kigundu zone	77.5	4.5	17.3
Kiwanataka	86.4	4.7	18.3
Go-Down 3	97.3	5.5	17.7
Grand Total	**90.8**	**5.1**	**17.7**

Apart from Wakaliga zone 7, the rest of the communities have per capita water consumption of less than 20 Litres/Capita/day which is the minimum required to take care of the basic water needs. However, 91% of the respondents indicated that their households had access to an adequate supply of clean water from all the available water points.

Sustainability factors

A number of factors contribute to the sustainability of water sources in communities. Firstly, contribution of users to the operation and maintenance of water supply systems/ sources is crucial for sustainability. From the baseline survey, 68% of the respondents indicated that they contribute money for upkeep of water sources whereas 18.6% don't contribute to the upkeep of the water sources. The contribution of the rest is varied in form of Labour, membership on water committee etc. It is important to device means of ensuring that all residents contribute to maintenance of water sources/supply systems.

Secondly, most of the respondents in the community are served with piped water supply from National Water and Sewerage Corporation which has a structured tariff to cater for different categories of users, the lowest tariff being at the prepaid public water points that target to serve the urban poor. NWSC has a toll free line through which complaints are received and addressed accordingly.

Thirdly, the findings show that 52.4% of the communities in the project area have water user committees. The operations of water committees are largely undocumented as only 18.2% of the committees interviewed had records of their activities. Further strengthening of the committees is required if they are to be effective in service delivery especially for the non-piped water sources and the communal piped water points.

In the schools, 10 out of the 12 Schools have a committee responsible for WASH in the institutions. The Schools without the committees are Katwe Matrys Primary and St. Ponsiano primary school. However, the effectiveness of the user committees in the schools could not be ascertained. Only 4 out of the 12 schools indicated that their committees receive refresher training on WASH issues. Apart from Nateete Muslim primary school, the rest of the schools indicated that they can access technical support in case their water point breaks down.

Eight out of the 12 schools indicated that they don't have funds for WASH service maintenance and the 4 that indicated having some funds said the funds were not sufficient.

Service Levels: School and Community Sanitation

Access

Community***:*** All the household respondents (except 1) indicated that they had access to a sanitation facility. However, the level of access varies across the different communities as illustrated in Table 3-9. The analysis shows

that 46.5% of the households have their own toilets whereas 45.6% access shared toilet facilities. Communal toilets serve 6.6% of the households in the project area.Sharing of sanitation facilities by more than one household is classified lowers the sanitation service level to a limited sanitation service under the SDGs classification.

Table 3-9: Toilet access levels for households

Community Name	Toilet access for Household						
	Your household	Shared with another household	Communal toilet	Institutional Toilet	Others (please specify)	No Response	Grand Total
Wankulukuku	21	35	1				57
Kivulu I	23	10	19			1	53
Mbogo zone	33	30		1			64
Kapeke	6	32	1				39
Luzige	11	18	5		1		35
Kanisa	36	12			3		51
Wakaliga zone 7	18	36					54
Kigundu zone	34	20	2				56
Kiwanataka	35	11	4				50
Go-Down 3	21	29	2	1			53
Grand Total	238	233	34	2	4	1	512
Overall	46.5%	45.6%	6.6%	0.4%	0.8%	0.2%	100%

On average each household has two toilet stances. The type of toilet owned and used by individual households (not shared) is shown in Figure 3-2. Pit latrine with slab forms the most common (26.2%) toilet type in use. VIP latrines and Flush/Pour flush are used by 7.6% and 9.8% respectively by the respondents in the project area.

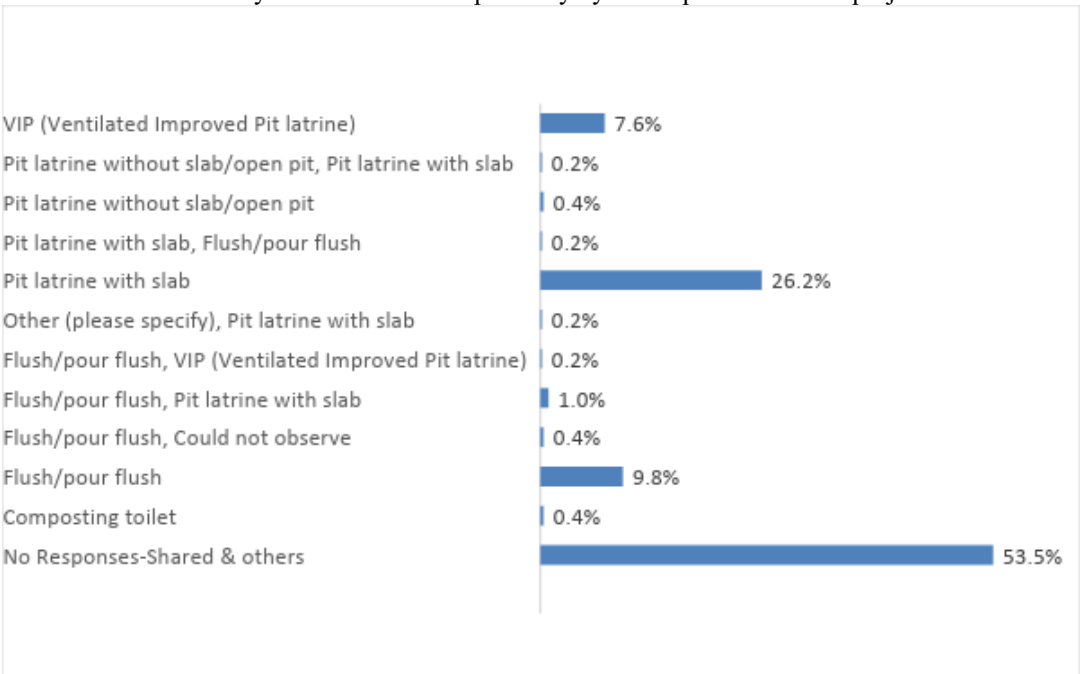

Figure 3-2 Types of household toilets in use

Open defecation was observed in 8 out of the 10 project communities. This implies that there is still a number of residents who have no toilets and practice open defecation. Previous studies estimate this to be at 1%. Six of the communities have public toilets where users are expected to pay per use. They are mostly at the busy markets and parks.

Toilet use : Some of the households that use communal toilets and shared toilets do pay to use the sanitation facility. Overall, about 3% of the respondents pay to use the above sanitation facilities. The baseline also established that most of the people (91%) in the households use the toilet facilities, whereas 6% use them not always and 3% do not use them at all as shown in Figure 3-3. The 3% who do not use the toilets are mostly children.

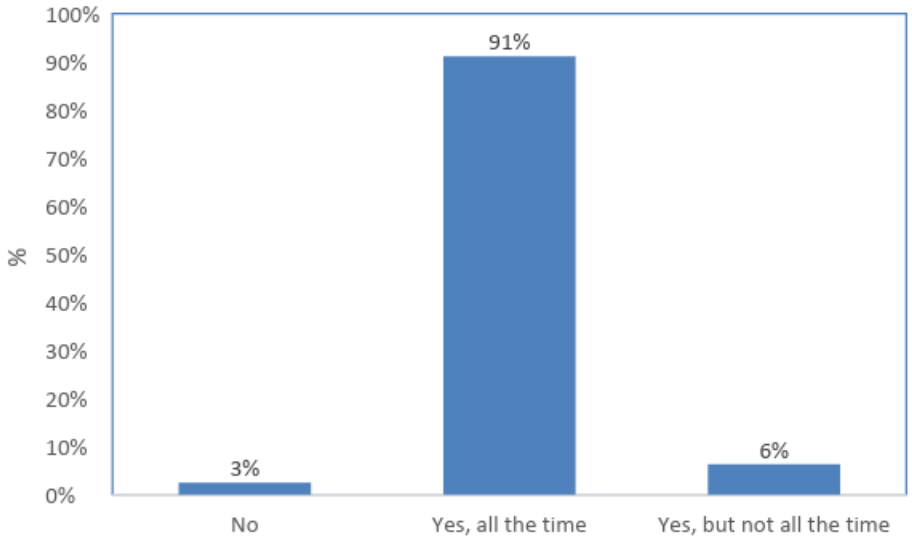

Figure 3-3: Does everyone use the household toilet?

