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The roles of community-based water and sanitation management teams (WSMTs) for sustainable development: An example of the Bawku West District, Ghana

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Poor sanitation, water and hygiene are related to several and severe negative implications on health and the environment. In recent years, community-based management of water and sanitation facilities have been linked to improving access to these facilities. Ghana is also on its way to achieving the Strategic Development Goals (SDGs) for access to potable water. However, several studies have found gaps between increased access to water and sanitation in Ghana and have shown that more than a third of the water supply facilities breakdown within the first year of their inauguration. Despite these problems, Water and Sanitation Management Teams (WSMTs) have contributed immensely to the attainment of the SDGs. This study assessed the roles of fifteen communities in maintaining the momentum towards the SDGs. The study revealed that twelve communities (80%) out of fifteen have WSMTs in place. All the communities have water facilities but only four (27%) have access to toilet facilities and the WSMTs working effectively to provide good services to their community members. The existence and effectiveness of WSMTs aided in providing reliable water supply, periodic maintenance of Water Supply Systems (WSSs), less breakdown of WSSs, timely releasing of funds, effective monitoring and quick responses in repairing broken down facilities. However, these WSMTs faced challenges such as the inability to generate funds for the rehabilitation of WSSs, team members lacked skills in water and sanitation management, poor record-keeping and cooperation among the committee and community members in the delivery of their services. It is recommended that WSMTs should be given managerial and maintenance training on WASH projects before they are handed over to them, and community members should be encouraged to cooperate with the WSMTs.

Key words: Community-based, water, sanitation, management, teams, sustainable, development.

INTRODUCTION

The importance of Water, Sanitation, and Hygiene (WASH) to human development and wellbeing cannot be overstated and underestimated. In spite of the over half a century of investment in the water and sanitation sector,

more than 10% and over a third of the world's population respectively lack access to potable drinking water and improved and adequate sanitation facilities according to the WHO/UNICEF (2017) Joint Monitoring Programme (JMP) report. Lane (2018) however indicates that in Ghana, access to drinkable water has improved since 2000. Notwithstanding the successes chalked in the WASH sector in some countries, the problems and challenges confronting the WASH sector are worse in rural communities in many developing countries (World Bank, 2019).

According to Baur and Woodhouse (2009), in Africa, the number of people in rural areas without improved water supply is six times higher than in the urban population. Thus, the United Nations adopted the SDGs to improve human life and provide a sustainable environment. The SDGs 6 seeks to ensure the sustainability of water and sanitation for all (United Nations, 2018). The Government of Ghana in collaboration with donors has provided WASH systems to communities in both urban and rural areas to make the lives of citizens more comfortable. Also, Non-Governmental Organizations (NGOs) and corporate societies have also contributed to the provision of such facilities. However, the continuity and scaling up of these WASH services pose a serious challenge to the Government. For instance, the Community Water and Sanitation Agency report (2014) stated that 16,959 new water points, 8,562 rehabilitated water points, and 71,505 sanitation facilities were constructed in 2013 across the country. However, studies have shown that between 30 and 40% of water supply systems become dysfunctional within the first year of usage as mentioned by the Rural Water Supply Network (RWSN) report (2010) and Lane (2018). The increasing population of human places more demand for water and places pressure on existing water supply facilities and a demand for new facilities. Sustainability is, therefore, one of the biggest challenges to satisfying this demand. Interestingly, Willetts and Wichen (2011) mentioned that it is one thing to construct systems that provide clean water and hygienic toilets, and it is another thing to ensure sustained behavioral change and local ownership of facilities for long term use.

According to the Dutch WASH Alliance report (2014), the scope of sustainability is divided into five thematic areas namely; financial, institutional, environmental, technical and social sustainability. This paper focuses on institutional sustainability. In ensuring the sustainability of WASH systems, community participation has also been espoused as one of the key strategies of the International Drinking Water and Sanitation Decade (IDWSD) (McCommon et al., 1990). It has been realized that community participation in WASH programs was limited to the mobilization of self-help labor or the organization of local groups to ratify decisions made by project planners outside the community (Laryea, 1994). Thus, the emphasis was shifted to community management.

