



Amedzikope community report

Cost of water and sanitation services in Amedzikope in the Ketu South District, Volta Region of Ghana

The Amedzikope community is considered one of the poorest in the district due to low levels of development, living standards and socio-economic activity. Most of the 1000 residents are subsistence farmers of the Ewe tribe and their main economic activities are kente weaving and gari processing. The community does not fully meet national rural water service standards. Less than half of people access enough water from formal sources, while the national standard for “crowding” is not met for anyone. The community has one institutional (school) toilet while 16 out of 74 households have VIP or traditional household toilets.

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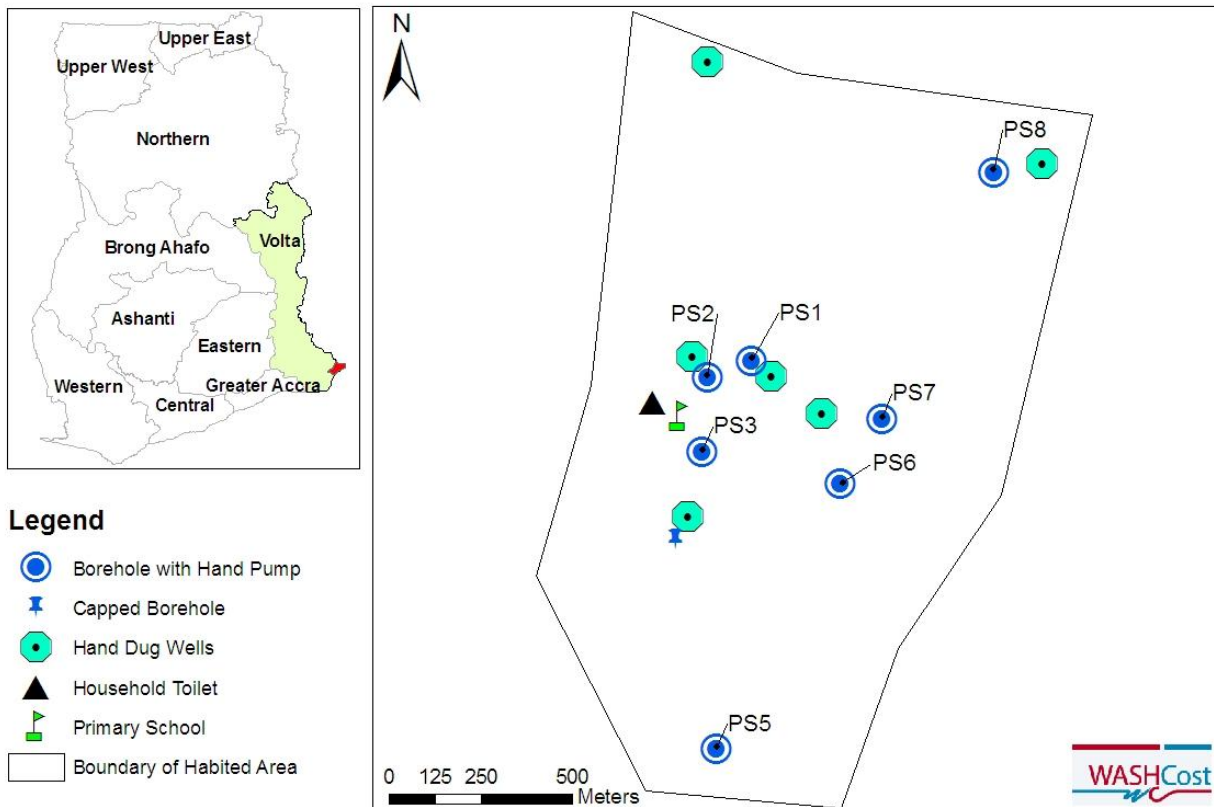
Front page photo

Bismark Dwumfour-Asare/WASHCost

WASHCost is undertaking action research to quantify 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 Amedzikope in the Ketu South District of the Volta Region of Ghana.

The WASHCost team visited the Amedzikope 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 about 1000 people. The inhabitants, ethnically mostly Ewes, are predominantly farmers with a few of the women engaged in gari processing.

Map of Ghana showing the Volta Region. The insert shows Amedzikope 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 2006, Amedzikope community relied on two ponds and seven hand-dug wells as their main source of water for all purposes including drinking. These water sources were provided by the community members themselves and some are still in use.