Toilet emptying: Table 3-10 shows the actions taken for the household sanitation facilities that have ever filled in the project area. It can be deduced that 22.3% of the sanitation facilities that filled up were emptied and reused whereas 0.4% were abandoned and 1.4% built another toilet. Abandonment of unlined pit latrines is sometimes inevitable since their walls are vulnerable and may collapse on emptying. Additionally, FS in unlined pits is usually so thick and difficult to extract. The no response column represents the shared latrines some of which could have filled and emptied, however this information was not captured in the tool. 19.7% of the household toilets have not yet filled.

Table 3-10: Action taken on filled toilets

Community Names	No response	Abandon	Build another one	Empty	It hasn't been full yet	Grand Total
Wankulukuku	36			13	8	57
Kivulu I	31			19	3	53
Mbogo zone	32		2	7	23	64
Kapeke	33			5	1	39
Luzige	24			5	6	35
Kanisa	15			7	29	51
Wakaliga zone 7	37	2	4	5	6	54

Kigundu zone	23			23	10	56
Kiwanataka	23			15	12	50
Go-Down 3	34		1	15	3	53
Grand Total	**288**	**2**	**7**	**114**	**101**	**512**
% age	**56.3%**	**0.4%**	**1.4%**	**22.3%**	**19.7%**	**100%**

Manual emptying accounts for 11% of all the emptied facilities whereas 89% was carried out using mechanical means. The draw-down with mechanical emptying is that the emptied faecal sludge ends up being disposed in the environment which creates environmental and public health risks. The survey revealed that 94.7% of the FS was transported away after emptying whereas 2.7% was buried onsite and 1.8% was left in the open. 89% of those that have ever emptied considered the emptying to have been safely done while 11% indicated that the FS was not safely removed. Regarding reliability of the FS emptying service, 75% of those that had ever emptied ranked it as reliable and 25% indicated that it was unreliable.The foregoing shows that there are still gaps in the provision of an efficient FS emptying service in Kampala. Streamlined regulation and monitoring of the private cesspool service providers by KCCA will go a long way in improving service delivery. Elimination of manual emptying or upgrade of manual emptier into the improved semi-manual gulpers is required to serve areas with limited vehicle accessibility.

Toilet maintenance: The households with their own toilets were asked whether they had undertaken any maintenance of their toilets. Table 3-11 shows that most (21.3%) of the toilets have not required any maintenance and only 11.5% have received some maintenance. Then 10.2% require maintenance but this has not been undertaken.

Table 3-11: Toilet maintenance history

Community Name	No response	It hasn't required maintenance yet	No	Yes	Grand Total
Wankulukuku	36	14	2	5	57
Kivulu I	30	16	2	5	53
Mbogo zone	33	19	9	3	64
Kapeke	33	1	2	3	39
Luzige	24	6	3	2	35
Kanisa	15	23	7	6	51
Wakaliga zone 7	38	13		3	54
Kigundu zone	22	9	8	17	56
Kiwanataka	28	2	12	8	50
Go-Down 3	33	6	7	7	53
Grand Total	**292**	**109**	**52**	**59**	**512**
Overall	**57.0%**	**21.3%**	**10.2%**	**11.5%**	**100%**

Schools: The type of toilets in use in the schools are shown in Table 3-12. The Flush/Pour-flush toilets are the majority and seven of the schools have this type. Kasanga P/S has a bio-latrine where biogas is generated and used for cooking food at school. The other 4 schools have pit latrines with slab as their main toilets.

Table 3-12: Toilet types in Schools

School	Toilet Type			Grand Total
	Flush / Pour-flush toilets	Bio-Latrine	Pit latrines with slab	
Buganda Road P/S	1			1
Kampala H/S	1			1
Kansanga P/S		1		1
Katwe Matrys P/S	1			1
Kibuye P/S	1			1
Mirembe P/S			1	1
Natete Muslim H/S	1			1
Natete Muslim P/S			1	1
Railway Children P/S			1	1
Mulago School for the deaf P/S			1	1
St. Ponsiano P/S	1			1
Uganda School for the deaf-Ntinda P/S	1			1
Grand Total	7	1	4	12

The location of the student toilets for 8 schools is an outside building but on the school premises. Four schools have their toilets within the School building. The computed pupil: stance ratio for the project schools varies from 7 (Uganda School for the deaf-Ntinda) to 158 (Kibuye Primary School). High pupil stance ratios affect the usage of the toilets and accessing them at busy times of the day such as break time can be a challenge for the pupils.

Table 3-13: Number of Pupils per toilet stance ratio for Schools

School Name	**No. of usable toilets/latrine stances**			**Total Stances**	**Pupil/Stance Ratio**
	Girls Only	**Boys Only**	**Common use**		
Buganda Road P/S	27	12	5	2,526	**57.4**
Kampala H/S	22	20	5	1,430	**30.4**
Kansanga P/S	7	7	0	1,108	**79.1**
Katwe Matrys P/S	3	3	0	309	**51.5**
Kibuye P/S	3	3	0	946	**157.7**
Mirembe P/S	8	12	0	665	**33.3**
Natete Muslim H/S	4	3	0	962	**137.4**
Natete Muslim P/S	3	2	0	500	**100.0**
Railway Children P/S	8	12	0	1,096	**54.8**
Mulago School for the deaf P/S	4	4	1	184	**20.4**
St. Ponsiano P/S	12	6	0	1,500	**83.3**
Uganda School for the deaf-Ntinda P/S	15	15	2	220	**6.9**
Grand Total	**116**	**99**	**13**	**11,446**	**50.2**

Half of the schools have at least 1 useable toilet that is accessible to the smallest children at the School. Eight out of the 12 Schools have at least one usable toilet/latrine that is accessible to those with limited mobility or vision. Culturally appropriate anal cleansing materials were only found in 9 of the schools at the time of the survey. Katwe Matrys P/S, Mirembe P/S and St. Ponsiano P/S did not have anal cleansing materials when the survey was done.Functional lighting in the student toilets was found in 10 of the schools on the day of the survey. Katwe Matrys P/S and Natete Muslim P/S did not have functional lighting for the toilets.Most (11/12) of the schools indicated that cleaning of toilets is done on a daily basis. Kibuye primary school indicated a cleaning frequency of 2-4 days per week.By visual observation, the cleanliness of the school toilets was assessed. Eight of the toilets were rated as clean while 4 of them were rated as somewhat clean. Table 3-14 shows the reasons for the low rating of the 4 schools.

Table 3-14: Reasons for low rating of cleanliness of school toilets

School	Reason
Katwe Martyrs P/S	Smell
Natete Muslim P/S	
Mirembe P/S	Smell, Other (please specify)
Kansanga P/S	Visible faecal matter in the toilet

Regarding cleaning of toilets, 9 of the schools used paid workers to effect the cleaning. The other three schools use paid workers and students to do the cleaning.