Presently, drinking water and sanitation policies assume that facilities should be managed by local user communities (Braimah and Fielmua, 2011). To handle this, at the local level, Water and Sanitation Management Teams (WSMTs) are formed to ensure community-based provision and sustainability of WASH facilities. In principle, the WSMTs are responsible for the operation and maintenance (O&M) of community water facilities and are expected to collect fees/levies for maintenance. Therefore, this study assesses the role of institutional sustainability with regards to a case study of the role of Water and Sanitation Management Teams-WSMTs in ensuring the sustainability of WASH facilities in the Bawku West District in the Upper East Region of Ghana.

MATERIALS AND METHODS

Demographic characteristics

The total population of the Bawku West District is 94,034 consisting of 45,114 males and 48,920 females (Bawku West District Assembly (BWDA) 2015 report). The district has seven Area and Town Councils which include Zebilla, Binaba/Kusanaba, Zongoyiri, Gbantongo, Tanga/Timonde, Tilli/Widnaba, and Sapelliga Town/Area Councils. The Zebilla Area Council with a population of 73,968 comprising fifteen (15) communities was selected for this research.

Overview of the study area

The Bawku West District of the Upper East region of Ghana was carved out of the old Bawku District under the new local government system in 1988. It lies between latitudes 10° 30'N and 11° 10'N, and between longitudes 0° 20'E and 0° 35'E (Figure 1). The district shares boundaries with Burkina Faso to the North, Bawku Municipality, Binduri District and Garu-Tempane District to the East, Talensi, Nabdam and Bongo Districts to the West and the East Mamprusi District to the South. The District covers an area of approximately 1,070 km^2, which constitutes about 12% of the total land area of the Upper East Region. It has Zebilla as its administrative capital (BWDA, 2012).

Research methodology and sources of data

This study utilized qualitative data which comprised both primary and secondary information. The primary variables considered in this research comprised the concept of community ownership and management of WASH systems, access to WASH, frequency of breaking down and response to maintaining WASH facilities,

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Operation and Maintenance (O&M) of the facilities, the effectiveness of WSMTs, gender representations on the WSMTs, community perspectives on Community Ownership Management (COM), and the successes and challenges of WSMTs. Secondary data were sourced from the following: the Bawku West District Assembly, the Bawku West District Water, and Sanitation Team (DWST), community members and WSMT members within the study area. A descriptive, qualitative design was adopted. Key informant interviews were conducted and close-ended questionnaires were administered to the District Assembly, DWSTs, Project Areas Community Members (PACM), WSTMs and households to generate empirical data for the purpose of this study. Community meetings were conducted in the communities to validate the findings from the various groups. A checklist was also used to evaluate and record onsite observations.

Determination of sample size and sampling method

In determining the sampled households, three factors were considered; the desired level of confidence, the error tolerance level and the proportion of the population with access to potable water in the district. The sample size was determined following Kendie (2002) and Braimah and Fielmua (2011) as presented:

$$N = [z/e]^2\,[p]\,[1-p] \quad (1)$$

Where N = sample size, z = standard score at 92% Confidence Level (1.76), e = margin of error (0.07) and p = proportion of population with access to potable water in the district (89.9%) according to UNDP (2011).

$$N = [1.76/0.07]^2\,[0.899]\,[1-0.899]$$

$$N = 57.4 \sim 60$$

Therefore, sixty questionnaires that sought people's views on the roles, performance, successes, and challenges of WSMTs were also administered to household heads within the district. In this study, both probability and non-probability sampling techniques were adopted. The probability method was used to gather information from households. However, since the number of households of the individual communities was undetermined, a systematic approach where the sampled households were distributed evenly across the communities was used. This was presented as

$$\left[\frac{60\ (house\,holds\ heads\,)}{15\ (communities\ \ )} = 4\ household\ heads\right].$$

Therefore, four household heads were interviewed in each community. Also, the non-probability sampling technique (purposive) was adopted in deriving information from WSTMs and the various institutions involved in water-related issues within the district.

