

User satisfaction with handpump water services

A synthesis of findings from 3 districts
(Akatsi South, East Gonja and Sunyani West Districts)



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TRIPLE-S

The Sustainable Services at Scale (Triple-S) is a six year (2009 – 2014) multi-country learning project to improve rural water by transforming the current piecemeal approach into the provision of planned and integrated water services. Triple-S is an initiative of IRC International Water and sanitation Centre. Its aim is to move from project based, one-off construction of water supply systems to indefinitely sustainable rural water services delivered at scale. It seeks to tackle long-term challenges of sustainable water supply by contributing to a shift from “infrastructure perspective” to service delivery approach for rural water sector through action research, working with government and sector stakeholders, research, documentation and dissemination and international partnerships and advocacy.

Although there are clearly variations across countries and between regions in many aspects of the water sector, Triple-S believes that three major adaptations or strategy areas are needed to address sustainability challenge:

- Adopting a Service Delivery Approach. This approach promotes a shift from projects to services. This means taking the perspective of a service instead of projects (or groups of projects under programmes), in which policy, institutional, planning, financing and governance of the sector all support water services at scale for rural populations;
- Supporting a strong learning and adaptive capacity for water service delivery. This means a sector with the capacity to learn, innovate and adapt to changing circumstances and demands that are necessary to ensure that service delivery approaches continue to be maintained for rural populations;
- Improving harmonization and alignment for water service delivery. This means greater harmonization of donor efforts at both operational and national levels, as well as better coordination and alignment of these efforts behind government-led strategies for service delivery to rural populations.

In Ghana, the Triple-S initiative is hosted by the Community Water and Sanitation Agency (CWSA).

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ABBREVIATIONS

CWSA	Community Water and Sanitation Agency
DANIDA	Danish International Development Agency
DWSP	District Water and Sanitation Plan
EHAs	Environmental Health Assistants
FLOW	Field Level Operations Watch
GSS	Ghana Statistical Service
LPCD	Litres per capita per day
LSDGP	Local Service Delivery and Governance Programme
MDG	Millennium Development Goal
MoFA	Ministry of Food and Agriculture
NR	Northern Region
O&M	Operations and maintenance
SSS	Sustainable Services at Scale
SWD	Sunyani West District
SWDA	Sunyani West District Assembly
WSMTs	Water and Sanitation Management Teams

EXECUTIVE SUMMARY

Triple-S Ghana in collaboration with Community Water and Sanitation Agency undertook a user satisfaction survey to complement monitoring data on functionality, service levels and service provider performance. Emphasis of this study was on user satisfaction with handpump water services. A total of 960 handpump-using households were interviewed from March-July 2013 in Akatsi, Sunyani West and East Gonja on their level of satisfaction with the services received, and perception on performance of service providers.

In general, handpump users expressed positive emotions, like pride and happiness, when asked how they feel about their water supply. However, that does not mean they were fully satisfied with their water services. Although users were generally found to be satisfied with the water quantity and the quality of water provided, many were not satisfied with the time it takes them to access water especially when the quantity of water diminishes. Overall, only 64%, 42% and 57% of handpumps users were satisfied with their water services in terms of accessibility, quantity and quality in Akatsi, East Gonja and Sunyani West respectively.

In the three districts, the proportion of users satisfied with the accessibility of their water services and the quantity of water they access, was found to be higher than the proportion of handpumps which meet the service level standards on accessibility (all users within 500 meters and not more than 300 people per borehole or 150 per hand dug well) and quantity (use of at least 20 lpcd). This suggests that many users are satisfied with sub-standard services.

Water users generally perceived the performance of service providers to be better than their actual performance, as assessed against the service monitoring indicators set based on national norms, standards and guidelines. A reason for this could be the lack of information and awareness on the roles of service providers on the part of the handpump users.

Handpump users expressed mixed feelings on affordability. Although pay-as-you-fetch tariffs were generally considered as affordable, many households in East Gonja considered the required ad hoc contributions as unaffordable. Pay-as-you-fetch thus seems the preferred user contribution mechanism. However, it should be noted that pay-as-you-fetch requires good record keeping, good accounting of the service provider towards the community and good financial management, which was found to be a struggle for many service providers. Therefore, the promotion of pay-as-you-fetch should go hand in hand with capacity building of service providers, in order to ensure effective, efficient and accountable financial management.

The generally high percentage of user satisfaction with sub-standard services raises the question whether the norms and standards have been set too high, or whether water users are insufficiently aware of their rights to water supply meeting these norms and standards.

1 INTRODUCTION AND BACKGROUND

Rural water supply has been successfully extended to 63% of the rural population of Ghana (CWSA Annual Report, 2012). Although Ghana is on track to achieving the Millennium Development Goal (MDG) target for water, behind this success are a complex set of challenges to turn newly provided water delivery infrastructure into sustainable services. Research by the WASHCost project in 3 districts found that 29% of rural point-systems were non-functional. The same research found that only 23% of people relying on rural point-systems¹ were accessing the nationally defined minimum level of service, although in small towns, this rose to 59% (Nyarko et al., 2012). The 2012 service monitoring round conducted by CWSA under the Triple-S initiative in three districts in Ghana shows an average non-functionality rate of 30%. Moreover the level of service provided and the performance of service providers and service authorities were found to be well below standards (Adank et al, 2013).

Relatively little is known regarding user satisfaction with rural drinking water services in developing countries, particularly in Sub-Saharan Africa (Deichmann and Lall, 2007). One would expect that with such low levels of service and limited functionality, users are dissatisfied with the service level, which in turn may lead to them not paying for the service and eventually may exacerbate the problem. However users may be quite satisfied with the level of service when very little or no information is shared with them on the actual level of services and performance of service providers. Thus access to monitoring data could enable the water users to realistically demand for better services and not contend with low service levels.

This paper sheds light on the satisfaction of rural households with their handpump water services in three districts in Ghana. It compares this level of user satisfaction with actual handpump service levels and performances of the service providers, as assessed through service monitoring. This can help to ensure that the service providers are kept on their toes and the users perform the roles required of them. The district assembly will have to lead and ensure that emerging issues from the survey are addressed by users and the service providers to ensure sustained service delivery.

Following this introduction, this report presents the methodology of the user satisfaction study. This is followed by the key findings from the user satisfaction study and a discussion on how these findings relate to the service monitoring findings. The final chapter provides the conclusions and recommendations.