Environmental sanitation

Solid waste collection and garbage management is one of the services provided by KCCA. It is estimated that about 1,500 tonnes of garbage are generated daily in Kampala. KCCA contracted out the management of garbage collection to private companies who work in different zones in the city. However, for the urban poor areas and public places such as the markets, KCCA still directly undertakes garbage collection. The respondents in the project communities were asked how they manage their solid waste. Figure 3-4 shows the responses regarding solid waste management in the project areas. Most of the residents pay for removal of solid waste by a private provider or individual. Burning of solid waste is also a common practice.All the 10 communities indicated that they have drainages. However, maintenance of the drainage system is still a challenge. Disposal of solid waste into the channels further complicates the maintenance.

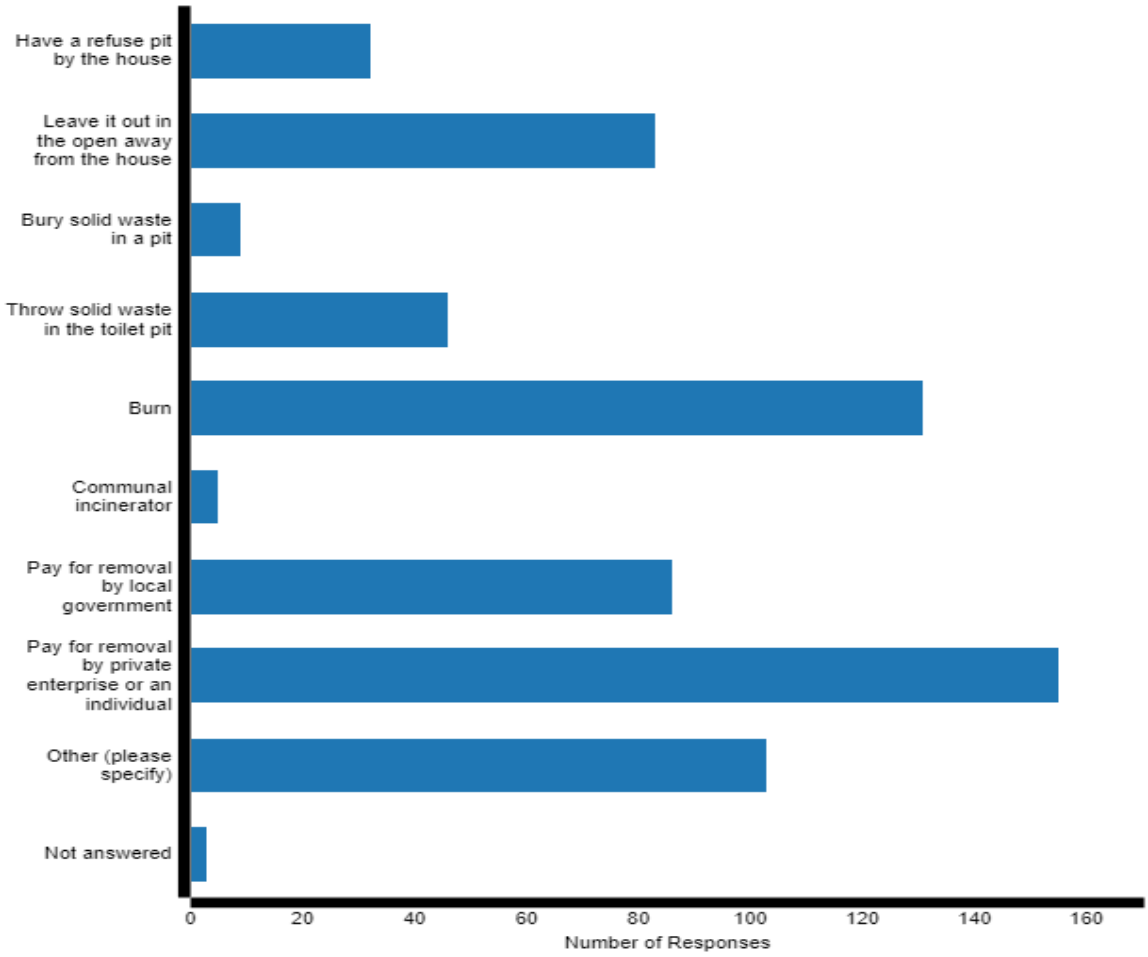

Figure 3-4: Solid waste management practices in Kampala

A significant number of respondents indicated that they leave the solid waste in the open away from their houses while others indicated that they dump solid waste in toilets. These practices point to a need to sensitize more about solid waste management and also improve the solid waste collection services in the project areas. For Schools, 9 out of the 12 schools use the municipal solid waste collection system. The other 3 schools burn the waste on site.

Management arrangements

Access to spares for toilet upgrade: Table 3-15 shows a cross tabulation of toilet maintenance history and access to spares for maintenance. About 3.5% of the respondents indicated lack of access to spares for toilet maintenance/upgrade whereas 13.5% had access to spares. Access to spares seems not to be a major constraint to toilet maintenance.

Table 3-15: Access to spares for toilet maintenance

Access to Spares/Materials	Toilet maintenance history				Grand Total	% age
	No Response	It hasn't required maintenance yet	Not maintained	Yes, Maintained		
No response	282	1	2	1	286	55.9%
I haven't needed to access spare parts or materials	6	100	27	6	139	27.1%
No access			14	4	18	3.5%
Yes, have access	4	8	9	48	69	13.5%
Grand Total	292	109	52	59	512	100.0%
% age	57.0%	21.3%	10.2%	11.5%	100%	

Promotion and management of sanitation in the community

Promotion and awareness creation are important aspects in improving sanitation service delivery in communities. The respondents were asked if they were aware of an active group that undertakes sanitation promotion in their community. Table 3-16 shows that 56% of the respondents indicated the presence of such groups which is a good starting point for the planned project interventions.

Table 3-16: Presence of an active group for sanitation promotion

Community Name	**No response**	**No**	**Yes**	**Grand Total**
Wankulukuku	8	25	24	57
Kivulu I	8	17	28	53
Mbogo zone	6	32	26	64
Kapeke	15	4	20	39
Luzige	2	2	31	35
Kanisa	4	30	17	51
Wakaliga zone 7		6	48	54
Kigundu zone		4	52	56
Kiwanataka	14	32	4	50
Go-Down 3	1	17	35	53
Grand Total	**58**	**169**	**285**	**512**
% age	**11%**	**33%**	**56%**	**100%**

Financing of toilet construction

The household toilet facilities construction in the project area are mostly self-financed from savings and family contributions as illustrated in Figure 3-5 below. Most of the NGO support has been directed to the communal toilet construction and limited to awareness creation when it comes to households. Some financial institutions such as Post bank and VAAD microfinance do have some loans that households can access to improve their sanitation facilities. Innovative financing options to enable households constructed improved sanitation facilities is an area that needs to be further explored.

