



Kito community report

Cost of water and sanitation services in Kito in the East Gonja District of Northern Region, Ghana.

Kito community, with a population of 238 has four formal water point systems, three of which are reliable. All members of this community are receiving acceptable water service at the basic and intermediate levels with most respondents (64%) enjoying the intermediate service. The community has one public toilet, two household and two institutional toilet facilities. Sanitation service level in the community based on WASHCost sanitation service ladder revealed that about 18% of the respondents are receiving acceptable (improved) sanitation service while about 64% of the respondents receive sub-standard service and 18% no service.

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Front page photo

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WASHCost has been undertaking an action research focusing on quantifying the cost of providing sustainable water, sanitation and hygiene (WASH) services in rural and peri-urban areas in Ghana. This community report presents findings of research carried out in the community of Kito in the East Gonja District in the Northern Region of Ghana.

The WASHCost team visited the Kito community in October 2009 to collect data on the WASH services received by the inhabitants and the cost of providing the services. The community has a population of 238 people from the Regional Community Water and Sanitation Agency records for 2009 and 41 households according to the WATSAN committee. The inhabitants are mostly of the Gonja ethnic group and their main economic activity is farming.

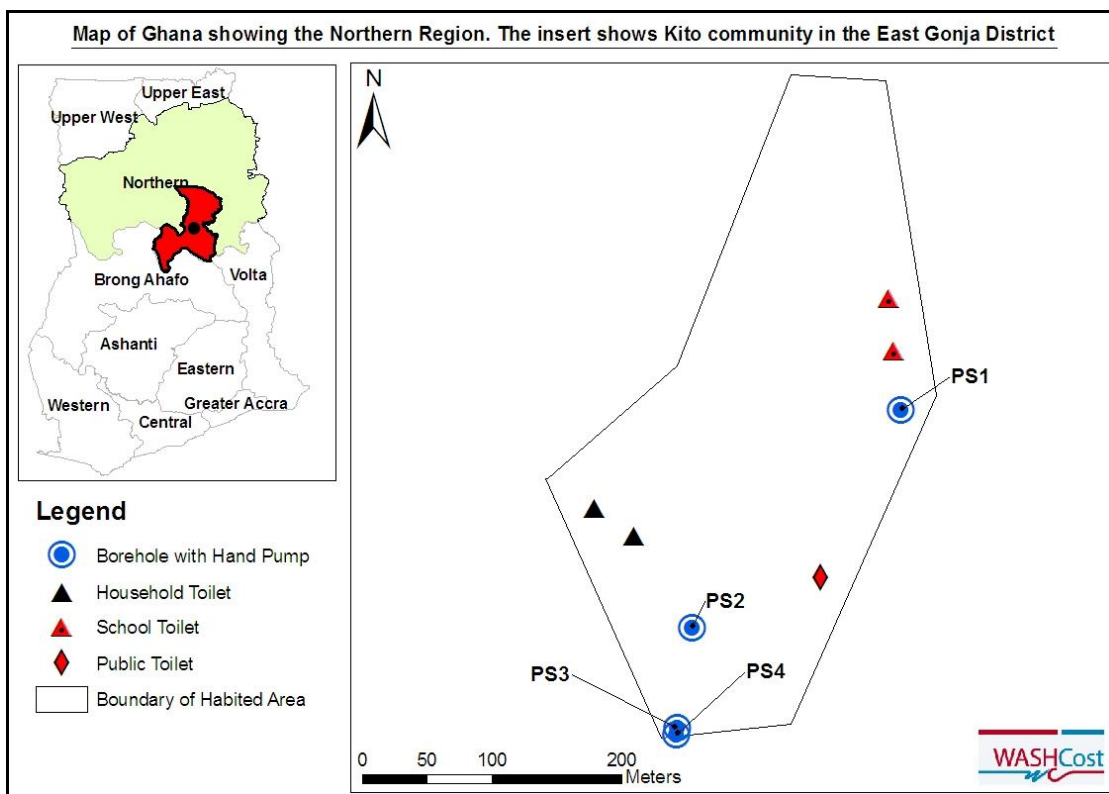


Figure 1: Map of Kito community with water and sanitation facilities

Water supply

Before the year 1998, the inhabitants of Kito relied primarily on harvested rainwater and a dam provided by the District Assembly in the year 1960 as their main sources of water for all domestic purposes including drinking. These informal sources are however still in use. The subsequent history of the development of Kito’s water supply is summarised in Table 1 below.

At the time of the visit, there were four formal water point systems available to the community and three of them were working and one broken down

Table 1: The history of the construction and replacement of formal water supplies

Pre-1998	1998	2004	2005
Harvested rainwater and a dam provided by the District Assembly in the year 1960 as their main sources for all domestic purposes including drinking.	The Canadian International Development Agency (CIDA) provided the community with a hand-dug well fitted with a handpump (PS1).	Northern Region Integrated Project (NORIP) provided one borehole fitted with a handpump (PS2).	A borehole fitted with a handpump (PS3) as well as a hand-dug well fitted with a handpump (PS4) provided by NORIP to further augment their water supply service.