¹ Point system/source is used interchangeably with handpump

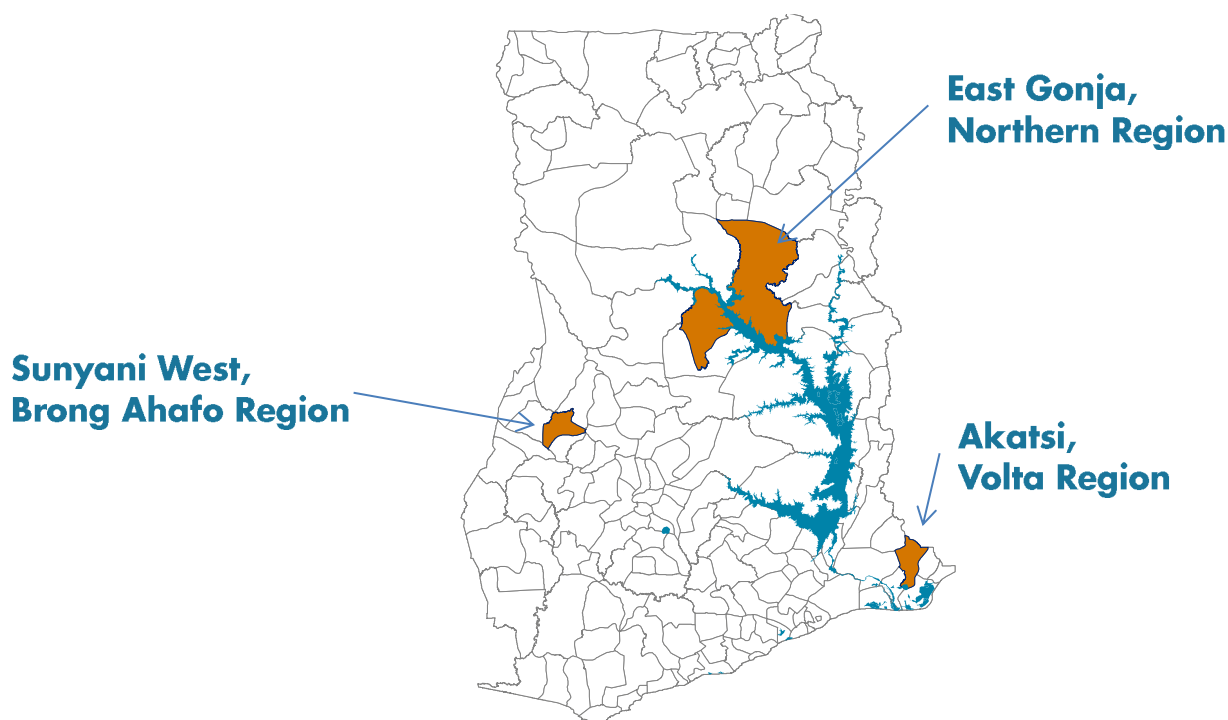
2 METHODOLOGY

This chapter outlines the methodology used for assessing water user satisfaction. It starts with general information in relation to the study area. It then provides a summary of the sampling frame, the questionnaire, and the data collection and analysis process employed.

2.1 Study Area

This study was undertaken in Akatsi (Volta Region), East Gonja (Northern Region) and Sunyani-West (Brong Ahafo Region) in Ghana. Figure 1 shows the locations of the districts. Akatsi District² is located in south-eastern part of Volta region in eastern Ghana. Akatsi is a relatively wet and densely populated area, whereas East Gonja is very scarcely populated and Sunyani West is a bit more urban.

FIGURE 1 MAP OF STUDY DISTRICTS IN GHANA



² In 2012 Akatsi district assembly was divided into Akatsi South (maintaining Akatsi town as the district capital) Akatsi North (with Ave Dakpa as the district capital). The original baseline study by Triple- and S was undertaken when Akatsi was a single district and therefore for the purpose of this report Akatsi refers to old district boundaries encompassing Akatsi North and South.

Table 1 shows a comparison of core district characteristics. It shows that East Gonja is a much larger district than Akatsi and suffers from lower coverage rates and more challenging hydro-geological conditions.

TABLE 1: COMPARISON OF SAMPLE DISTRICTS

Characteristic	Akatsi District	East Gonja district	Sunyani West District
Population	128,461	135,450	85,272
Number of households	33,762	18,811	19,716
Urban / rural population ratio	0.33	0.23	2.43
Area/km ²	1,077	10,787	1,659
Population density (persons per km ²)	119	13	51
Mean household size	3.8	7.1	4.3
Number of handpumps	294	137	138
Number of piped schemes (including limited mechanised boreholes)	6	8	44
Formal water coverage rates	63%	31%	54%
Borehole success rate*	In Volta region as a whole, boreholes tend to be fairly low yielding. Typical depth to the aquifer range from 45 – 60m. The typical success rate of borehole drilling is around 80%.	In the worst areas towards the north of the district success rates can be as low as 25%. 45% - 55% is typical across the district.	The average drilling depth is about 60m with success rate ranging between 75% and 90%.

Source: GSS, 2012, Sources: Ministry of Food and Agriculture (MoFA) – Republic of Ghana (<http://mofa.gov.gh>), CWSA Annual report, 2012

2.2 Sampling Strategy

Random sampling was applied in this survey to ensure reasonably reliable independent estimates for each district. The communities were clustered into area/town council. Communities were randomly drawn from the area/town council and distributed proportionally to the sample size of each given area/town council.

Unfortunately due to the non-availability of population data of the communities from Ghana Statistical Service (GSS), it was not possible to apply proportional sampling as per number of households per community. Instead, the same number of household was sampled from each community in each district. In Akatsi, East Gonja and Sunyani West District, 8, 6 and 16 households were sampled per community respectively. The total district sample size was divided by the total number of sampled communities to derive the number of households interviewed per community.

In all a total of 1150 household members from three districts were randomly selected for the questionnaire interview. The sample size per district was based on a 95 percent confidence level and a ±5 percent margin of error using the 2010 census population data on number of households per district for estimating the sample size for each district, which we consider representative of the entire district population.

On a whole there was no reported non-responsive cases observed during the data collection. This is because random sampling was employed to select households and at least one member of the

household was happy to be interviewed. Though there were no reported instances of non-responsive, there were cases in which between 5-10% of the respondents gave non applicable responses for a few questions were usually filtered out. Table 2 highlights the list of the sample in each community vis á vis districts and area/town councils.

In order to compare the results of the service monitoring findings related to handpump water services, households not using handpumps as their main source of drinking water supply were filtered out.

