



Jillo Yipalla community report

Cost of water and sanitation services in Jillo Yipalla in the East Gonja District, Ghana.

Jillo Yipalla community with a population of 498 has three formal water point systems but the community members are receiving limited water service. The community relies mostly on the informal water sources for all purposes including drinking. The community has no public or institutional latrines and no one in the community has a household toilet. All community members do not receive basic sanitation service.

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WASHCost is 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 Jillo Yipalla in the East Gonja District in the Northern Region of Ghana.

The WASHCost team visited the Jillo Yipalla 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 498 people from the Regional Community Water and Sanitation Agency records for 2009 and about 73 households according to the WATSAN committee census. The inhabitants are mostly of the Gonja and with Dagomba forming the minor ethnic group. The main economic activity is farming.

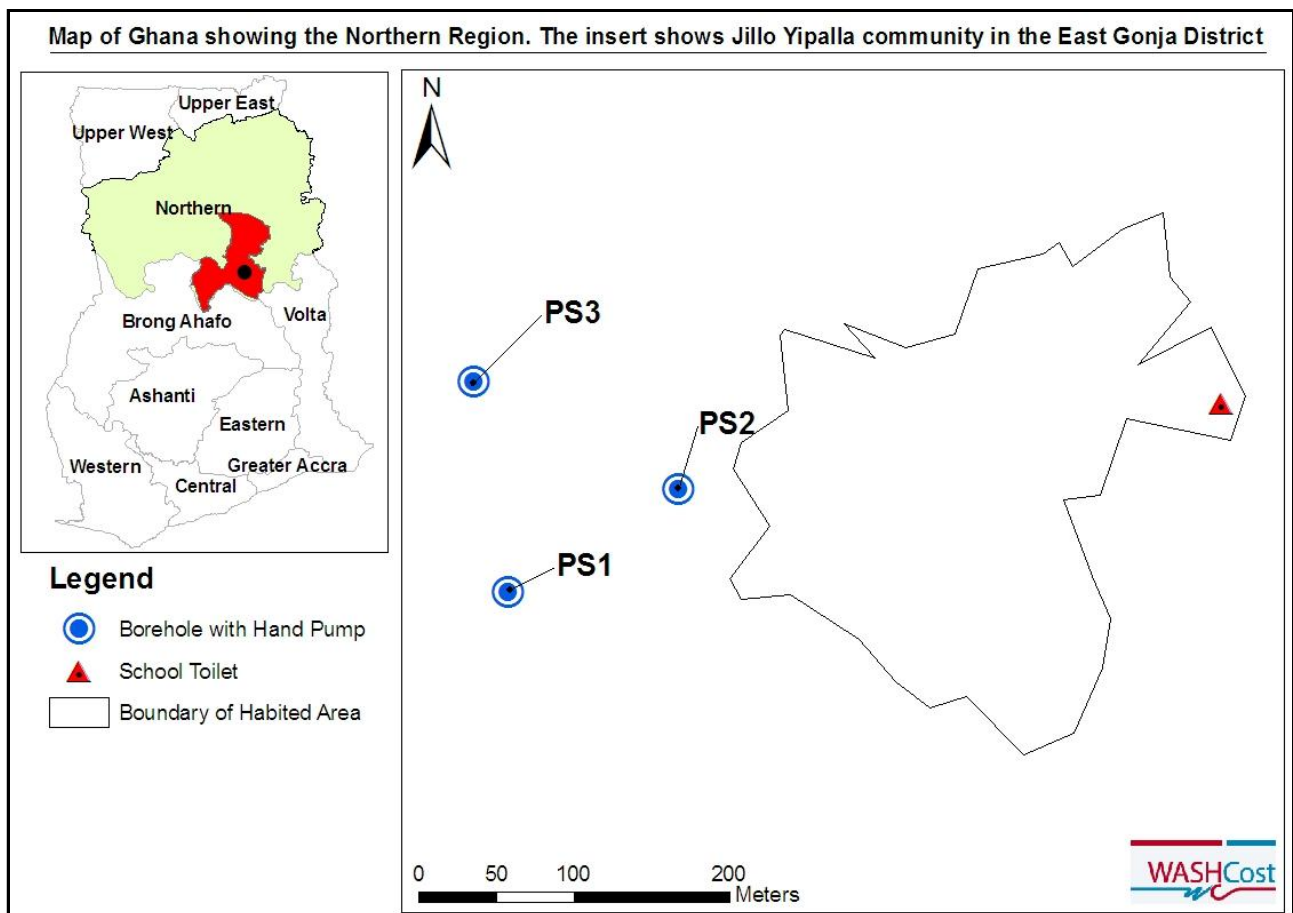


Figure 1: Map of community with water and sanitation facilities

Water supply

Before the year 2006, the inhabitants of Jillo Yipalla relied primarily on four (4) different streams, and rainwater as their main source of water for their domestic (drinking, cooking, washing, bathing and others) and non domestic (irrigation, livestock watering, etc) activities. The community enjoys the rainwater for about three (3) months in a year. At the time of the visit, the community had a total of three formal water systems; three boreholes fitted with handpumps available but only one of them, PS 1 was working, PS 2 had never worked since its installation and the relatively new one, PS 3 is not accessed by the people of the community due to its low yield.