Water consumption from formal and informal sources

The average water consumption from formal water sources shows a strong seasonal pattern, rising in the dry season (≈ 64 l/c/d) and falling in the wet season (≈ 19 l/c/d) when other sources are available. However, informal use of water was not captured as people found it difficult to estimate how much they use e.g. rainwater harvesting in the wet seasons.

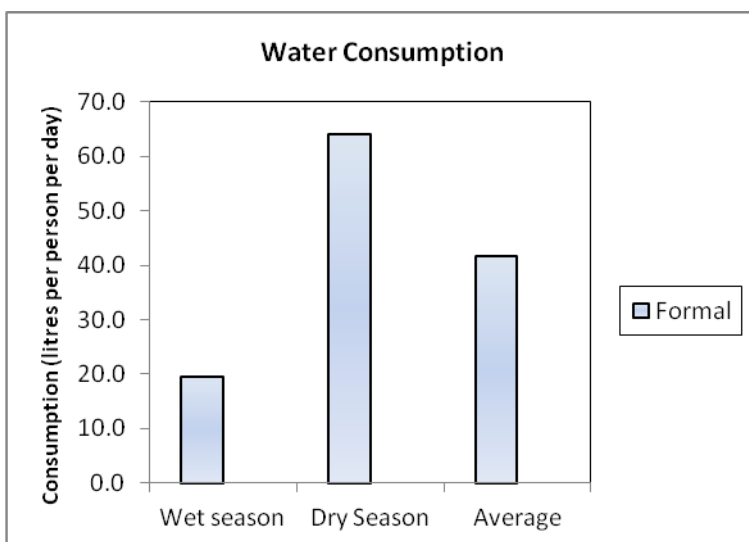


Figure 2: Average water consumption per person

Water service levels in Kito

What matters to people is how much water they get, how far they have to travel to get it, the quality of the water and how often the service is available. These indicators of service levels can be expressed as high, intermediate, basic, sub-standard and 'no service'. A basic service is one that meets the guidelines set by

the Community Water and Sanitation Agency (CWSA). According to CWSA guidelines, a basic level of service entails receiving at least 20 litres of water a day and having a water point within 500 metres, which is shared with not more than 300 people. The service level is the service actually received by users, not what is supposed to be delivered to users. Table 2 below provides the WASHCost service levels framework based on the CWSA norms.

Table 2: WASHCost Ghana service levels based on national norms.

Service Levels	Indicators		
	Litres per person per day	Distance to water source	Crowding with reliability
High	More than 60	500 meters or less	300 people or less per reliable water point system
Intermediate	40 to 60		
Basic	20 to 40		
Sub-standard	5 to 20	More than 500 meters	more than 300 people per reliable water point system
No service	0 to 5		

Quantity

The result of the survey with respect to water quantity revealed that all inhabitants in Kito use sufficient water with respect to the national guidelines.

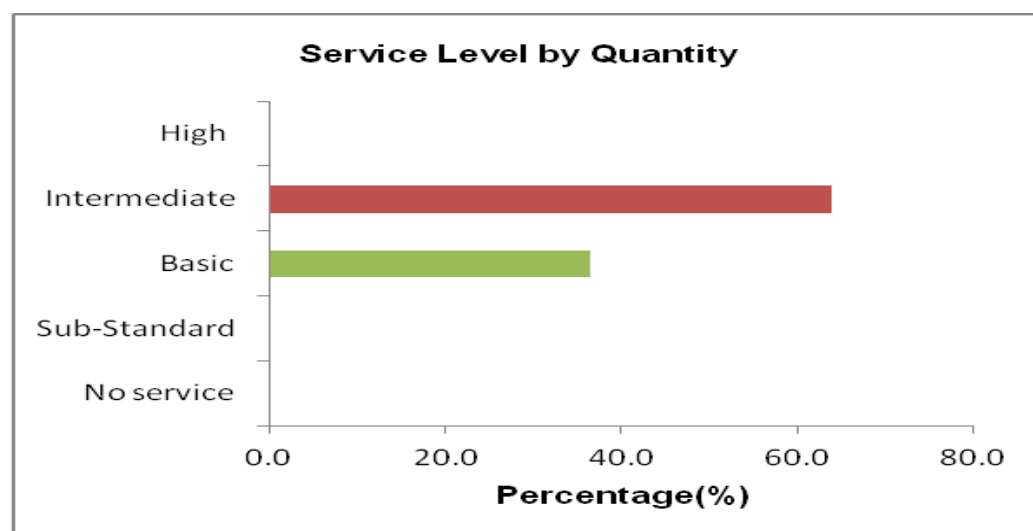


Figure 3: Percentage of respondents receiving a particular service

The result also indicates that all the respondents receive at least the basic level of 20 litres of water per person per day as stipulated in the CWSA guidelines. A majority of respondents (64%) receive intermediate service (40 to 60 litres per person per day) throughout the year.

Accessibility

All the respondents meet the accessibility criteria. This is because their maximum walking distance to the formal water facilities falls within the norm of 500 metres prescribed by the CWSA guidelines.