TABLE 2: NUMBER OF COMMUNITIES AND HOUSEHOLDS SAMPLED IN THE THREE DISTRICTS

District	Area Council	Total Communities	Selected communities	Number of randomly selected households	Number of households using handpump a main source of drinking water supply
Akatsi	Akatsi	40	8	65	47
	Ave Dakpa	48	10	80	75
	Avenorpeme	54	11	93	65
	Gefia	55	11	88	78
	Wute	37	7	58	58
Total	5	234	47	384	323
East Gonja	Bunjai	27	1	6	6
	Kpariba	58	9	54	24
	Kpembe	33	23	126	93
	Kulaw	77	12	75	75
	Makango/Kafaba	47	11	71	52
	Salaga	11	14	73	53
Total	6	253	72	405	304
Sunyani West	Awua Domase	49	7	101	101
	Chiraa	13	2	32	32
	Dumasua	12	3	49	48
	Fiapre	5	1	14	14
	Koduakrom	34	4	58	56
	Nsoatre	16	5	75	71
	Odomase No.1	34	2	32	32
Total	7	163	24	361	354
Grand total				1150	960

Source: Water user satisfaction survey, 2013

2.3 Questionnaire

A structured questionnaire was developed to measure rural water user satisfaction with the level of service delivered by the water system, water use and perceived performance of service providers. The questionnaire therefore has 4 subsections: general information, water supply, reliability and performance of water management. A copy of the final questionnaire used in the survey is attached in Annex 1.

2.4 Data Collection

Data was collected between March and July, 2013 by District level Environmental Health Assistants (EHAs) and regional CWSA national service personnel. Data collection was done using smart phones running on the Android operating system. Submitted surveys stored on the phones were transferred over the local mobile data network or WIFI into the online database. A web-based information and communication technology application, called Field Level Operations Watch (FLOW), was used for

data collection. A dashboard was used to convert the paper-based surveys for the phone interface. The questionnaire was pre-tested in line with standard survey practice in Sunyani West, in order to further test the suitability of the questionnaire and the procedures for data collection and subsequently loaded on each of the phones and administered through face-to-face interviews with household representatives.

2.5 Data Analysis

Data was cleaned and validated prior to analysis. The data was processed and analysed using MS Excel. User satisfaction findings were compared with service monitoring³ findings. As part of service monitoring, performance of all water facilities, service providers and service authorities was assessed in the three focus districts against national norms, standards and guidelines for community water supply at set by the Community Water and Sanitation Agency (CWSA).

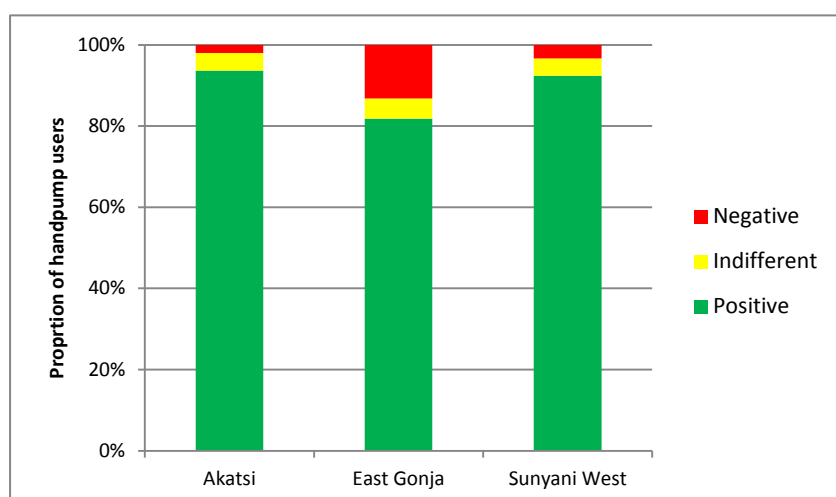
3 RESULTS AND DISCUSSION

This section presents the level of user satisfaction with different aspects of handpump water service provision and compares the level of satisfaction with the actual level of service provided and the performance of service providers, as assessed based on the service monitoring data. It starts by giving an overview of the main perceptions of handpump users of their water supply and their main problems. The sections that follow focus on user satisfaction with characteristics of water services, like accessibility, quantity and quality, and on user satisfaction with service provider performance. The last section of this chapter focuses on tariffs and perceived affordability of handpump water services.

3.1 Main emotions and perceived problems with water services

When asked about their feeling related to the water supply in their community, households which use handpumps as their main source of drinking water supply generally expressed positive emotions, like pride and happiness, while only few expressed negative emotions, like anger, anxiety and frustration. The proportion of households expressing negative emotions was slightly bigger in East Gonja than in the other two districts. See figure 2.

FIGURE 2: USERS' EMOTIONS RELATED TO THEIR WATER SUPPLY



Source: Water user satisfaction survey, 2013

In spite of these positive emotions, households did have challenges with their water supply. When asked about the main problems with their water services, the majority of households referred to the time it takes to fetch water (see table 3). Furthermore, breakdown of handpumps was considered a problem, especially in East Gonja and Sunyani West. An assessment of the functionality of handpumps in the three districts as part of service monitoring did however not show big differences in functionality levels between Akatsi and the other two districts. As handpump coverage is higher in Akatsi than in the other two districts, handpump users are more likely to rely on multiple handpumps and therefore less likely to be affected by handpump breakdowns. This could explain the relatively low proportion of households that considered broken down water facilities as a major problem in Akatsi district.

Only a small proportion of households indicated water quality or the costs of handpump water services as the main problem, although it should be noted that in Akatsi district the proportion of households that identified the costs of water supply as the main problem, was considerably higher than in the other two districts.

TABLE 3: MAIN PROBLEM WITH WATER SUPPLY AS PERCEIVED BY HANDPUMP USERS

Main problems with water supply	Akatsi (n=300)	East Gonja (n=303)	Sunyani West (n=356)	Grand Total
None	44%	10%	19%	24%
The time it takes to get water	22%	56%	31%	36%
Broken water supply	5%	32%	35%	25%
Bad quality	2%	0%	10%	4%
Money and costs of water supply	12%	1%	3%	5%
Other	16%	1%	2%	6%

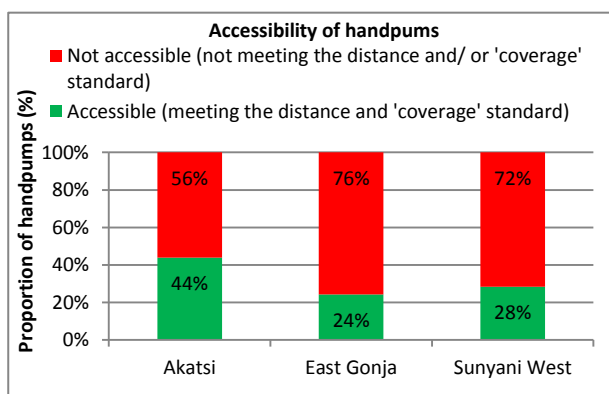
3.2 User satisfaction with the level of water services