At the time of the visit, there were eight formal water point sources which were available to the community. Water from these boreholes with handpumps is used for drinking, cooking, washing, cleaning, bathing and productive activities. The history of the development of Amedzikope water supply is summarised in Table 1.

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

Pre-2006	2006	2009
2 ponds and 7 hand dug wells	Two boreholes with handpumps provided by Government of Ghana. Community made no contribution to investment costs.	Six boreholes provided by Lifetime Well Drilling (NGO). Community made no contribution to investment costs.

Water consumption from formal and informal sources

Average water consumption of formal water shows a strong seasonal pattern, rising sharply 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. People found it difficult to estimate their use of e.g. rainwater harvesting in the wet season.

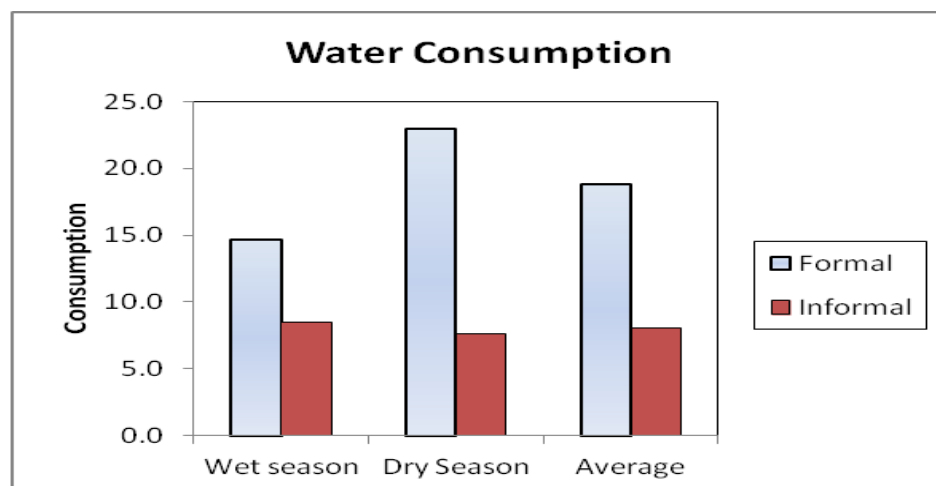


Figure 1: Average water consumption per season

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 meters 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 meters	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 means that people receive at least 20 litres of water a day and have a water point within 500 metres, shared with no more than 300 people.

Water service levels in Amedzikope

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 is the service actually received by users, not what is supposed to be delivered to users.

In Amedzikope,

- About 46% of people actually use sufficient water according to national guidelines.
- The eight (8) water points are shared by about 1,000 people, (about 125 persons per water point) which is more than twice as good as the standard maximum of 300 people per water point.
- About 69% of the population have access to a water source within 500 metres.