The subsequent history of the development of Jillo Yipalla water supply is summarised in Table 1 below.

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

Pre- 2006	2006	2009
Four different streams and harvested rainwater for domestic and productive uses.	The French Development Agency (AFD) provided the community with two (2) boreholes fitted with handpumps (PS 1 and PS 2). The community made no capital cost contribution to the provision of the facilities.	The United Nations Children’s Fund (UNICEF) also provided the community with another borehole with handpump (PS3) to further augment their water supply service. The community made no capital cost contribution to the provision of the facility.

Water consumption from formal and informal sources

Average water consumption from formal water sources shows a little seasonal pattern, rising in the dry season (≈ 8 l/c/d) and falling in the wet season (≈ 6 l/c/d). The average consumption of water from the informal sources is however higher (14 l/c/d) than consumption from the formal water sources (7 l/c/d). However, information on rainwater consumption could not be captured in this data because households were not able to provide the amount harvested during rainy sessions, meaning the consumption during the wet season could have been more than the average of 14 l/c/d.

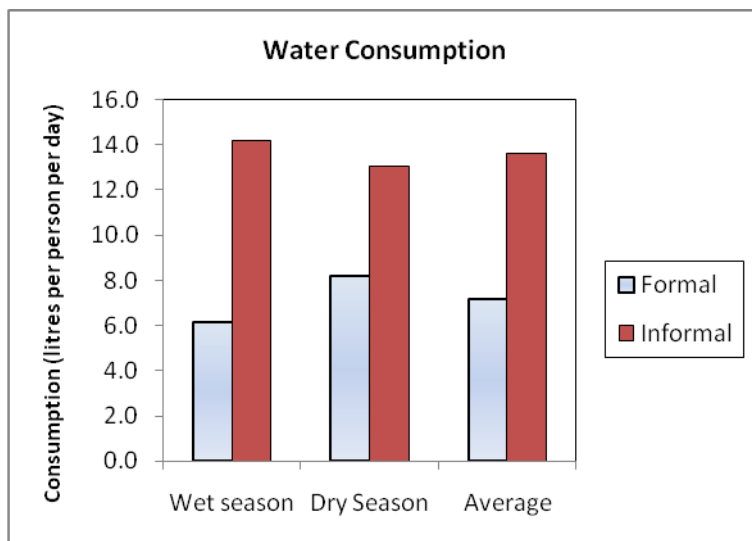


Figure 2: Average water consumption per season

Water service levels

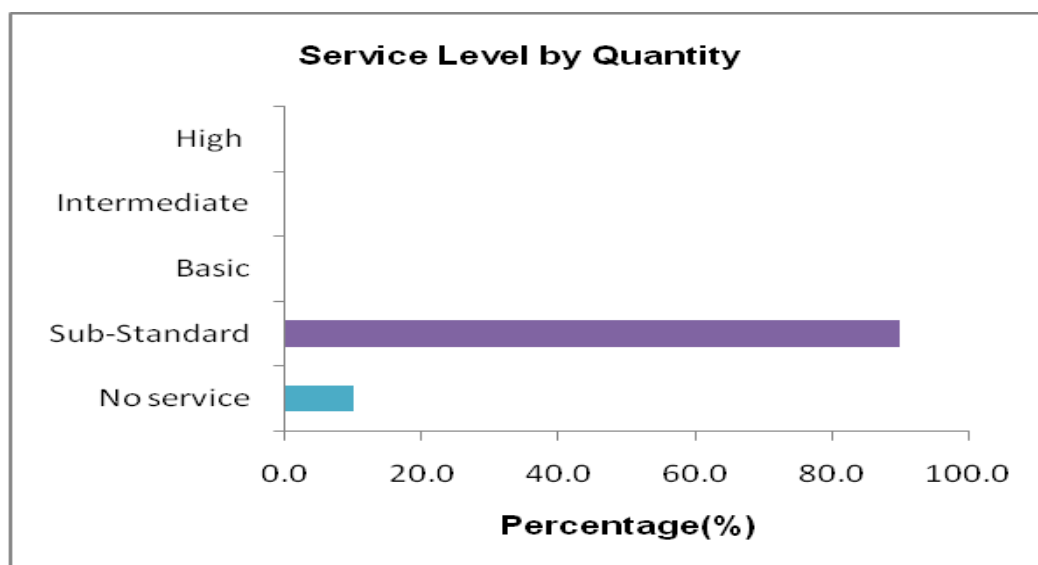
Generally, what matters most to people is how much water they can get, how far they have to travel to get it, the quality of the available water and how often the service is available. These form the basis for indicators that express service levels used by the WASHCost's life cycle cost approach – high, intermediate, basic, sub-standard ("limited") and 'no service' as shown in Table 2 below (where all indicators are treated as equally important). A basic service meets the guidelines set by the Community Water and Sanitation Agency (CWSA). The service level here is the service actually received by users, not what is supposed to be delivered to users.