This section focuses on the level of user satisfaction with characteristics of their handpump water services, including the accessibility, the quality of the water provided and the amount of water that is available and used. The proportion of households satisfied with these characteristics can be compared with the proportion of handpumps that meet the national standard on this indicator in each district, as assessed through service monitoring. These national standards have been set as follows (CWSA, 2014):

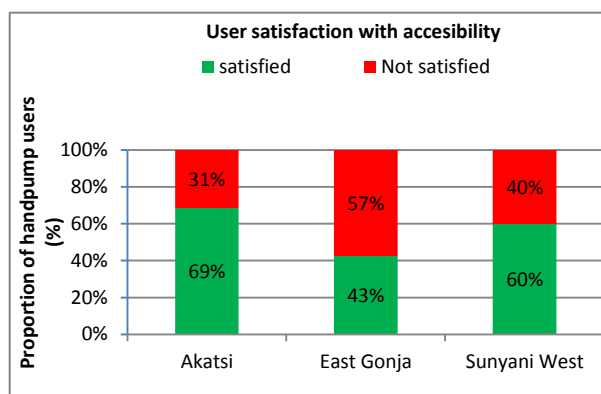
- Accessibility:
 - Max 150 people per hand dug wells and max 300 people per borehole
 - Distance between water point and users max 500m
- Quality: Meeting all Ghana Standards Authority standards for water quality of drinking water (here: assessed based on perceived acceptability)
- Quantity: 20 litres per capita per day

Figure 3 gives an overview of the proportion of handpumps meeting the standards on the accessibility indicators and the proportion of handpump-using households which are satisfied with the accessibility of their water services per district. It shows that in all three districts a relatively low proportion of handpumps managed to meet the accessibility standards, with the lowest proportion of handpumps meeting the accessibility standards in East Gonja district and the highest in Akatsi district. The proportion of households which expressed satisfaction with the accessibility of their handpump water services was found to follow a similar pattern, but was higher than the proportion of handpumps meeting the accessibility standards.

FIGURE 3: ACCESIBILITY OF HANDPUMPS AND USER SATISFECTION



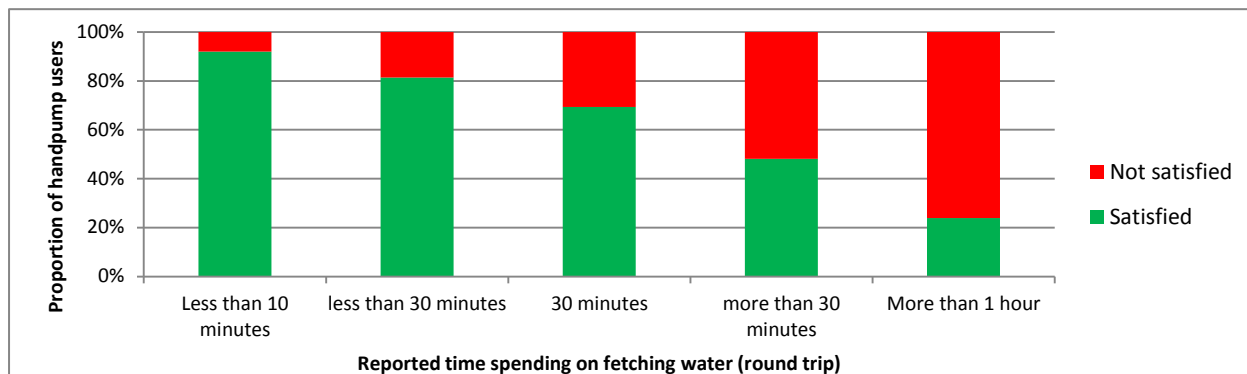
Source: Service monitoring, 2013



Source: Water user satisfaction survey, 2013

As shown in figure 4, the proportion of satisfied handpump users went down with the time spent on fetching water. However, still almost a quarter of households that spent more than 1 hour on collecting water from handpumps, expressed to be satisfied with the amount of time spent on water fetching.

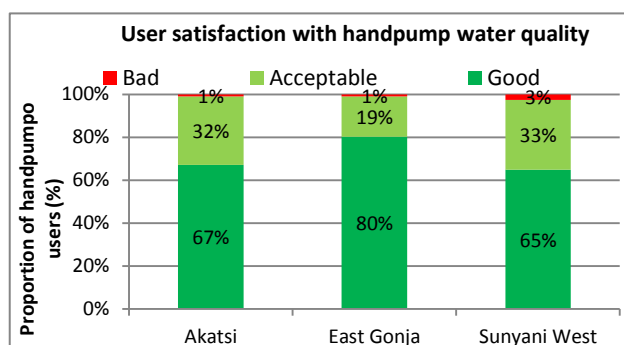
FIGURE 4: USER SATISFACTION AND TIME SPENDING



Source: Water user satisfaction survey, 2013

The quality of handpump water was generally perceived as acceptable, as shown in figure 5. However no water quality tests have been undertaken to verify this.

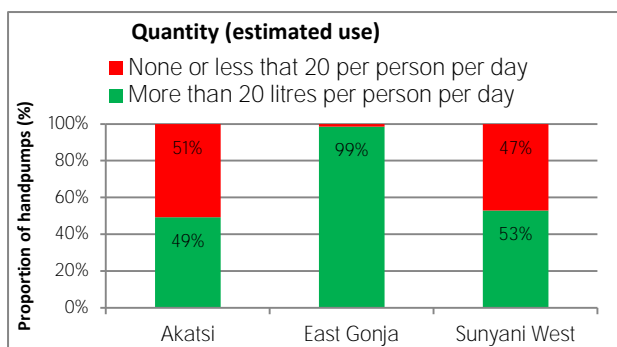
FIGURE 5: PERCEIVED QUALITY FROM USER PERSPECTIVE



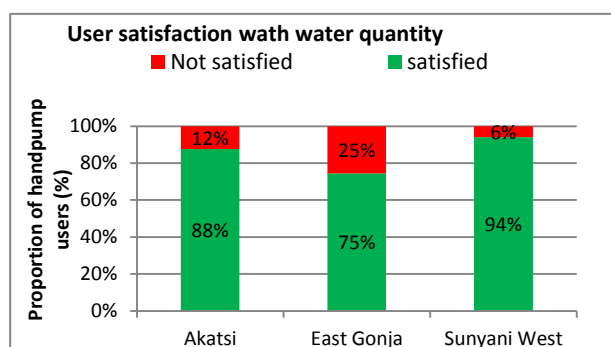
Source: Water user satisfaction survey, 2013

The quantity of water use was reported to be less than the standard 20 litres per capita per day for a large part of handpumps in Akatsi and Sunyani West. However, the proportion of households satisfied with the quantity of water provided was relatively high, as shown in figure 5.