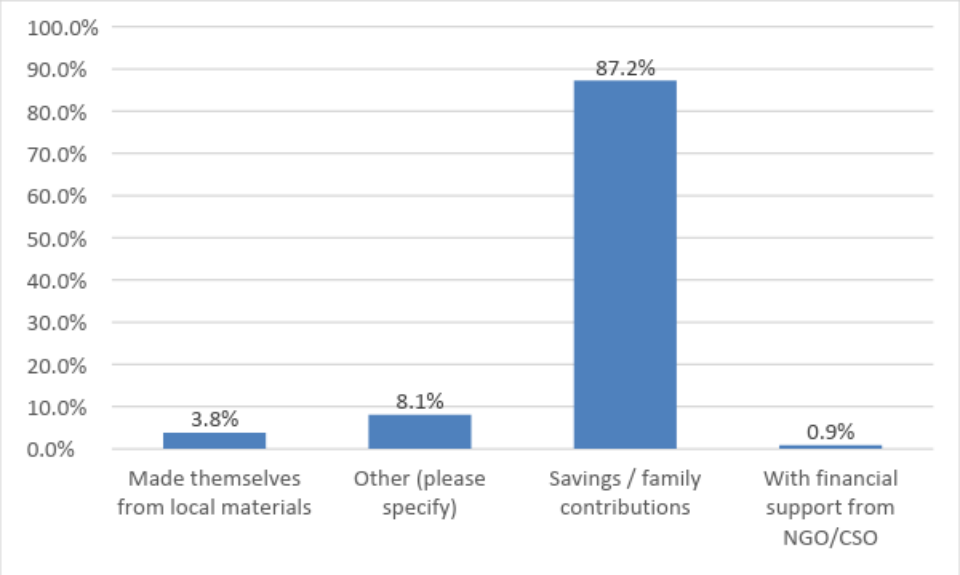

Figure 3-5: Financing for household toilet construction

External Technical Support

Maintenance and Management services: The communities indicated that KCC provides support in terms of monitoring and training on WASH aspects but not on a frequent basis.The respondents in schools were asked if they can access technical support for maintaining their sanitation facilities and 11 out of the 12 schools indicated that they were able to do so. Only Kibuye Primary School indicated otherwise.

Availability of Pit Emptiers': Kampala has over 100 private cesspool trucks that provide FS empting services to customers in different parts of the city. The cesspool trucks can be accessed by direct contact between the customer and the service providers. Another contact is through the KCCA call centre whereby requests received for FS emptying are forwarded to the private operators through their Umbrella association i.e. UPEA. Other Pit emptiers available in the city are 10 Gulper operators who work mostly in areas not accessible by cesspool trucks. KCCA records show that on average about 600m^3 of FS are collected per day. However, estimates show that over 1,000m^3/day of FS can potentially be collected. The main concerns with the services are the high emptying costs of about USD $ 10 per m^3 of FS emptied.

School WASH Financing: Two schools (Kibuye Primary School and Railway primary school) have access to some WASH funding from NGOs. Eight Schools indicated that they had no access to external funding for WASH. Two schools (Buganda Road P/S and Kampala H/S) indicated that they access financing from the National Government.

Service Levels: School and Community Hygiene
Access

Location of hand washing facilities: Respondents were asked about the location of their hand washing facilities that had both soap and water. Only 33% had hand washing facilities inside or near the toilet; 13% of the cases indicated that the hand washing facility was in the Kitchen; 26% indicated elsewhere in the household and 27% admitted as not having hand washing facilities.Figure 3-6 shows the assessment of suitability of physical setting of hand washing facility. Overall 40% of the physical setting was not suitable for hand washing whereas 48% was suitable. The rest (11%) could not be observed. This shows that there is still a big gap in having suitable hand washing facilities within the project area.

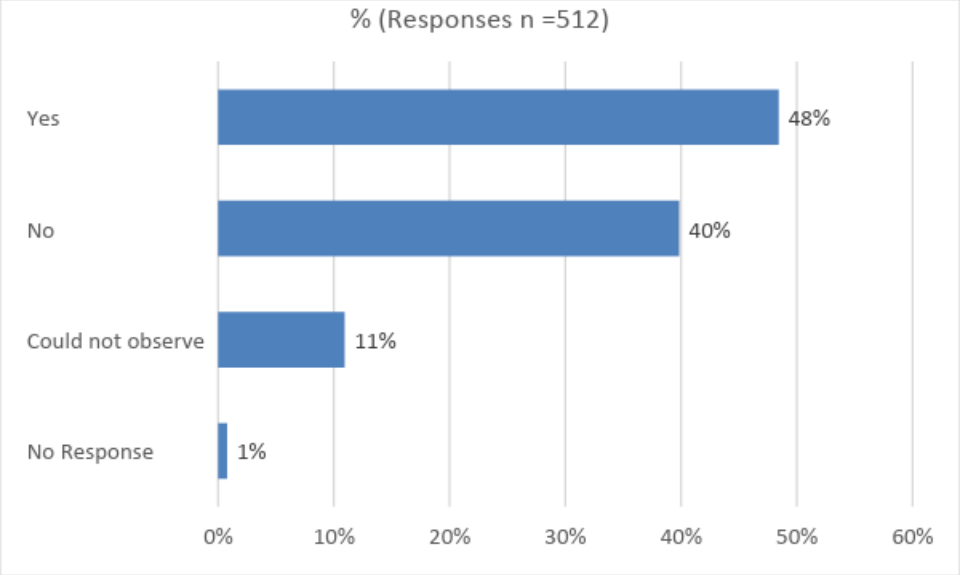

Figure 3-6: Suitability of physical setting for hand washing

Presence of soap and water: Effective hand washing requires a hand washing facility, water and soap to be complete. The baseline survey established that there is still a big gap w.r.t hand washing facilities for households in the project areas. Table 3-17 shows that only 15% of the hand washing facilities in the Kitchen have both soap and water and only 28% of the toilets have hand washing facilities with soap and water.

Table 3-17: Hand washing facilities with soap and water

Location of Hand washing Facility	HWF with both Water & Soap Available	Water only	Soap Only	Neither
Kitchen	15%	43%	24%	19%
Inside or near toilet	28%	1%	16%	54%
Elsewhere in toilet	26%	42%	28%	4%
Could not Observe	31%	14%	32%	23%

Schools
All the schools have hand washing facilities. Seven (7) out of 12 Schools have both water and soap at the hand washing facilities. Five schools only have water at the hand washing facilities. These include:Mirembe P/S; Uganda School of the deaf Ntinda P/S; Railway P/S; Kibuye P/S; Natete Muslim P/S.

Hand washing facilities in 10 of the school are accessible to those with limited mobility or vision. Whereas 11 Schools have facilities accessible to the smallest children at School.
Table 3-18 shows the locations of the hand washing facilities in schools. Most of the facilities are located in the food preparation are followed by the toilets.

Table 3-18: Location of hand washing facilities in Schools (multiple responses)

Location of HWF	**# Responses**	**% responses**
Food preparation area	10	29%
Toilets	9	26%
School yard	6	18%
Classrooms	4	12%
Food Consumption area	3	9%
Others	2	6%
Total	**34**	**100%**

Group hand washing activities are undertaken by all the schools but the frequency varies. Six schools indicated that they undertake the activity less than once per week; 4 schools undertake it once per week. Mulago School of the deaf undertakes it once per day while Kibuye P/S undertakes it 2-4 days per week.

Hygiene behaviour/practice

Hand washing with soap and water at critical times

Household respondents were asked whether hand washing with soap at critical times was common in the community to get their perceptions on the current practices. Over 40.8% of the responses indicated that hand washing with soap at after defecation is common in the community. However, about 14% indicated that hand washing with soap at critical times is not common in the community.

Table 3-19: Hand washing with soap practices

Aspect/Practice	**# Responses**	**%**
Hand washing with soap before feeding/eating are common in the village	184	26.9%
Hand washing with soap after defecation is common in the community	279	40.8%
No, hand washing with soap at critical times is not common in my community	96	14.1%
Don't Know	124	18.2%
Total	**683**	**100%**

Water treatment and proper storage

Community

Over 95% of the household respondents indicated that they treat their drinking water by boiling. However, 43% of those who indicated boiling could not be confirmed through observation. It is possible that the consistency of boiling water before drinking is not that high in the communities.

