WASHCost

Community Report

Akporkploe community report

Cost of water and sanitation services in Akporkploe in the Ketu South district

A community where seven boreholes were drilled, only two were working and only one was fully acceptable to the community.

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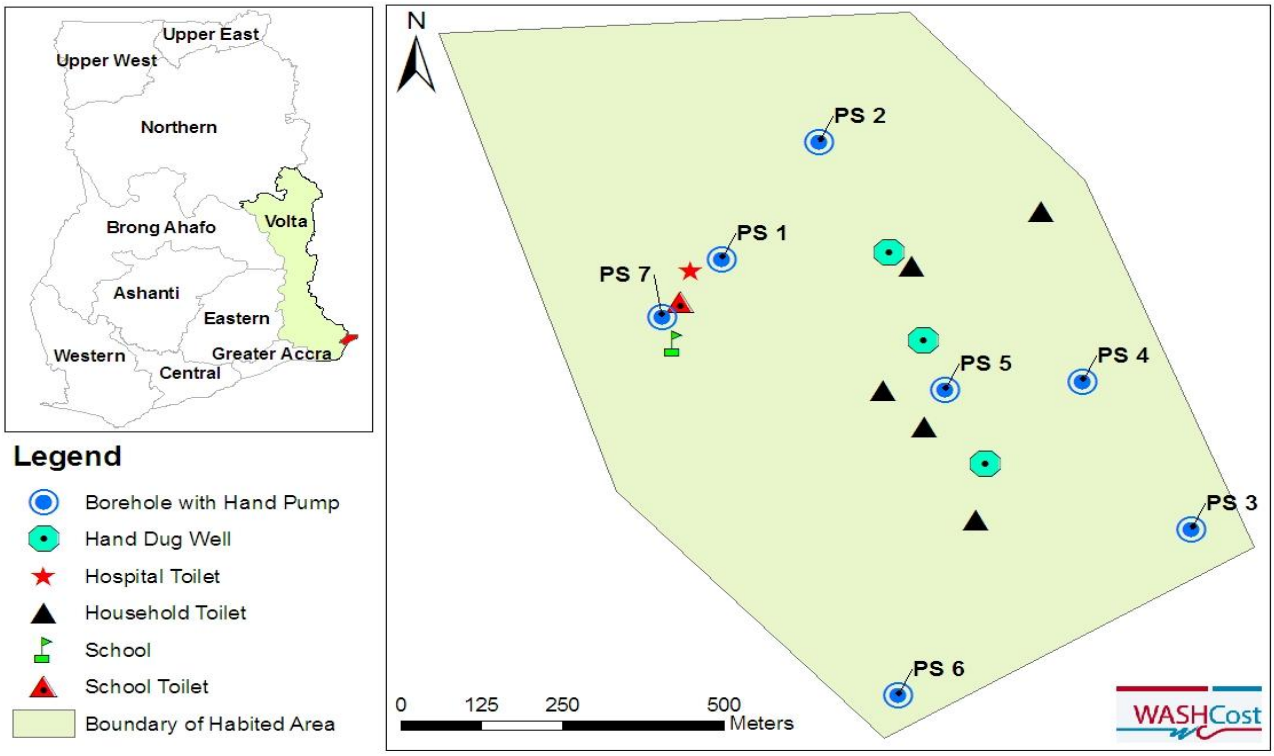
WASHCost is undertaking action research focusing on quantifying the cost of providing sustainable water, sanitation and hygiene services (WASH) in rural and peri-urban areas in Ghana. This community report presents findings of research carried out in the community of Akporkploe.

The WASHCost team visited the Akporkploe community in April 2010 to collect data on the WASH services received by the inhabitants and the cost of providing the services. The community has a population of 2489 people (CWSA, 2009). The inhabitants are of the Ewe tribe and predominantly subsistence farmers.

Map of Ghana showing the Volta Region. The insert shows Akporkploe community in the Ketu South District



**The boundary lines indicate only inhabited areas of the community and not the political boundaries of the community*

WATER SUPPLY

Before the year 2000, the inhabitants of Akporkploe relied on ten hand-dug wells without handpumps as their main source of water for all purposes including drinking. These informal sources were provided by the community members themselves and some are still in use.

At the time of the visit there were seven formal water point sources which should have been available to the community. However, of these seven, four boreholes did not have handpumps on them as two had been capped (stopped up) and the other two had been abandoned due to the

saline taste of the water. The other three boreholes were fitted with handpumps but only two were working. The subsequent history of the development of Akporpkloe's water supply is summarised in Table 1 below.

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

Pre-2000	2000	2009
Ten hand-dug wells for domestic and productive uses	Three boreholes with handpumps provided by the District Assembly and CWSA. No community contribution to capital cost.	Four boreholes (2 fitted with handpumps and 2 capped due to saline taste of water) provided by Lifetime Well Drilling (NGO). No community contribution to capital cost.