FIGURE 6: ESTIMATED WATER USE QUANTITY AND USER SATISFACTION



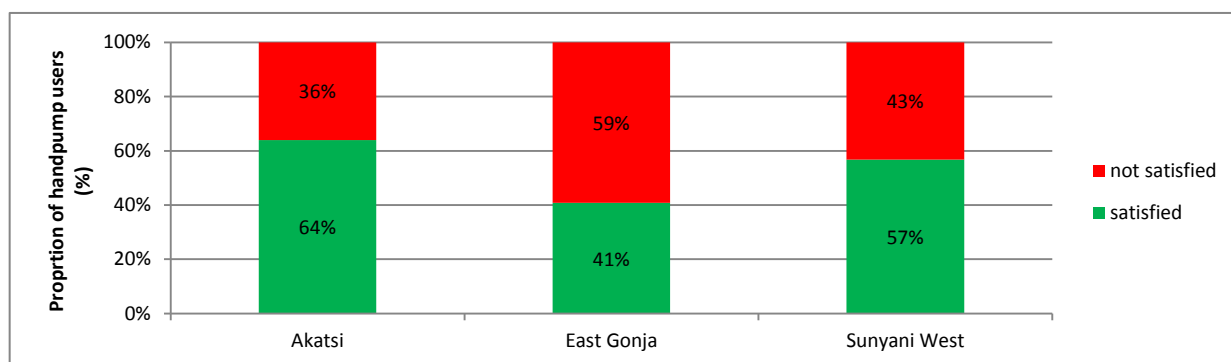
Source: Service monitoring, 2013



Source: Water user satisfaction survey, 2013

Figure 7 presents the proportion of handpump-using households satisfied with accessibility as well as with quality and quantity of their water services. The smallest proportion of satisfied households was found in East Gonja district. Although the majority of households were satisfied with the quantity and quality of their water, less than half were satisfied with accessibility in terms of the time it takes to fetch water in East Gonja. Handpumps are often far apart in East Gonja, making people walk longer distances to fetch water. Water users abandon a broken down facility and resort to the functional hand pumps which culminates in longer waiting time and crowding.

FIGURE 7: TOTAL SATISFACTIONS WITH THE OVERALL LEVEL OF SERVICE



Source: Water user satisfaction survey, 2013

Almost all (97%) households which expressed to be satisfied with accessibility, quality and quantity, also express positive feelings towards their water supply. However, 80% of households which expressed to be not satisfied with accessibility, quality and / or quantity, expressed to have positive feelings towards their water supply nevertheless.

Summing-up: Many households expressed positive emotions, like happiness or pride with their community managed handpump water services, even when there are not fully satisfied with all aspects of the water services. Also, many households are satisfied with their water services, although these water services are considered to be sub-standard as per the national norms and standards.

3.3 User satisfaction with the performance of service providers

Handpumps are commonly managed by community-based service providers, elected by community members: the Water and Sanitation Management Teams (WSMTs). The performance of these service providers was assessed in 2013 using the monitoring indicators and benchmarks as set for rural and small town water service provision by CWSA (see annex 2 for an overview of the service provider indicators and the set benchmarks). It showed low levels of performance with less than half of the WSMTs meeting the benchmark on the majority of the service provider indicators. As shown in Table 4, in Akatsi a larger proportion of WSMTs met the benchmark on the financial management indicators than in the other two districts. In East Gonja, a larger proportion of WSMTs met the benchmark on the operational indicators. The proportion of service providers meeting the benchmarks was generally lowest in Sunyani West.

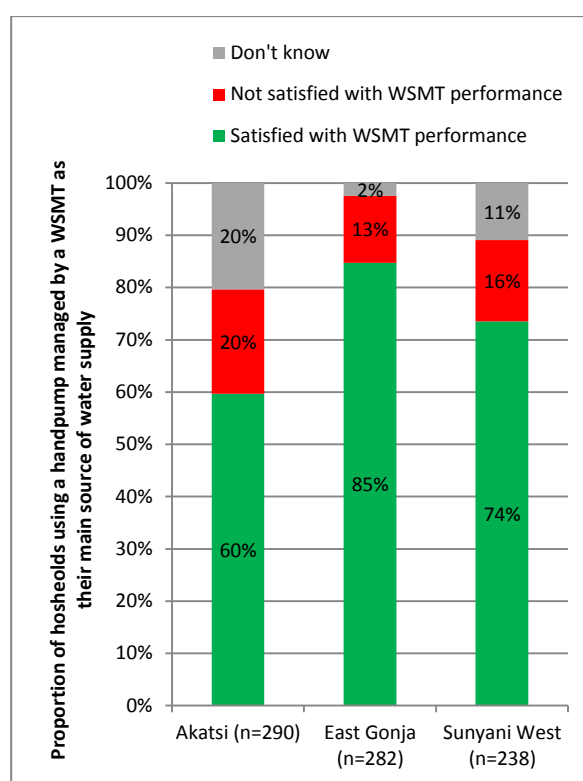
Although only a relatively small proportion of WSMTs managed to meet the benchmarks on most service provider indicators, a relatively large part of the households using handpumps managed by a WSMTs as their main source of drinking water expressed contentment with the performance of their handpump water service providers, as shown in Figure 8. No obvious correlation was found between the proportion of WSMTs meeting the service provider benchmarks and the level of user satisfaction with service provider performance between the three districts. Although service provider performance was generally lowest in Sunyani West, the proportion of households satisfied with the performance of the service provider was actually found to be higher in Sunyani West than in Akatsi.

TABLE 4: PROPORTION OF WSMTS THAT MET THE SERVICE PROVIDER BENCHMARKS

	Akatsi (n=200)	East Gonja (n=65)	Sunyani West (n=119)
Governance indicators:			
Composition of WSMT	30%	22%	3%
Reporting and accountability	29%	2%	9%
No political and chieftaincy interference	99%	100%	100%
Operational indicators:			
Spare part supply	36%	44%	26%
Area Mechanic services	55%	61%	48%
Corrective maintenance	37%	43%	20%
Routine maintenance	58%	69%	27%
Water quality testing	1%	52%	7%
Financial management indicators:			
Revenue/ expenditure balance	62%	40%	13%
Financial management	18%	5%	12%
Tariff setting	91%	17%	36%

Source: Service monitoring, 2013

FIGURE 8: USER SATISFACTION WITH SERVICE PROVIDER PERFORMANCE



Source: Water user satisfaction survey, 2013

The majority of handpump users which expressed dissatisfaction with the performance of the WSMTs were not satisfied with the level of communication between the WSMT and the community, as shown in table 7. Overall however, only 10% of households using handpumps with WSMTs expressed dissatisfaction with the level of communication between the WSMT and the community, while service monitoring in the same year showed that 73% of WSMTs did not keep and share records with community members.