Functions of the institutions from which data was obtained

(i) Bawku West District Assembly: This is the local government authority that has the mandate of all planning and developmental programs at the local level.
(ii) Bawku West District Water and Sanitation Team (DWSTs): A unit within the Works Department of the District Assembly charged with the mandate of facilitating and providing technical assistance and services to WSMT in the various communities under the district.
(iii) Project Areas Community Members: The members of the project communities who have lived in the communities for at least the past twenty years or older than the oldest hand pump installed.
(iv) Project Areas of the WSMTs: These are the community level authorities responsible for the operations and management of the water facilities at the community level. These committees are charged with the responsibility of ensuring the continuity of water and sanitation facilities or the long term benefit of the beneficiaries.

Data analysis

The acquired data were analyzed using the Statistical Package for Social Sciences (2015 version) and Microsoft Excel (2016 version). Descriptive and statistical methods in the form of percentages, tables, and graphs were used to organize and interpret the acquired data.

RESULTS AND DISCUSSION

Access to safe water supply

Safe water is an important resource for mankind. However, a proportion of the world's population still lacks access to drinkable water. The findings of the study showed that the assessed communities relied on safe water sources. Thirteen communities had access to borehole water, whereas a community each depended on dugout wells and pipe source. The study identified seventy-seven improved water sources within the district (Table 1). Zebilla, the district capital which had the highest population had access to both borehole and pipe connection. It is inferred that the community which depended on dugout wells may be at risk to several health implications since the wells at the time of this study were not covered and/or lined.

Across the studied communities, based on the sources of water identified, water-borne diseases such as typhoid, cryptosporidiosis, giardiasis, and salmonellosis were not expected since according to Table 1, they had access to improved water sources. However, due to prolonged dryness, erratic and minimal rainfall, some of the boreholes and dugout wells dried up during the dry season. It is suspected that because the region has a high water table, the majority of the boreholes and wells were drilled to shallow depths. This was consistent with the findings by Anim-Gyampo et al. (2012) which indicated the drying up of underground water sources in some parts of the region. Due to this, people were compelled to resort to unsafe water sources such as streams and rivers for domestic and other purposes (UNDP, 2011) which could contribute to water-related diseases if pre-treatment of water is not properly done in these periods. In addition, the study identified the construction of new water supply systems as stated by (UNDP, 2011). Eighty-seven (87%) of the respondents attributed this progress to efforts by the WSMTs. Based on this, access to improved water is expected to rise