Crowding with Reliability

The community has three reliable water points used by 238 people, which is less than the prescribed standard of at most of 300 people per water point. Due to this, the water service in Kito currently meets the basic standard for a rural water service, in principle the users are over served in terms of crowding per facility.

Quality and Use

All the respondents perceived the quality of water accessed from the formal water point systems to be satisfactory in both the dry and wet seasons. However, no water quality test was carried out to confirm their perception. Water from the formal source is used for all domestic purposes including drinking and also non domestic uses such as livestock watering and irrigation.

Based on the WASHCost Ghana water service level matrix (see Table 2), the overall water service level, putting all indicators together as equally important, gives 64% of respondents receiving **intermediate service level and 36% of the respondents receiving basic service level**. This means that 100% of respondents are receiving acceptable service (the basic and better levels) in terms of quantity, standard service in terms of crowding with reliability and distance.

SANITATION

The Kito community has one public toilet, two household and two institutional toilet facilities. The public and two institutional toilet facilities were solely provided by the District Assembly in 1974, 2002 and 2005 respectively. The household toilet facilities are Ventilated Improved Pit latrines (VIP) whereas the public and institutional latrines are Kumasi Ventilated Improved Pit (KVIP). In 2004, the CWSA in collaboration with the EU provided some subsidies in the form of construction materials (bags of cement, roofing sheets, vent pipes, etc) to encourage the community members to put up household toilets. Despite all these facilities, about 27% of the community members still resort to open defecation and dig-and-bury practices.

Sanitation service level in the community based on WASHCost sanitation service ladder revealed that about 18% of the respondents were receiving acceptable (improved) sanitation service while about 64% of the respondents were receiving sub-standard service and 18% no service.

Costs and finances

Cost data was collected where available to cover capital investment, operational expenditure and capital maintenance expenditure (that is larger repairs and rehabilitation), and were adjusted for inflation to a base year of 2009.

Capital investment costs

Capital investment costs are calculated using a regional average as actual costs were not available for all boreholes surveyed. The average regional cost of developing a borehole and handpump is US\$ 7,795. This implies that the total investment that has been made in Kito is US\$ **31,180**. Using the design population of 300 people, this suggests a cost of US\$ **26** per person but US\$ **131** per person for the actual population of 238.

Operational and minor maintenance costs

Operational and minor maintenance for the borehole fitted with a handpump were reported over the period between 2007 and 2009. However, considering actual population of 238, the operational and minor maintenance expenditure per capita of US\$ 0.04 seems insignificant partly due to the fact that at least one of the repair works was carried out using existing spare parts from the funding project (funding agency) that provided the facility and also WATSAN caretaker or area mechanic fixed them at less or no cost. Operational and minor maintenance expenditure per capita for actual and designed population were US\$ 0.04 and US\$ 0.03 respectively (see Table 3).

Capital maintenance expenditure

Capital maintenance expenditure had never been incurred. The reason is that, there had never been any major rehabilitation and/or replacement of handpump. This means that capital maintenance expenditure is US\$ 0.

Table 3: Cost of providing WASH services

Cost Components	Current Cost (2009) in US\$	
	Observed population	Designed population
Capital investment (US\$/person)	131	26
Operational and minor maintenance expenditures (US\$/person/year)	0.04	0.03
Capital Maintenance Expenditure (US\$/person/year)	0	0

Tariffs

Members of Kito community are not charged any tariff for accessing water from the formal water system when it is working. However, in the case of any breakdown, contributions are made by the community

members to offset cost of its repairs. This approach, according to the WATSAN committee, is flexible but does not allow prompt response to maintenance any time the facility breaks down.

Sustainability

The breakdown of the water point systems is mostly associated with breakdown of the handpump. They have suffered some minor faults which have led to the replacement of some parts such as U-seals, O-rings, and rod centralisers. These repair works were carried out between 2007 and 2009. The broken down water system has poor yield and its well has to be deepened but has still not been done. Sustainability of the water facilities cannot be ensured in a case where money has to be mobilised only when there is breakdown.

Conclusion

The community (with a population of 238) can be considered over served based on the number of facilities available in the community. In terms of access by distance, all inhabitants are within the acceptable 500m distance to access water. All the community members use the formal water point sources and also rely on water from an informal source (a dam). Water from both the formal and informal water point sources is used for all domestic and productive purposes.

Unlike most rural communities visited, all the inhabitants of this community are receiving acceptable service at the basic and intermediate levels with most respondents (64%) enjoying the intermediate service. This is because parameters or indicators defining the service access by distance, quantity of water received, crowding and reliability passed the national norm forming the basis of the WASHCost service ladder.

With respect to sustainability, there are no funds for maintenance as no user fee is charged for accessing water system. Hence, when the water system breaks down it will be difficult for the community to pay for capital maintenance.

Sanitation service level in the community based on WASHCost sanitation service ladder revealed that about 18% of the respondents were receiving acceptable (improved) sanitation service whilst about 64% of the respondents were receiving sub-standard service and 18% no service.