TABLE 5: REASONS FOR DISSATISFACTION OF HANDPUMP USERS WITH THE SERVICE PROVIDERS

Reasons for dissatisfaction with service provider performance	Akatsi (n=57)	East Gonja (=36)	Sunyani West (n=36)	Grand Total (n=135)
Lack of communication with community	65%	61%	56%	61%
Committee does not maintain facility well	7%	31%	14%	16%
Committee does not use revenues well	16%	3%	28%	16%
Committee is not active	12%	0%	0%	5%
Committee charges too much for water	0%	6%	0%	2%
Committee members not serious	0%	0%	3%	1%

Source: Water user satisfaction survey, 2013

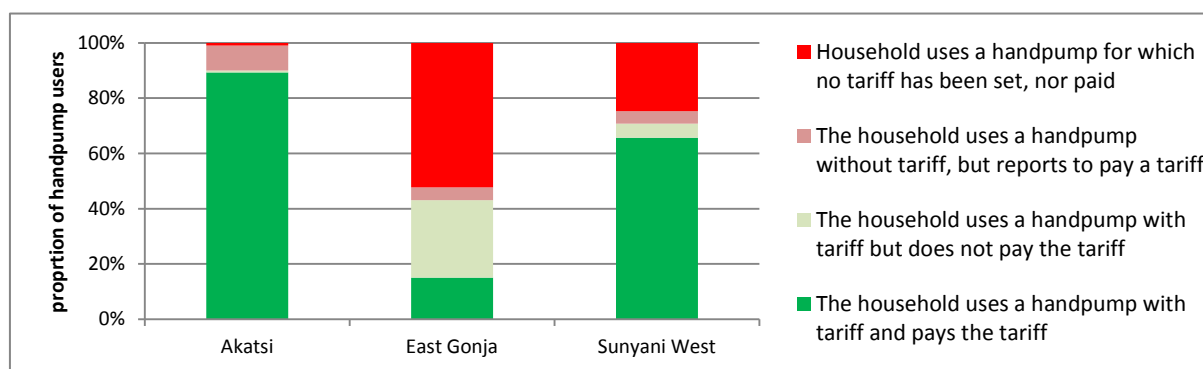
3.4 Tariffs and affordability of water services

This section gives an overview of the ways in which handpump users pay for their water services. In addition, the perception of these users related to the affordability of their water services is explored.

3.4.1 Tariffs and user contributions

The WSMTs have the responsibility of setting tariffs in consultation with the community, which is to be approved by the service authority, the District Assembly. In 2013, 89% of handpump-using households in Akatsi district used water from a handpump for which a tariff had been set. In Sunyani West this was only two-thirds (68%) of the WSMTs, and in East Gonja only 42%. However, as shown in figure 7, not all users paid the tariff. Especially in East Gonja a considerably proportion of handpumps users (29%) was found not to pay the set tariff. The figure also shows that about 6% of handpump users reported to pay for handpump services, although tariffs had not been set for these handpumps, according to the service monitoring data.

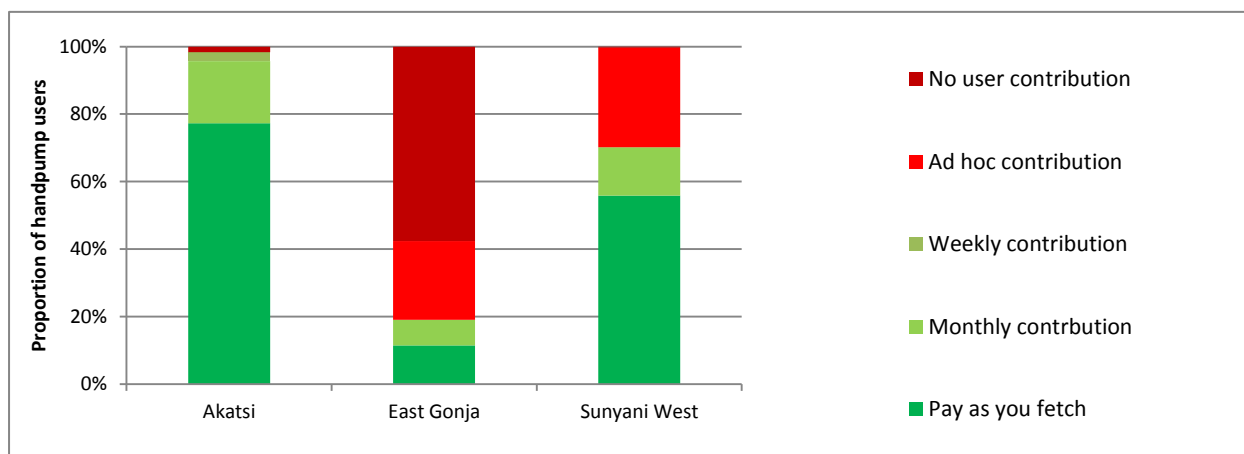
FIGURE 9: TARIFFS SET AND PAID



Source: Water user satisfaction survey, 2013

CWSA guidelines advocate that a volumetric water tariff is charged and collected by water point vendors. This type of collection is termed “pay as you fetch”. This is the most common way of paying for handpump water services in Akatsi and Sunyani West, as shown in figure 10. This figure also shows that, especially in East Gonja, other payment methods are applied, like fixed monthly or weekly contributions, or emergency (ad hoc) contributions which are collected when systems fail.

FIGURE 10: USER CONTRIBUTIONS



Source: Water user satisfaction survey, 2013

The pay-as-you-fetch tariff ranged between GHC 0.025 and GHC 0.10 per 20 litres. From the service monitoring data, about half of WSMTs in Akatsi and about 40% in Sunyani West were found to have set a tariff of GHC 0.05 per bucket with most of the remaining WSMTs having set the tariff at GHC 0.025 per bucket. In East Gonja most (88%) WSMTs had set the tariff at GHC 0.05 per bucket.