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		

According to CWSA guidelines, a basic service level entails receiving at least 20 litres of water a day and having a water point within 500 metres, which is shared among at most 300 users.

The result of the survey revealed that no one in Jillo Yipalla actually use sufficient water per the requirements of the national guidelines.



The result also indicates that about 90% of the respondents are receiving sub-standard service by quantity and the remaining 10% are receiving no service. Thus, none of the respondents is receiving the basic level of at least 20 litres of water per person per day as stipulated in the CWSA guidelines.

Quality and Use

All the respondents perceived the quality of water from the point source to be good during both wet and dry seasons. However, for the purpose of this survey, no water quality test was carried out to ascertain their perception. Water from the functional water point system, according to the respondents, is adequate only in the wet season. Water from the formal sources are used for domestic, non domestic and other productive uses such as drinking, cooking, washing, bathing, livestock watering, irrigation, etc.

Accessibility

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

Crowding - with- reliability

All the respondents (100%) were receiving sub-standard service in terms of service level by crowding-with-reliability because only one of the facilities has been reliable (working 95% of the time for the entire population) resulting in 498 persons per facility instead of the norm (300 persons per reliable facility). Due to this, everyone in Jillo Yipalla community does not fully meet at least the basic standard for a rural water service in terms of crowding with reliability.

Sanitation

The community has no public toilet facility or institutional latrine. None of the respondents (100%) had a household toilet. Due to this, all community members resort to open defecation. Therefore all the community members do not have basic sanitation service.

Costs and finances

Cost figures were collected, where available, to cover operational expenditure and capital maintenance expenditure (larger repairs and rehabilitation), adjusted for inflation to base year 2009.

Capital investment costs

Capital investment costs were 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 Jillo Yipalla is US\$ 23,385 for three boreholes fitted with handpumps. Using the design population of 300 people, this suggests a cost close to US\$ 26 per person but US\$ 47 per person for the actual population of 498 (see Table 3)

Operational and minor maintenance costs

Data on operational and minor maintenance costs of the formal water systems were not available even though the WATSAN committee reports of carrying out a couple of repairs on the facilities.

Capital maintenance expenditure

Capital maintenance expenditure had never been incurred since there have 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)	47	26
Operational and minor maintenance expenditures (US\$/person/year)	NA	NA
Capital Maintenance Expenditure (US\$/person/year)	0	0

Tariffs and Sustainability

Community members do not pay any tariff for accessing the water point systems and there is no existing mechanism in place to finance operations and maintenance (O&M). This is indeed contrary to the ideals of the CWSA Community Ownership and Management (COM) concept towards sustainability. Sustainability of the formal water facilities cannot be ensured since there are no measures in place to mobilize funds for any form of operational and minor maintenance and capital maintenance.

Conclusion

Jillo Yipalla community (with a population of 498) should be considered to have well over 100% water coverage based on CWSA norm of facility provision where three boreholes fitted with

handpumps should serve 900 people but the reality is that all the community members (100%) are receiving sub-standard service due to the fact that only one facility is reliable.

The overall water service in terms of quantity accessed, accessibility by distance and crowding-with-reliability gives 90% sub-standard service and 10% no service. This is because no one in the community receives water quantity of at least the basic level of 20 litres of water per person per day as stipulated in the CWSA guidelines and also service level in terms of crowding-with-reliability gives 100% sub-standard due to overcrowding of the one (1) reliable facility in the community.

The community members use the only functional formal water point system, they also rely more on water from informal sources (streams and harvested rainwater) due to the obvious challenges with the water facilities ranging from non-functionality to low or poor well yield. Water from both the formal and informal water point sources is used for all domestic and productive purposes.

All the community members do not receive basic sanitation service since there is no toilet facility of any form.