Water consumption from formal and informal sources

Average water consumption of formal water shows a seasonal pattern, rising in the dry season and falling in the wet season, when other sources are available. Much of the informal use of water in the wet season, particularly for productive use, is not captured in this data as people found it difficult to estimate their use of e.g. rainwater harvesting in the wet season.

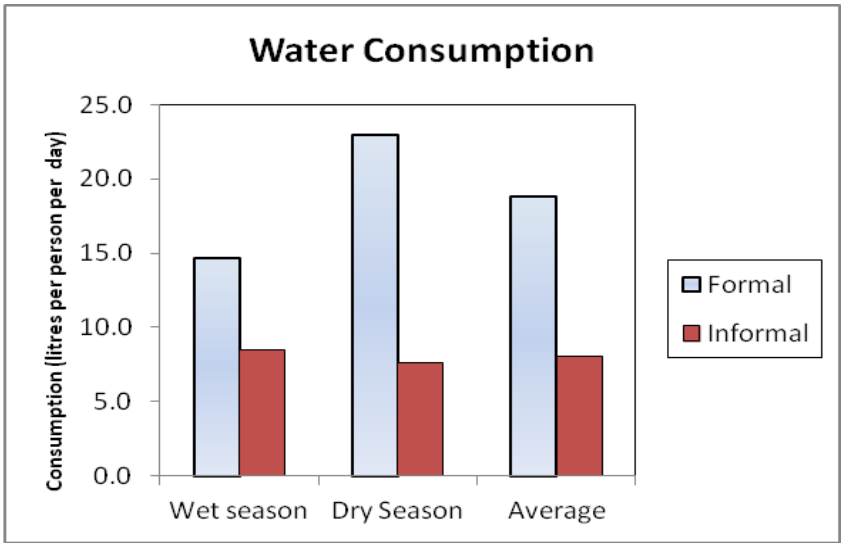


Figure 1: Average water consumption per season

Water service levels in Akporkploe

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 can be expressed as service levels – high, intermediate, basic, sub-standard and 'no service'. A basic service meets the guidelines set by the Community Water and Sanitation Agency (CWSA). The service level measures the service actually received by users, not what is supposed to be delivered to users.

Table 2: WASHCost Ghana service levels according to national norms.

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

** Reliability means working at least 95% of the time*

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 no more than 300 people.

In Akporkploe,

- Only 38.4% of people actually use sufficient water according to national guidelines.
- Of the three working boreholes, only two are considered reliable (working 95% of the expected time)
- The two reliable water points are shared by 2,489 people between them, which is four times more than the standard maximum of 300 people per water point.
- Almost everybody (96.3 %) has access to a water source within 500 metres

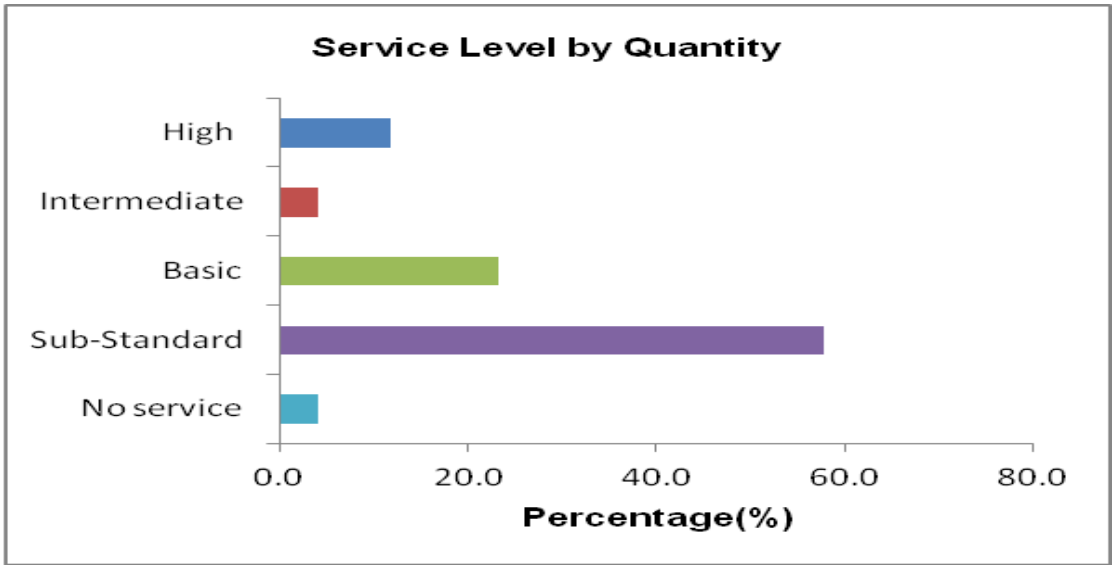


Figure 2: Percentage of respondents receiving a particular service

A majority of respondents (61.5%) receive sub-standard or no service throughout the year with respect to water quantity (see figure 2). This means that the majority of the people are not receiving the basic level of at least 20 litres of water per person per day as stipulated in CWSA guidelines. On the average only 38% of respondents enjoy an acceptable service level (basic service level or better).