The data collectors observed the storage of drinking water by households and rated the practices as shown in Figure 3-6. Most (63.4%) of the households store drinking water in clean containers with leads. A significant number (12.9%) store drinking water in clean containers but without lids which exposes the water to contamination. Unclean containers without lids are not many.

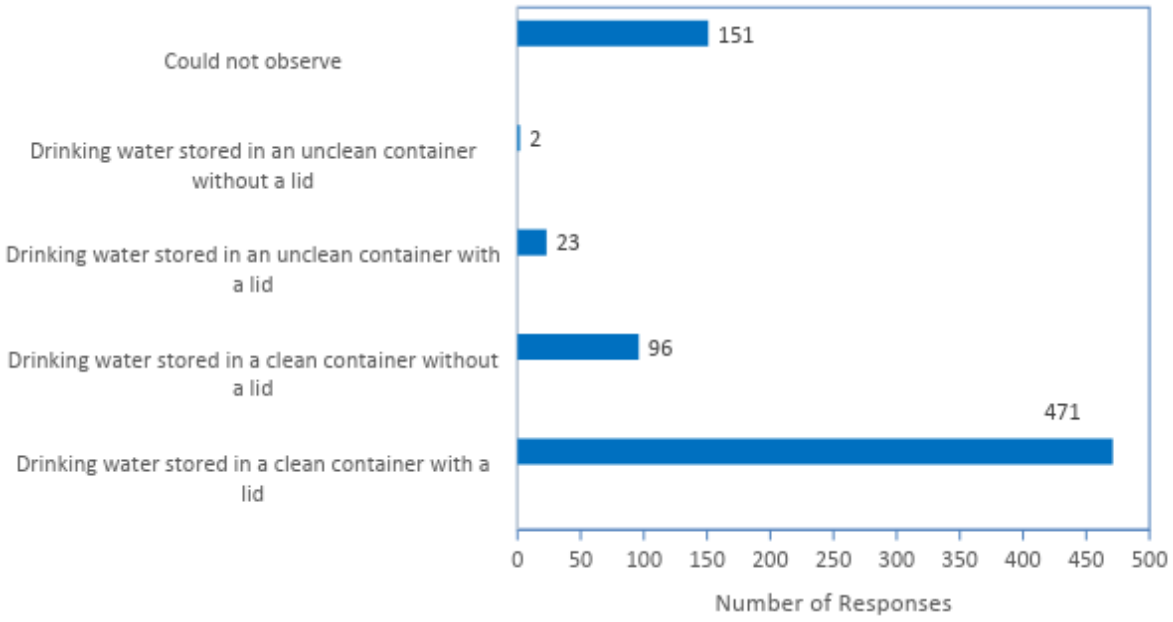

Figure 3-7: Storage of drinking water in households

Schools

Eight of the schools indicated that they treat the water from the main water source to make to safe for drinking. Two schools (St Ponsiano primary school and Katwe Martyrs Primary school) do not do any form of treatment to the water. They don't provide children with drinking water. The pupils are advised to pack their own drinking water from home. This can affect the effective learning and the children can resort to drinking unsafe water in case they were not able to carry water from home. The treatment methods used include: Boiling (3 No.); Chlorination (4 No.); Filtration (2 No.); Ultraviolet disinfection (1 No.).

Cleanliness of sanitation facility and child faeces disposal

Through observation, the cleanliness of the toilets was ranked. The analysis shows that 56.3% of the toilets in the households in the project area were clean whereas 39.3% of the toilets were not clean but are in use. There is a gap in the community regarding appropriate cleaning their toilet facilities.

The respondents indicated that 24% of children defecate in toilets. Other households use a combination of methods to deal with children waste. Some use potties and dispose the faecal matter into toilets of open ground. Others let the children do open defecation and clean up later. Other dispose children pampers together with solid waste. Generally more sensitization and awareness creation on proper handling of children's faeces is required. The survey also established that 79.7% of the sanitation facilities were conducive for managing faeces (including children faeces).

Food hygiene practices

Table 3-20 summarizes the responses for household practices with respect to maintaining food hygiene. The commonest means of maintaining food hygiene in the project areas include cooking food thoroughly and ensuring that serving utensils are clean just before serving food.

Table 3-20: Food hygiene practices at Households

Aspect	% Response (n =1470)
Ensure that serving utensils are clean just before serving food	26.5%
Re-heat stored food thoroughly	17.0%
Store cooked food properly to protect from flies / dust / dirt / animals	9.4%
Cook food thoroughly	26.8%
Store cooked food properly to protect from flies / dust / dirt / animals	10.4%
Ensure that serving utensils are clean just before serving food	2.7%
Keep cooked and uncooked food separate in the kitchen	7.1%
Total	**100%**

The community practices reported in the project areas are summarized in Figure 3-8. Only 2% of the responses indicated that no good food hygiene practices are maintained in the community. Thorough cooking is the most (39%) reported practice of maintaining food hygiene in the project area.

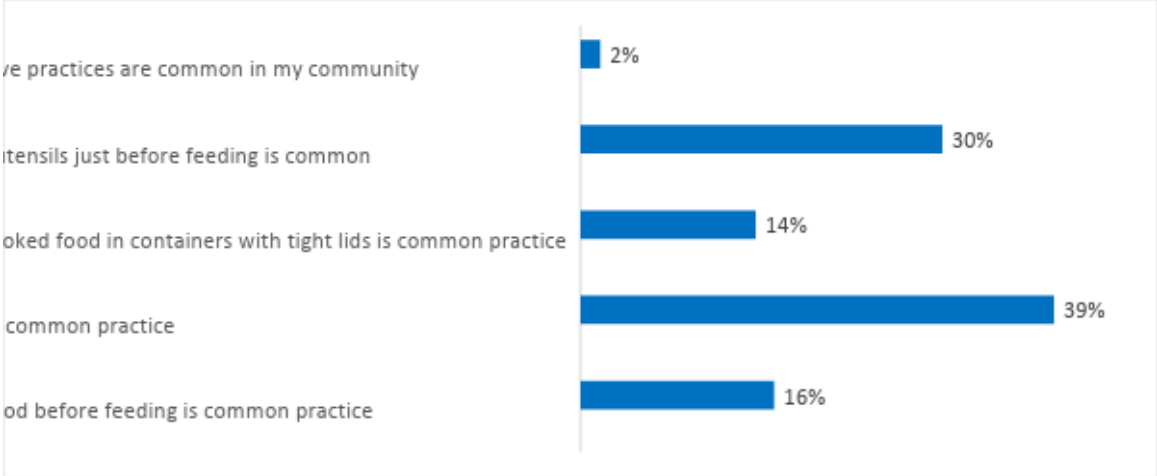

Figure 3-8: Community practices with respect to food hygiene (n= 866)

Menstrual Hygiene Management

Community

The survey established that 46.7 % of the respondents had access to hygienic, safe and private facilities to practice good menstrual hygiene. About 10% of the respondents indicated that management of Menstruation activities is considered a Taboo in their community. There seems to be good knowledge about MHM in most of the communities and households.

Schools

All the schools (except Railway primary school) have hygienic and safe facilities for management of menstrual hygiene. Both Water and soap are available in the girl's toilet cubicles for menstrual hygiene management in 8 of the schools. Three schools (Railway primary, Katwe Martyrs and Nateete Muslim Primary School) had water but no

soap for MHM. Covered bins for disposal of menstrual hygiene materials in girl's toilets are available in 11 schools. Railway Primary school didn't have the covered bins. Ten of the schools had disposal mechanisms for menstrual hygiene waste at the schools. Katwe Martyrs and Railway primary don't have such a provision.
The provisions for menstrual hygiene management available at the different schools are shown in Table 3-21.