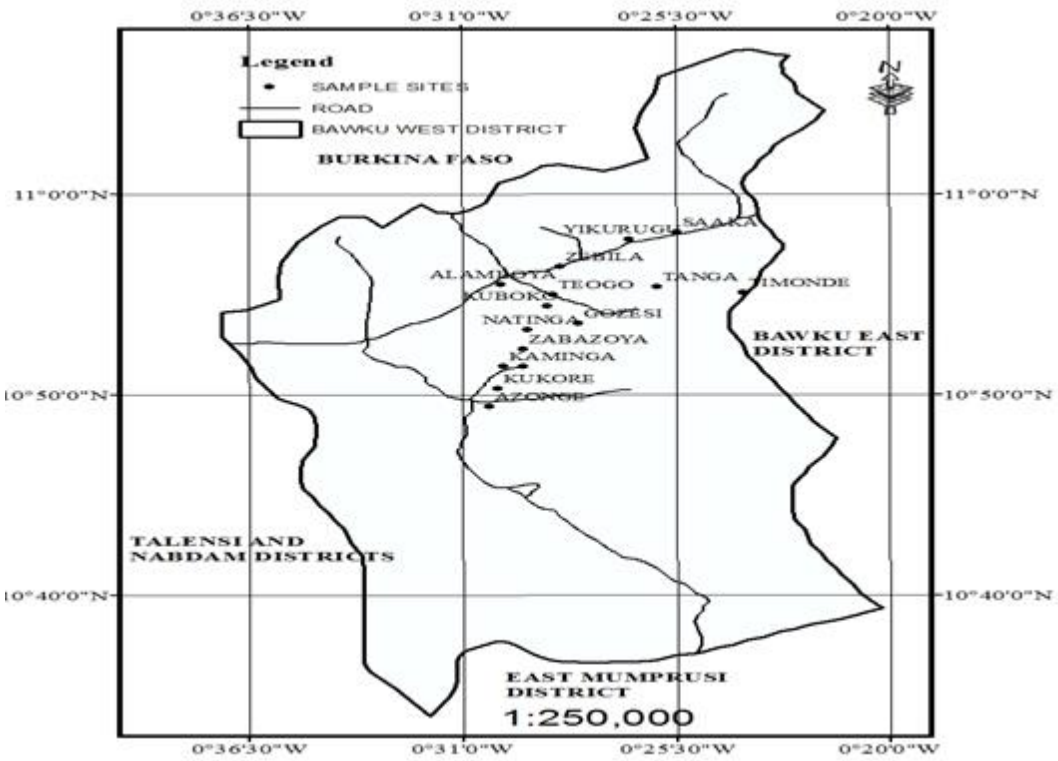

Figure 1. Locations of the communities.

Table 1. The types of water facilities within the communities.

Type of water facility	Total number	Number of communities
Boreholes	68	13
Dugout wells	2	1
Pipe connection	7	1

Table 2. Breakdown of water supply facilities in a year.

Frequency of breakdown	Number of facilities	Percentage
No breakdown	42	55
Once	15	20
Twice	5	6
Thrice	8	10
Four	4	5
Drought/dryness	3	4
TOTAL	77	100

considerably.

Frequency of breakdown of Water Facilities

Table 2 presents the frequency of dysfunctional WASH facilities in a year. According to the International Water and Sanitation Centre (IRC) (2018), one of the biggest challenges related to WASH is the sustainability of projects. The study showed the majority (42) of the facilities were functional after a year. The majority of these facilities were located in communities with effective WSMTs. Others were also located in less populated areas. However, Yelwoko, Alamboya, Kuboko, and

Zebilla have their facilities breaking down once in a year whereas facilities within Zebilla broke down two to three times in a year. The study further showed that WASH facilities at Gozeisi, Teogo, Saaka, and Kukore broke down twice in a year. These communities had mechanics in charge of maintenance and repairs. Meanwhile, Zabazoya had its facilities breaking down three times in a year whereas Timonde recording four. However, the Naringo community had just a dugout well which functioned during the rainy season. This made water accessibility a problem during the dry season, and surface water sources a perfect resort. Similar to the findings by Taylor (2009) and the RWSN report (2010), on average, 46 and 30% of rural boreholes were dysfunctional in Tanzania and Sub-Saharan Africa respectively. Further studies reflected in the findings by the RWSN (2012) and Fisher et al. (2015) also indicated that in Sub-Saharan Africa, at any given period, one-third of rural hand-pump boreholes are dysfunctional. The study identified that similar to the findings by IRC (2018), 45% of the water systems broke down within a year of construction. This result was further confirmed as 67% of the respondents observed the breakdown of these facilities within a year of construction.

The breakdown of WASH facilities could not be attributed to just the inexistence and ineffectiveness of WSMTs, but increased population, the rate of usage and the level of maintenance also contributed significantly. Larger and populated communities experienced frequent breakdown and deterioration of water supply facilities. Seventy-nine percent (79%) of the respondents stated that they had observed a correlation between population growths with the deterioration of water supply systems. However, the emergence and effectiveness of WSMTs created an avenue for funds to be generated for the construction of new WASH facilities to meet the growing population and to rehabilitate broken-down facilities. WSMTs also ensured a judicious use of these facilities to reduce intensified pressure. This was done by shutting down and locking the systems daily from evening to morning.