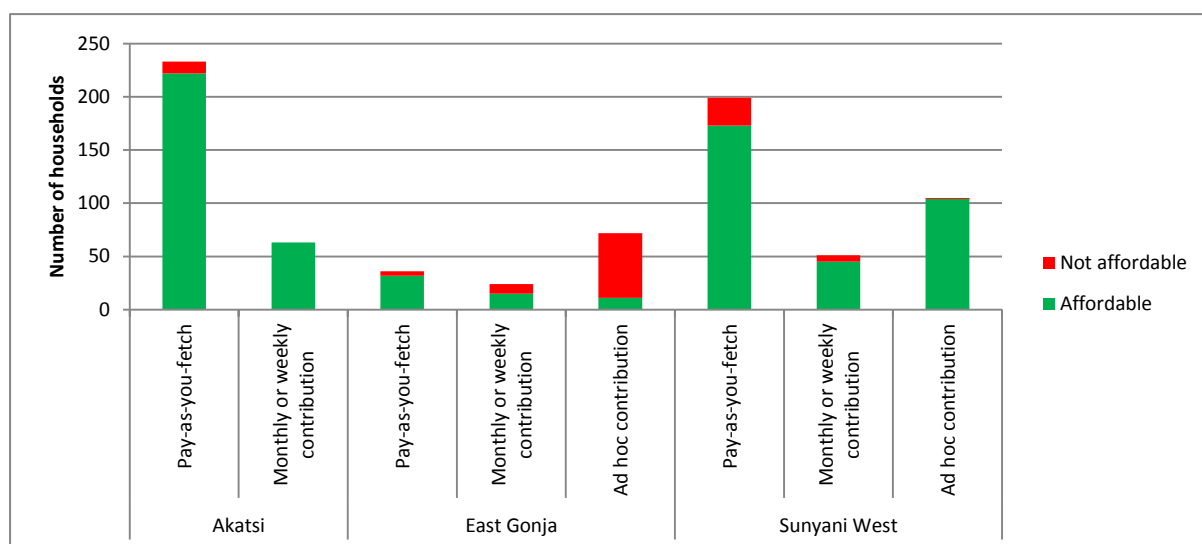
Households paying for handpumps water on “pay as you fetch” basis reported to spend an average of GHC 6 per month. This is considerably higher than the fixed monthly tariff charged, which was found to range between GHC 0.50 and GHC 1.00 per household per month.

3.4.2 Affordability

Overall, about 96% of the households paying for handpump water services in Akatsi and 88% in Sunyani West indicated they perceived the tariffs to be affordable. In East Gonja only 44% of households paying for handpump water services shared this opinion.

As shown by figure 11, most households which practice pay-as-you-fetch considered the charged tariff as affordable. However, only a small proportion (15%) of households which contribute on at hoc basis in East Gonja perceived their contribution as affordable as well.

FIGURE 11: AFFORDABILITY PERCEPTION OF HANDPUMP USERS WHO PAY FOR WATER



Source: Source: Water user satisfaction survey, 2013

4 CONCLUSIONS AND RECOMMENDATIONS

This study has shown that in general the level of handpump user satisfaction is higher than the level of compliance of services and service providers with national norms, standards and guidelines. This implies that many users are satisfied with services that are classified as being sub-standard.

In general, handpump users did not express major concerns with the quality and quantity of the water they accessed. Water users were more perturbed with the accessibility of their water services, related to the time it takes them to obtain water. Accessibility of water services is the main reason why users are satisfied or not with a service level.

Many handpump users expressed satisfaction with the performance of the service provider, even where service provider performance proved to be below the standards set by CWSA.

In general, handpump users considered the pay-as-you-fetch tariffs charged by WSMTs as affordable. This is in contrast to the ad hoc contributions charges in East Gonja, which were considered by many as unaffordable. This is not surprising as users often prefer to pay frequently small amounts, rather than paying larger amounts in one go, when there is a break-down. At first sight this strengthens the argument for having pay-as-you-fetch as the main method of financial contribution from users. However, pay-as-you fetch or monthly payment schemes require more elaborate book keeping, bank accounts and accountability measures. Many WSMTs have big challenges with record keeping and financial management. Therefore, the argument in favour for pay-as-you fetch should go hand in hand with the argument for strengthening the capacity of the WSMT to undertake record keeping and financial management.

The discrepancy between the level of user satisfaction and the level of compliance of services and service providers with national norms and standards can have different reasons:

- The national norms and standards have been set to a level that is higher than the actual demands of water users. It should be noted that this is not necessarily a bad thing, as it is the task and in fact the obligation of the public sector to protect citizens from potential health risks, **even when they don't recognise these risks.**
- Water users lack information and knowledge on their rights to water services (as per nationally set norms and standards) and on the roles and responsibilities of the service providers. And thus cannot judge whether service levels and performance is meeting or not these rights.

The findings of this study can (and should) be used to raise awareness of water users on their right to water services and may increase their capacity to demand for these services and hold service providers accountable.

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ANNEX 1: HOUSEHOLD SURVEY QUESTIONNAIRE

Question	Response
General Information	
1. Region	Brong Ahafo_____
	Northern_____
	Volta_____
	<i>Only answer if you responded Northern to Q1</i>
2. District	East Gonja_____
	<i>Only answer if you responded Brong Ahafo to Q1</i>
3. District	Sunyani West_____
	<i>Only answer if you responded Volta to Q1</i>
4. District	Akatsi_____
5. Community	_____
6. Area council	_____
7. Household head	_____
8. Name of Interviewee	_____
9. Gender	Female_____
	Male_____
10. Age (Years)	_____
11. Number of household members	_____
12. What is the main source of livelihood for your household?	farming_____
	fishing_____
	employed_____
	remittances_____