Table 3-21: Menstrual hygiene management provision in the schools

School Name	MHM provision
Kansanga P/S	MHM education, MHM materials
Katwe Matrys P/S	MHM materials, MHM education
Kampala H/S	Bathing areas, MHM education, MHM materials
St. Ponsiano P/S	MHM education
Mirembe P/S	MHM education, MHM materials
USFD Ntinda P/S	Bathing areas, MHM materials, MHM education
SFD Mulago P/S	Bathing areas, MHM materials, MHM education
Buganda Road P/S	Bathing areas, MHM materials, MHM education
Railway Children P/S	Bathing areas, MHM education, MHM materials
Kibuye P/S	MHM materials, Bathing areas, MHM education
Natete Muslim H/S	None
Natete Muslim P/S	Bathing areas, MHM materials, MHM education

Technical support
Active hygiene promoters

Community health workers and other volunteers are still active in hygiene promotion work in 8 of the 10 project communities. Table 3-22 shows a combination of various groups involved in hygiene promotion.

Table 3-22: Management of Hygiene programme at community level

Party that manages hygiene	Count of Schools
Any other mobilised volunteer (paid or unpaid)	1
Community	2
Community, Local government institutions	1
Community, Responsible group is not functional	1
Local government institutions, Community	1
Local government institutions, Traditional leaders, Community	1
Local health institutions, Local government institutions, Community	1
Local NGOs, Community	1
Local NGOs, Community, Local health institutions, Local government institutions	1
Grand Total	**10**

Availability of hygiene promotion guideline and package for reinforcement

Only 1 community does not have a mechanism for reinforcing key hygiene behavior at household and community level. The community name is Wankulukuku in Rubaga division. The percentage of respondents for the community survey who indicated that they were aware of who to contact in case of need to refine and implement hygiene promotion tasks is 80%. In addition, 80% of the communities indicated lack of financing for promotion and maintenance of hygiene services.

Seven out of the 12 schools indicated that they had WASH standards and guidelines to help them in the day to day management of WASH activities.

Capacity Assessment For KCCA

Wash Policy, Planning and Budgets

KCCA has a budget line for WASH services. The budgets capture solid waste management costs, construction of public toilet and maintenance of public toilets. The primary schools receive capitation grants from MoES of which 5% takes care of water and sanitation. The WASH allocation for the FY 2016/17 and FY 2017/18 is shown in Table 4-1. The current KCCA strategic plan ends in 2019. It has some elements of WASH captured but are not adequate to address the WASH needs in the city. Regarding minimum WASH standards, KCCA has draft minimum standards for sanitation technologies. These are still in draft form and are yet to be approved. However, the standards do not cover all aspects of WASH in the city. KCCA has some elements of WASH cost recovery mechanisms for sustainability. Management of solid waste in the city is under a PPP arrangement where the principle of "polluter pays" is incorporated. In schools, parents do contribute money to take care of the sanitation needs. This however varies from school to school. The WASH community interventions are demand driven that are accompanied with self-sustaining mechanisms.Some of the pro-poor strategies employed by KCCA for WASH at the city level include:

- Investment in UPE and USE schools.
- Free solid waste collection service in urban poor communities.
- Lower tariff for the poor communities in solid waste management.
- Re-organization of FS emptying services and fully utilize the call center to reduce emptying prices.
- Public toilets in selected areas.

Planning

KCCA does not have a specific WASH operational plan. However, a number of WASH projects and programmes run by KCCA come with specific areas to address in predefined timelines. The main target for schools in sanitation is a reduction in the Pupil: Toilet Stance Ratio. The current ratio is 1:50 and the target is 1:40 for primary schools. Little attention is given to secondary schools, yet the pupil: stance ratio in the public secondary schools is also high. The institutional setup mandates management of public secondary schools in Kampala to Ministry of Education and Sports. KCCA's mandate is mostly in the public primary schools.

WASH Monitoring and Evaluation system

KCCA has a generic Monitoring and Evaluation (M&E) tool for school inspections. The draw-down is the fact that WASH aspects are not given much attention in the school inspections. There is no proper M&E system for monitoring community WASH aspects. Most of KCCA monitoring is based on complaints received or enforcement. However, the VHTs do capture some sanitation information from the communities. The HMIS captures pupil/stance ratio for school and some aspects of community sanitation coverage. However, the HMIS information is insufficient to cover the WASH indicators that address the SDG requirements. KCCA has WASH awareness creation/promotion plan in form of Behavior Change Communication (BCC) under the Bill and Melinda Gates Project (BMGF) project. The toll- free contact center also is a vital source of WASH information for the public.

Financing

KCCA has a budget line for Water and Environment within their annual budgets. Table 4-1 shows that medium term budgetary allocation by vote for FY 16/17 and FY 2017/18. Water and Environment took 2.6% and 4.6% of the total KCCA budget in the FY 16/17 and FY 2017/18 respectively. The highest budget allocation is for Works and Transport.

Table 4-1: KCCA medium term budgetary allocation by vote function

Sector /vote Function	**FY 2016/17**		**FY 2017/18**	
	Total in UGX (Billions)	**%**	**Total in UGX (Billions)**	**%**
Production	7.88	1.4%	7.07	2.1%
Education	36.5	6.5%	37.96	11.3%
Health	6.88	1.2%	20.31	6.0%
Water & Environment	**14.64**	**2.6%**	**15.55**	**4.6%**
Social Development	1.82	0.3%	1.86	0.6%
Revenue Collection	3.6	0.6%	3.69	1.1%
Human Resources and Administration	78.44	13.9%	89.5	26.5%
Legal Support	18.44	3.3%	12.42	3.7%
Political Governance	14.05	2.5%	17.87	5.3%
Treasury Services	3.95	0.7%	2.98	0.9%
Internal Audit	0.27	0.0%	0.31	0.1%
Executive Support	5.21	0.9%	5.44	1.6%
*Urban Planning	3.05	0.5%	3.46	1.0%
Works and Transport	369.11	65.5%	118.98	35.3%
Grand Total	**563.84**	**100.0%**	**337.39**	**100.0%**

Source: Ministerial Policy Statement FY 2017/18

The KCCA Water and Environment Budget captures some WASH improvement activities such as maintenance of public toilets; Construction of school toilets. About 40% of the Water and Environment budget is for solid waste management including maintenance of landfill and garbage trucks.

Donor support in WASH: T

he details of WASH donor support to KCCA is summarized in Table 4-2

Table 4-2: WASH donor support to KCCA

#	Donor Agency	Activities Supported	Budget
1	WaterAid	Advocacy; Construction of WASH facilities	
2	GIZ	Capacity Building	
3	BMGF/DFID	Faecal Sludge Management improvement	USD 2 Million
4	AFD		
5	MTN Uganda	Construction of School Sanitation facilities	
6	AMREF	Construction of communal sanitation facilities; Faecal sludge management in urban poor areas	
7	Coca Cola	Construction of School sanitation facilities	
8	Chesire Foundation	Construction of sanitation facilities; Advocacy	

All the WASH interventions are targeted to the poor and marginalized groups and WASH funds are directed to schools in most need. KCCA usually has an input in the selection of the target areas where interventions in WASH are to be undertaken irrespective of the Donor.