The availability of spare parts and attending to broken-down WASH facility

According to Braimah and Filmua (2011), the availability of spare parts for repairing water supply systems has become a major challenge in the country. It was observed that the unavailability of funds was not the only factor impeding repairs but the obsolete nature of the systems, unavailable skilled persons, poor road network, and unavailable spare parts also contributed significantly. The results of this study showed that spare parts for minor repairs (polyvinlychloride (PVC), primers) were available at Zebilla (the district capital) whereas major faults such as the breakdown of water pumps, riser main, pump cylinders, and tailpipes were purchased from towns/cities (Bolgatanga, Tamale, Kumasi, and Accra). However, these were costly. These results were consistent with the findings by Braimah and Filmua (2011). Seventy-three percent (73%) of the respondents affirmatively indicated to have seen WSMT members conveying purchased spare parts for repairs.

Figure 2 presents the institutions responsible for reporting the breakdown of WASH facilities for the consideration of appropriate and available measures. According to the WHO (2010) report, 64% of Overseas Development Aid (ODA) to WASH globally goes into the construction of new facilities whereas only 13% is allocated for the maintenance of projects. Thus, WSTMs either solicits or mobilizes funds from co-operating societies, NGOs, the Assembly or community members in order to maintain WASH facilities. They also monitor the functionality of the facilities to ensure their sustainability and longevity. From Figure 2, the majority of the communities had the WSMTs in charge of reporting the devastating conditions of WASH projects for corrective measures to be taken and to solicit funds to improve the quality and coverage of WASH in their respective communities. Observation made in this study coupled with the affirmative responses by 76% of the respondents indicated that the involvement of WSMTs in WASH networks was more formal, effective and recognized by donors, government and NGOs. The study evidentially showed that the WSMTs could easily represent the communities in seeking assistance related to WASH from NGOs, rich natives and outsiders, local and international donors, providers, trained mechanics, government agencies, political leaders and government appointees (Figure 3). On average, WSMTs have a wider scope of reaching support to solve community-based WASH problems.

Service downtime

The result revealed that all the communities with quicker responses (two days) in maintenance and repairs were under the management of the WSMTs as shown in Table 3. The study identified that none of the communities recorded a response to broken-down water facilities in less than a week. A significant number (4) of them had relatively quick responses through their respective WSMTs within a week. Irrespective of the existence of WSMTs, the response to repairing broken down WASH facilities was relatively slow. This was due to over-reliance on the District Assembly, area mechanics or the District Water Board which involved bureaucratic processes, political or ethnic influences, especially in the absence or ineffectiveness of WSMTs. The communities without WSMTs (Azoge, Kariga and Naringo) (Table 4) had responses to broken down facilities after two months. Poor road network, lack of funds, scarce spare parts, ineffective WSMTs also delayed maintenance and repairs. However, in cases where WSMTs worked effectively,