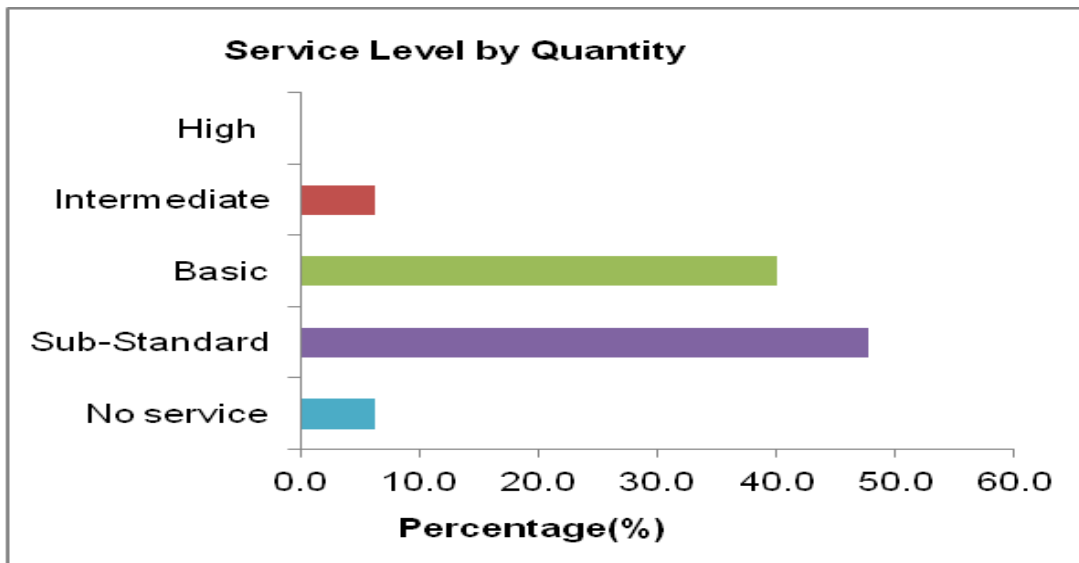


Figure 2: Percentage of respondents receiving a particular service

In terms of quantity of water, a majority of respondents (54%) receive a sub-standard or no service throughout the year. 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. However, about 46% of respondents enjoy an acceptable service level (basic service level or better).

Crowding with Reliability

Three out of the eight boreholes with handpumps were found to be reliable (working at least 95% of the expected time). Due to crowding, everyone is receiving a sub-standard service. In other words, no one in Amedzikope can currently be said to fully meet the basic standard for a rural water service.

Accessibility

A majority of the respondents (69%) are receiving a standard service in terms of access. This is because their maximum walking distance to the formal water facilities falls below the norm of 500 m.

Quality and Use

Almost three quarters of respondents, 72%, perceived the quality of the formal water to be good. Some respondents however were not satisfied because of a saline taste. No water quality test was carried out to confirm their perception. Water from the formal sources is mostly used for domestic and productive activities (e.g. small scale gari processing)

SANITATION

The community has no public toilet but has one institutional (school) toilet. This was provided by CWSA in conjunction with the District Assembly. WATSAN members could not recall its year of construction. 16 out of 74 households have VIP or traditional pit latrine household toilets.

Costs and finances

Cost figures were collected, where available, for capital investment, operational expenditure and capital maintenance expenditure (larger repairs and rehabilitation). These were all adjusted for inflation to a current year 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 of US\$ 79,760 has been made in Amedzikope. Using the design population of 300 people per waterpoint (i.e. 2,400 people for eight boreholes), this suggests a cost of US\$ 33 per person. When the actual community population of about 1000 people is used it gives a cost of US\$ 80 per person.

Operation and maintenance costs

There has not been any cost incurred on operation and maintenance as the facilities have not broken down since they started operation. The WATSAN committee could not recollect any minor repair works ever carried out neither could they provide any record.

Capital maintenance

Again, there has not been any expenditure on capital maintenance cost (CapManEx) as there has been no handpump replacement.

Table 3: Cost of providing WASH services

Cost Components	Current Cost (2009) in US\$	
	Actual pop	Design pop
Capital investment (US\$/person)	80	33
Operational and minor maintenance expenditures (US\$/person/year)	NA	NA
Capital Maintenance Expenditure (US\$/person/year)	NA	NA

Tariffs

According to the WATSAN committee, the water tariff is set by all members in an open forum at any time deemed appropriate. The water tariff is collected and kept by the WATSAN committee. Each household in the community pays GH¢ 0.05 (US\$ 0.04) per 36 litres of water fetched on a pay-as-you-fetch basis. A majority of the respondents (58%) said the water tariff was acceptable.

Sustainability

If all the users are to pay the tariff of GH¢ 0.05 (US\$ 0.04) per 36 litres, the expected revenue will be about GH¢ 9,500 (US\$ 6,786) per year assuming there are no breakdowns. This suggests that the community should be able to maintain all the water facilities. Thus, operation and capital maintenance expenditure can be funded from the revenue.

Conclusion

The overall water service level received by a majority of respondents (62%) is sub-standard and does not satisfy the CWSA criteria. In spite of a very large investment in eight borehole systems, which should theoretically be more than adequate for a population of about 1,000 the reality is that the current population relies on the three most reliable boreholes. When all facilities are working, about 31% of the respondents would travel more than 500 m to access them.

Reported use from the systems showed strong seasonal variability. It was also clear that a majority of the population of Amedzikope use less than the national norm of 20 litres per person per day, with 46% reporting basic or better daily use.

There is little sanitation coverage and almost everyone in the community (98.7%) receiving a nil or sub-standard services as they rely on unimproved traditional latrines, dig and bury or open defecation.

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. However, it is clear that if the current situation of paying tariffs to access formal water is continued, the community would be able to take care of operation and maintenance of water facilities.