Mechanisms for WASH support in Schools

Some of the mechanisms through which WASH in schools is supported include:

- Government of Uganda grants to the schools are sent through KCCA
- Project based capacity building for schools is undertaken by KCCA and partners
- Training of head teachers by KCCA on WASH issues
- Peer to Peer learning (Others learn from schools that are working well in WASH)
- Training on bio-toilets technology has been carried out in schools that have received toilets of this kind
- KCCA provides technical backstopping and at the request of the schools, KCCA sends Masons and plumbers to do repairs and maintenance as a one-off activity from time to time

Despite the efforts by KCCA, Training manuals for WASH in schools are not in place and this affects continuity of the school WASH capacity building initiatives.

Mechanisms for WASH support in Communities

KCCA has a number of planned activities to support WASH O&M in communities. These include:

- Clean-ups in selected communities
- Sanitation improvement campaigns. The examples include free FS emptying and solid waste collection on world water day and other special days.
- KCCA also undertakes WASH training for communities for example the toilet user committees, VHTs etc.
- Technical backstopping is provided to communities by KCCA. The Health Inspectors provide support to communities that need advice on being compliant to different public health requirements. The KCCA Engineers also provide guidance on appropriate technologies for Construction of acceptable sanitation facilities in the city.
- KCCA utilizes Community Barazas as a point of entry that allows Communities to directly engage the technical staff on different WASH issues.
- KCCA has provided a Toll free customer care centre and several social media platforms through which complaints are received and addressed accordingly.

Wash stakeholder Coordination and Collaboration

Capacity: KCCA coordinates/collaborates the WASH sector through different platforms that have been put in place. These include:

a) The Kampala Water and Sanitation Forum (KWSF). The overall objective of the KWSF is to streamline coordination of stakeholders in developing an integrated WASH sector in Kampala. The forum has four working groups with chairs for different themes. Overall, the forum needs to be strengthened for effectiveness of the working groups.

b) The Kampala Pollution Control Task Force started in 2012. The PTF is coordinated by KCCA, and comprises of the Directorate of Water Resources Management (DWRM) - Ministry of Water and Environment (MWE), National Environment Management Authority (NEMA) and National Water and Sewerage Corporation (NWSC). Uganda Manufacturers Association (UMA) and Uganda Cleaner Production Centre (UCPC) were also brought on board to enhance the engagement of the industrial sector through a Public-Private Dialogue (PPD) regarding cleaner production and improved resource recovery and reuse efficiency with focus on water, waste and energy optimization. The PTF aims at strengthening cooperation between both the member regulatory agencies as well as between the public and the private sector.

c) KCCA is represented on all major WASH infrastructure projects undertaken by NWSC and other agencies in Kampala. KCCA is always a member of the project steering committee and this has enhanced the coordination with other sector actors. The membership includes CEOs of the different entities and is therefore influential.

d) KCCA also requires other actors such as NGOs, CBOs, Donor agencies that work in the WASH sector in Kampala to have Memoranda of Understanding with them. The MoUs spell out the obligations, expectations and roles of the different actors. This partly enables KCCA to coordinate the actors and minimize duplication of interventions.

Despite having the collaboration platforms above, their effectiveness in the actual collaboration of the sector needs strengthening through:

a) Operationalization of the commitments and plans that have been documented and agreed upon by the different committees. KCCA should take lead in this and also in securing the required facilitation to make the operationalization a reality.

b) Strengthening the WASH sector performance monitoring for Kampala to ensure that the required information is periodically gathered and assessed to inform decision making.

WASH management information systems

KCCA currently captures WASH related information through the following means:

- The Toll free care centre based at KCCA headquarters. The setup allows for capturing of complaints which are forwarded to the concerned persons for action. The call centre also has a reporting system to capture feedback on whether the complaint was resolved or otherwise.
- At the division leveI, an issues logo is used to capture any complaints or issues received regarding WASH and other services handled by KCCA.
- With respect to FSM, KCCA has put in place a system that tracks movement of the cesspool trucks in a bid to minimize illicit disposal of FS into the environment.
- KCCA has a GIS data base for sanitation facilities in Kampala and also another platform for schools.
- Departmental monthly and quarterly reports summarize the activities undertaken by the department in the period under review.

Some of the areas to improve in the WASH information management systems include: Updating of GIS based WASH monitoring platform for schools; Upgrade of the GIS database for sanitation facilities to enable automatic online update in case new information is received from the field; Further optimization of the tracking system to ensure that all activities in FS collection and disposal activities in the city are effectively monitored.

Stakeholder Analysis

The main WASH actors in Kampala and their roles are summarized in Table 4-3.

Table 4-3: Roles and responsibilities for WASH services in Kampala

Function	MoH	MoES	DWRM	DEA	NEMA	NWSC	KCCA	NGOs/CBOs	Private Sector
Water treatment, supply etc.						■	•	•	•
Sewer network O&M & Expansion						■			
Wastewater/Faecal sludge treatment						■			
Household onsite sanitation	•						■	•	
Public latrines	•					•	■	•	•
School latrines	•	■					■	•	•
Faecal sludge collection						•	■	•	■
Health/hygiene promotion	•	•				•	■	■	
Surface water drainage							■		
Solid waste collection/disposal							■		■
Water quality monitoring			■		■	•	•		
Wetlands management				■			•		
Waste/discharge permitting			■		■	•	•		

Investment planning						■	■		
Physical planning							■		
Planning control			•				■		
■= major role •= minor role									

The level of involvement of civil society in KCCA planning, implementation and influencing of WASH varies and is summarized in Table 4-4 below.

Table 4-4: level of Involvement of civil society in KCCA

#	Aspect of WASH involvement	Remarks	Rating
1	Planning	Low involvement	
2	Implementation	Very High	
3	Influencing	Very high (through advocacy)	

Overall the level of networking amongst the stakeholders through research and learning initiatives is low. Opportunities for further collaboration and networking and strategic use of partnerships include: Research, capacity building and harmonization of interventions to minimize duplication of efforts and ensure improved WASH service delivery.

Implementation status of WASH Policies

The overall guiding Government policy for WASH in Kampala is the National Development Plan 2 (2015/16 to 2019/20) and Vision 2040.The Greater Kampala Metropolitan City is recognized by both Vision 2040 and NDP-2. In both plans, the water and sanitation component focuses on increasing access to safe water and sanitation services in the long term. At both National and sub national level, the government of Uganda in collaboration and with support from the development partners, private sector and civil society have prioritized Water and Sanitation as a key sector to contribute to improved health and reduction in environmental pollution.
In Kampala, there are several ongoing projects that are geared to improved WASH services. Some of the projects include: i) Kampala Water-Lake Victoria Water and Sanitation Project (EU/GoU financed); ii) Enhanced Water Security and Sanitation (ENWASS/ (GIZ), Basic Sanitation for Poor Peri-Urban and Urban Communities in Kawempe Division (EU/AMREF financed); and iii) Kampala Faecal Sludge Management (KFSM/BMGF, DFID) etc. The projects are at varying stages of implementation and others are at the planning stage. The water projects are mainly implemented by NWSC.

Through the KCCA annual Budgets, WASH activities are routinely undertaken to ensure that the vision of KCCA of being a Vibrant, Attractive and Sustainable City is realized. KCCA has also partnered with Private entities such as MTN Uganda who have implemented a number of improvements in Schools Sanitation in the City.
Despite the above efforts, the available financing is currently not sufficient to address all the gaps to enable achievement of desired WASH service delivery levels and Infrastructure in Kampala. In addition, the Legal framework needs to be strengthened to enable full participation of the private sector in WASH financing, Regulation and management in the City.