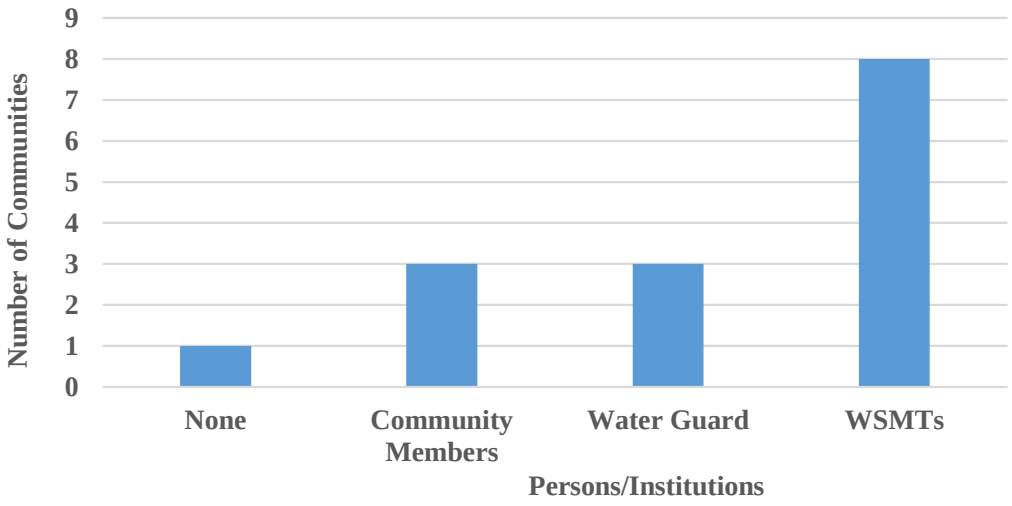

Figure 2. Persons responsible for reporting the breaking down of WASH facilities.

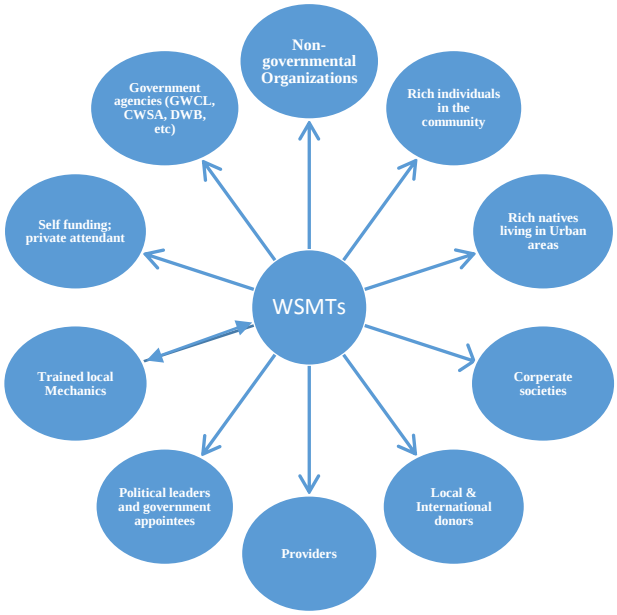

Figure 3. Chain in seeking for support.

these setbacks were handed by WSMTs to considerable levels. This fast-tracked the rehabilitation of existing facilities or construction of new WASH projects.

Responsibility for maintaining WASH facilities

The WSMTs were preferred by community members (87% of the respondents) to be in charge of the operation and maintenance of the water and sanitation facilities as compared to mechanics, the district assembly, Providers or the Water Board. The Respondents mentioned that they could easily communicate WASH related issues with the WSMTs and had quick responses in previous instances (Figure 4).

Fisher et al. (2015) indicated that the presence and effectiveness of skilled mechanics and WSTMs aided in the sustainability of water supply systems. Seven and four communities respectively depended on WSTMs and mechanics in responding to broken down projects. This reflects the importance of WSMTs and mechanics in conducting minor repairs instead of relying on external

Table 3. The duration of response to maintain WASH facilities.

Duration before responding to broken down wash facilities	Number of communities
No response	1
One week	4
Three weeks	2
One month	2
Two Months	6
TOTAL	15

Table 4. Female representation on the WSMTs.

Community	WSMTS availability	Male	Female	Leader	Total
Kubore	Yes	3	3	Male	6
Azonge				No WSMT	
Kamiga				No WSMT	
Yikurugu	Yes	7	5	Male	12
Saaka	Yes	8	7	Male	15
Alamboya	Yes	6	4	Male	10
Teogo	Yes	2	1	Male	3
Timonde	Yes	2	5	Male	7
Tanga	Yes	2	0	Male	2
Kuboko	Yes	2	2	Male	4
Zabazoya	Yes	2	2	Male	4
Naringo				No WSMT	
Zebilla	Yes	3	1	Male	4
Yelwoko	Yes	2	2	Male	4
Gozeisi	Yes	2	2	Male	4
	TOTAL	41	34		75