Accessibility, reliability and crowding

Almost all respondents (96%) are receiving an acceptable service in terms of access. This is because their maximum walking distance to the formal water facilities falls below the norm of 500 m. Access to the most accessed point source, PS1 can be seen on the map shown in Figure 3. It was found that none of the respondents were accessing the other functional source, PS3 because of its saline quality. PS4 and PS6 have been capped while PS7 and PS2 have their handpumps removed and the boreholes were abandoned because they were not functional.

Two boreholes were found to be reliable (working at least 95% of the expected time). One was unacceptable to the community because of the taste.

Due to crowding of the one functional and acceptable borehole, no-one in Akporkploe can currently be said to fully meet the basic standard for a rural water service.

Quality and Use

A majority of the respondents, about 53%, perceived the quality of water from PS1 (the most accessed formal water facility – provided by Lifetime Well Drilling) to be good. Respondents indicated that the other fully functional facility, PS3 has a saline taste and therefore they scarcely access it. However no water quality test was carried out to confirm their perception.

Water from the formal sources is used for all purposes including drinking. Also 16% of the respondents purchase sachet water from vendors for drinking purposes only and this is mostly during the dry season.

SANITATION

The community has no public toilets. A school and a clinic each have a 4-seater Kumasi Ventilated Improved Pit (KVIP) toilet. In our sample, there were 31 household toilets made up of one (1) water closet (WC), twenty four (24) traditional pit latrines (TPL), five (5) VIP latrines and one (1) sanplat latrine.

Costs and finances

Cost figures were collected, where these were available, to cover capital investment, operational expenditure and capital maintenance expenditure (larger repairs and rehabilitation), and were adjusted for inflation to a current 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$ 9,970. This implies that a total investment has been made in Akporkploe of US$ 69,790. Using the design population of 300 people, this suggests a cost of US$ 33.23 per person or US$ 28.04 per person for the actual population of 2,489 people.

Operation and maintenance costs

For PS1 and PS3, there has not been any cost incurred on operations and maintenance as the facilities have not broken down since the start of operation. The WATSAN committee could not recollect any repair works ever carried out; neither could it provide any records as the committee said documents had been destroyed by a wildfire which swept through the whole community a few years back.

Capital maintenance costs

These are occasional larger scale repairs for which money has to be found – sometimes unexpectedly but in the longer term these costs will always be needed. There has not been any expenditure on capital maintenance (CapManEx) as there has been no handpump replacement, although one of the facilities (PS7) has its handpump removed some years back.

Table 3: Cost of providing WASH services

Cost Components	Current Cost (2009) in US$	
	Actual pop	Design pop
Capital investment (US$/person)	28.04	33.23
Operational and minor maintenance expenditures (US$/person/year)	NA	NA
Capital Maintenance Expenditure (US$/person/year)	NA	NA

Tariffs

Members of Akporkploe community are not charged any tariff for accessing water from the formal water points. Therefore, according to the WATSAN committee there is no money for operation and minor maintenance should the need arise.

Sustainability

As it stands now, there is no assurance of sustainable service delivery since the current service depends mainly on one borehole and cannot be continued or restored in the event of facility breakdown.

Conclusion

Facilities have been capped due to the poor quality of the water and others are not working, leaving only two functional boreholes, one of which is not acceptable to the community. There is no clue as to how much it will cost this community to carry out any repairs since repair works seem to have never been carried out. This could be due to lack of money as no user fee is charged for accessing water and also lack of community motivation to use the formal facilities because of their

perceived saline quality. There is therefore no assurance of sustainable service delivery since the current service depends mainly on one borehole and cannot be continued or restored in the event of facilities breakdown.

The water service level received by the community is sub-standard though individual indicators like quantity and access were acceptable (basic and better). This is because services in terms of crowding-with-reliability were 100% substandard due to overcrowding around two reliable and one (acceptable) facility in the community.

On sanitation, a significant number of respondents (56%) have household toilets but the majority (87%) are receiving no service or sub-standard services (due to the unimproved nature of the traditional latrines being used) while only 13% are receiving improved or basic services. Therefore, there is minimal sanitation coverage which is in line with the national coverage of 13%.