Challenges and Opportunities

MWE Joint Sector Review: At the national level, the Water and Environment activities and targets are coordinated through the Joint Sector Review which takes place annually. The lead coordinating agency is the Ministry of Water and Environment. Other actors in the sector are required to provide sector specific information to enable tracking of performance and follow up on earlier agreed commitments. The WASH donors are actively involved in the sector reviews.For many years, the sector performance report hasn't captured Kampala specific information for the WASH sector. Absence of sufficient WASH data for Kampala in the sector report is a hindrance to accessing further

financing and collaborating with other actors. KCCA would also use the opportunity to show case what they have done in the sector and further foster peer-to-peer learning with other cities/towns.

Capacity Challenges

Some of the capacity challenges faced by KCCA include:

- Understaffing within the Public health and Environment directorate affects service delivery.
- Limited financing to undertake all the desired WASH improvements and investments with Kampala.
- Harmonization of technical and political interests within KCCA for sustained WASH service delivery.
- Absence of a detailed Physical Development master plan for Kampala.
- Lack of equipment/tools for to undertake independent water quality tests, faecal sludge analysis etc.
- Lack of a research department that can undertake research in areas of interest in WASH improvement in Kampala.

Feedback Mechanisms for Wash Users

Governance and Accountability

The mechanisms in place for communities to raise WASH issues with KCCA include: i) The toll free platforms (including e-mail; Socio Media; and telephone). The platforms have been widely publicized by KCCA to the communities; ii) Through the Local Leaders. The KCCA political wing has LCs and Councilors who directly engage with the communities and through this channel WASH issues are brought to the attention of the technocrats for action; iii) KCCA has an open door policy where clients walk into the offices and their complaints are captured and forwarded to the relevant staff.Although the mechanisms for raising WASH issues are in place, the response mechanisms need to be strengthened. For example, KCCA does not have laid down procedures for providing feedback to clients especially on complaints. The response time to the feedback is also open ended and partly depends on the urgency of the matter at hand.

In responding to community demands, transparency and accountability is considered a core value for KCCA. However, there are cases where this is not strictly adhered to. In addition, feedback to the clients is sometimes not provided in a timely manner. The mechanisms in place to monitor transparency and accountability in WASH have to do with compliance to the KCCA internal processes of Procurement and internal Audit. The mechanism to monitor accountability directly to users need to be strengthened.

The level of transparency and accountability by service providers in responding to community demands is moderate based on findings from the household survey. The sectors is not properly regulated and it is difficult to get an accurate level of transparency from the service providers since they don't have a binding relationship with the Authorities in service provision.

Community involvement in WASH

The communities are actively involved in WASH service provision in Kampala. Some of the activities undertaken by the communities include: i) management of communal public toilets constructed by KCCA and other Partners; ii) The communities pay for services e.g. Emptying of toilets and Solid waste collection; iii) Community leadership is involved in WASH awareness creation and enforcement activities.Through the platforms highlighted in section 5.1 the communities are able to demand for their WASH rights. The level of community involvement in WASH is high.

Community Awareness and Participation

In Kampala, a number of NGOs work with KCCA to create awareness in the communities about their WASH rights. This is done through strategic community meetings; Barazas; Targeted trainings; and provision of WASH information in form of fliers, posters etc. At the city-wide level, the level of awareness of WASH rights is Low. Like-wise the awareness of the communities on WASH related policies and procedures is also Low.

Community participation
Level of participation

WASH promotions are undertaken as described in section 5.3. The mechanisms in place for communities to demand their WASH rights include: i) Council meetings; ii) Barazas; iii) Radio talk shows; iv) Email; v) Social Media and vi) Call Centre among others.The mechanisms for the users to demand accountability from the service providers are weak and it is usually based on the understanding between the two parties. For services like solid waste collection, the users can complain directly to KCCA when they are not satisfied in the services being offered by the private company.

KCCA effectiveness & efficiency

At the City Authority Level, KCCA responds to citizen demands and complaints by taking the required corrective action or improvement depending on the nature of the issue at hand. In most of the public health related complaints, response stops at taking the corrective action. For complaints which are sent to KCCA in writing/letter form, the response is also usually given back in writing. However, there is no specific timeline within which such a response would be expected by the concerned citizen.
In cases of dissatisfaction with decisions taken, there is a redress system of appealing to a higher authority within the Entity. Tracking of citizen demands received through the Call centre are effectively tracked and are easy to trace. However, the demands received through other channels are not properly tracked and the tracking system needs to be made more improved from manual to an automated one.

Obstacles and Barriers

The obstacles to community participation and in demanding their rights to WASH services include:

- Limited Knowledge about WASH
- Limited citizen participation and interest
- Varying interests between Technical and political wings at KCCA
- Limited involvement of citizens in planning of WASH initiatives and only come in at a later stage.
- Limited Funding for awareness creation
- Varying Cultural backgrounds of the residents in Kampala
- High Transient Population affects sensitization
- Absentee Landlords who are difficult to engage
- Lack of a well-structured system to capture community demands and questions
- Poor Attitude and behaviours of some communities
- Limited staffing

Platforms for Citizen Engagement

KCCA has some citizen engagement platforms that are used for engagements not only in WASH but also other services provided by the Authority is discussed in the earlier sections above. The most relevant for the WASH sector is the toll free customer centre where citizens can call in any time of the working days and their complaints are picked up. However, the call centre is only based at the Authority level. All calls are centrally received and sent to the lower levels for action. Am improvement to the set-up would be putting in place decentralized call centres for timely service delivery. The other manual platforms needs to be upgraded.

Conclusions

The data collected under this baseline survey documents the existing situation in the selected project areas for the SusWASH project in Kampala. The findings provide the baseline data related to the overall project objectives from which WaterAid will measure progress over the life-time of the SusWASH project. The findings also provide an opportunity to set realistic targets that are to be achieved by the project which will feed into the overall monitoring and evaluation plan for the project.The project results framework including the baseline information is shown in Appendix A. Based on the findings, some areas of focus/emphasis were identified and are summarized in section 6.2 below.

Recommendations

Based on the finding of the study some of the key areas of emphasis are highlighted here-below.

Service levels -School and Community Water

- Water quality monitoring of point water sources and school water supply.
- Increase the number of water drawing points for schools with high populations
- Explore rain water harvesting options to improve on reliability of water supply in the households and Schools

Service levels -School and Community Sanitation

- Mobilization of financing for WASH in schools
- Promotion of improved FS emptying options

- Support Latrine construction in schools with high Pupil/latrine ratios
- Regulation of WASH service provision especially Pit emptying
- Refresher training for WASH committees at community and school
- Improvement of solid waste collection in the communities
- Elimination of open defecation
- Maintenance of drainage systems
- Technical support for WASH in schools
- Financing options for upgrade of household toilets to reduce on toilet sharing and move higher in the sanitation ladder

Service levels -School and Community Hygiene

- Awareness Creation on: Toilet cleanliness; management of children faeces; Water treatment and storage in both schools and communities; Appropriate hand washing facilities; Hand washing with soap and water at critical times
- Emphasis on Menstrual Hygiene Management schools. Provision of facilities and education/information/capacity building

Capacity assessment for KCCA

- Incentives/recognition system for applauding good performing Schools/Communities in WASH
- Strengthen WASH M&E system
- Lobby for increased allocation of WASH budget within KCCA for Schools
- Put in place training manuals for WASH in schools
- Operationalization of commitments and plans agreed upon in KWSF and other collaboration platforms
- Strengthen automation of WASH Management information systems
- Strengthen legal framework for effective regulation of WASH in Kampala

Feedback mechanisms for WASH users

- Develop a comprehensive system to track citizen complaints and feedback handling
- Capacity building for KCCA
- Put in place decentralized call centers for timely service delivery.
- Upgrade of manual citizen engagement platforms.
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