family_____

State (pension)_____

13. Location

Water Supply

14. What is your main source of water for drinking?

Handpump_____

rainwater_____

hand dug well without handpump_____

surface water_____

sachet or bottled water_____

standpipe_____

Household connection(own)_____

household connection (neighbour)_____

don't know_____

15. What is your main source of water for drinking in the dry season?

Handpump_____

rainwater_____

hand dug well without handpump_____

surface water_____

standpipe_____

sachet or bottled water_____

Household connection(own)_____

household connection (neighbour)_____

don't know_____

16. What is your main source of water for other domestic uses (washing etc) in the wet season?

Handpump_____

rainwater_____

hand dug well without handpump_____

surface water_____

sachet or bottled water_____

standpipe_____

Household connection(own)_____

household connection (neighbour)_____

17. What is your main source of water for other domestic uses (washing etc) in the dry season?

don't know_____

Handpump_____

rainwater_____

hand dug well without handpump_____

surface water_____

sachet or bottled water_____

standpipe_____

Household connection(own)_____

household connection (neighbour)_____

don't know_____

18. Do you use a safe source of water?

Yes_____

No_____

Reliability

Only answer if you responded Yes to Q18

19. Does the facility you depend on provide water service throughout the year, including the dry season?

Yes_____

No_____

20. Over the last year, how many days was the facility non functional?

Only answer if you responded No to Q19

21. When was the last time your facility broke down?

Less than one week_____

Two weeks_____

1-3 months_____

3-6 months_____

More than 6 months_____

Never broke down_____

22. How long does it normally take to repair the facility in case of breakdown?

Less than 3 days_____

3 days_____

Less than a day_____

Never broken down_____

Don't know_____

23. During the breakdown of the facility were households asked to contribute towards the repair?

Yes_____

No_____

None_____

24. If Yes how much were they asked to contribute (new Ghana Cedis)?

25. In case there is a breakdown what is the main cause?

Mechanical_____

Geology_____

Seasonal_____

Don't know_____

26. In case it is a seasonal variation, for how long has the source been dried?

27. Are you satisfied with the water quantity?

Good_____

Acceptable_____

Bad_____

28. How will you describe the colour of your drinking water?

Good_____

Acceptable_____

Bad_____

29. How will you describe the taste of your drinking water?

Good_____

Acceptable_____

Bad_____

30. How will you describe the odour of your drinking water?

Good_____

Acceptable_____

Bad_____

31. What is the quality of the water?

Good_____

Acceptable_____

Bad_____

32. Are you satisfied with the time spent to fetch water?

Yes_____

No_____

Don't know_____

33. How many buckets of water does your household use per day on average in the dry season?

less than 20 litre per household member per day_____

more than 20 litre per household member per day_____

None_____

Only answer if you responded Yes to Q19

34. Are you satisfied with the quantity of water from the facility in the dry season?

Yes_____

No_____

Only answer if you responded Yes to Q19

35. Are you satisfied with the quantity of water from the facility in the wet season?

Yes_____

No_____

36. How much time do you spend fetching water from the facility in the dry season (round trip)?

more than 1 hour_____

more than 30 minutes_____

30 minutes_____

less than 30 minutes_____

Less than 10 minutes_____

37. In the last one week what was the longest time? (in minutes)

38. In the last one week what was the shortest time? (in minutes)

39. Do you normally have a queue for water?

Yes_____

No_____

Occasionally_____

Affordability

40. Do you pay for water from the facility?

No _____

Yes _____

Only answer if you responded Yes to Q40

41. How do you pay for water?

Pay -as- you- fetch _____

monthly contribution _____

Ad hoc contribution _____

42. How much do you pay for a bucket of water or monthly contribution

43. How much do you spend on water per month (in Ghana cedis)

44. Do you find the water tariff affordable?

No _____

Yes _____

45. If yes why?

46. If No how much would you have wanted to pay for water (Ghana new cedis)?

47. Are you willing to pay in future?

yes- only per bucket _____

yes- only when asked in case of breakdown _____

yes- per bucket and in case of breakdown _____

No _____

Only answer if you responded No to Q47

48. Why not?

Other water sources available _____

Someone else should pay _____

No money available _____

49. Does your household have a mobile phone?

Yes _____

No _____

50. How much do you spend on the mobile call cards per month (New Ghana cedis)?

51. How much do you spend on the mobile charging

per month (New Ghana cedis)

Water management

52. Do you know whether there is a WSMT for small communities or small towns?

Yes _____

No _____

Don't know _____

Only answer if you responded Yes to Q52

53. Who elected the WSMT for small communities or small towns?

PO staff _____

entire community _____

community leader _____

district staff _____

Assembly man _____

don't know _____

54. Do you know whether technical, administrative and financial records are kept?

I know they are kept _____

I know they are not kept _____

don't know _____

Only answer if you responded I know they are kept to Q54

55. Are technical, administrative and financial records shared with the community?

yes- at least twice a year _____

Yes- at least every year _____

Yes- but less than every year _____

No _____

56. Does the water committee carry out all the roles required of it?

Yes _____

No _____

Some _____

Don't know _____

Only answer if you responded Yes to Q52

57. Are you satisfied with the functioning of the committee?

Yes_____

No_____

Don't know_____

Only answer if you responded No to Q57

58. If no why not?

Committee does not communicate well with community_____

Committee charges too much for water_____

committee does not maintain facility well_____

Committee does not use revenues well_____

59. In your opinion what are your expectations of people responsible for water supply?

Consult with water users more often_____

Ensure water points are there_____

Help more effectively in case of breakdown_____

Don't know_____

60. What do you do when you have problems with your water supply?

Play no role_____

Help make decisions_____

Know who to talk to_____

Don't know_____

61. What is the problem with your water supply?

Broken water supply_____

The time it takes to get water_____

Money and costs of water supply_____

Bad quality of the water_____

Who uses water and for what reason_____

Other_____

None_____

62. When you have problems with your water supply to who is best to go?

No one_____

Service providers_____

Local leaders/traditional authorities_____

Water supplier_____

National government_____

District Assembly_____

Non-government organisation/churches/charity_____

Don't know_____

63. In your opinion who should pay if the water facility breaks down?

Government or aid organisation because water is a gift_____

Local water provider because it is their responsibility_____

Me because water is something we buy_____

Don't know_____

64. How do you feel about your water supply/facility in your community?

Proud_____

Happy_____

Indifferent_____

Angry_____

Frustrated_____

Anxious_____

Don't know_____

ANNEX 2: SERVICE PROVIDER INDICATORS AND BENCHMARKS

Management and Governance indicators:	
Composition of WSMT	There is a WSMT, which has been composed in line with the CWSA guidelines, and has received initial training
Record keeping and accountability	All records are kept and up-to-date, but have not been presented to the community
No political and chieftaincy interference	Any change that had occurred in the WSMT was not due to political or chieftaincy interference
Operational Indicators:	
Spare parts supply	It takes between 1 to 3 days to acquire spare part(s)
Area Mechanic services	takes between 1 to 3 days to acquire the services of an area mechanic
Corrective maintenance	Breakdown repair is carried out between 1 to 3 days
Routine maintenance	Routine maintenance is carried out but less often than twice a year
Water quality testing	Water Quality Sampling and Analysis done by certified institutions but not on yearly basis
Financial management indicators:	
Revenue / expenditure balance	Annual revenues were higher than annual expenditure
Financial management	There is a bank account, cash book, but no rendering of account to community
Tariff setting	There is some financial arrangement in place but not based on all the indicative cost items