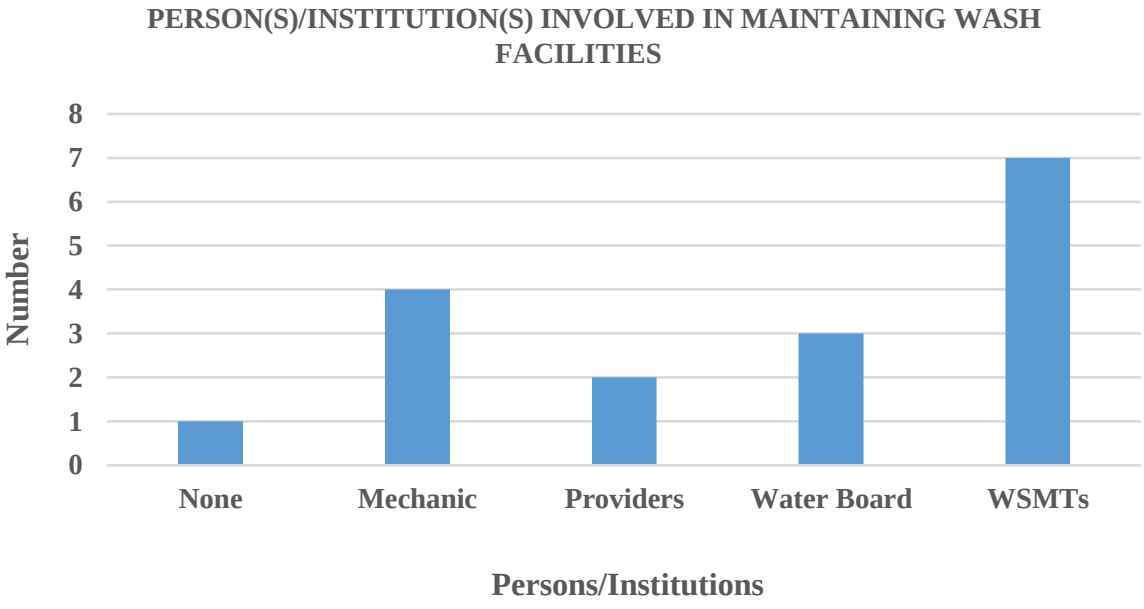

Figure 4. Persons responsible for the maintenance of the water facility.

technical and financial support as mentioned by Alexander et al. (2015) and Fisher et al. (2015), and Foster (2013) and Lane (2018) respectively. This significantly sustained WASH projects.

The availability of toilet facilities

Four communities (out of 15 communities) had toilet facilities. In totality, these four communities have about 12 toilet facilities which comprised of one Kumasi Ventilated Improved Pit (KVIP) at Alamboya, another at Timonde, seven at Zebilla and three pit latrines at Azonge. Apart from Azonge whose pit latrines were constructed by donors, sixty-eight percent (68%) of the respondents in the remaining three communities (Alamboya, Timonde and Zebilla) attributed this achievement to the WSMTs. Meanwhile, the KVIP at Timonde and three KVIPs at Zebilla had been dysfunctional for about two to three years. The WSMTs and assessed stakeholders attributed this to the lack of funds and external support, and increasing population. The remaining eleven communities (Kubore, Kamiga, Yikurugu, Saaka, Teogo, Tanga, Kuboko, Zabazoya, Naringo, Yelwoko, Gozeisi) had no toilet facilities. Out of the sixty households that were randomly assessed, twenty-nine had household pit latrines. Thus, they neither depended on public facilities nor practice open defecation. Interestingly, eighteen of these facilities were located in the communities which had public KVIPs and latrines. The absence of toilet facilities in most of the communities and households suggest that they resort to open defecation. However, apart from the stench, most of the community members (79%) did not know the environmental and health implication associated with open defecation. In addition, the payment of toilet user fee (averagely 20 peswas) at the time of the study, and queuing to use toilets made it inconvenient for some of the community members. Such people considered open defecation as a better option.

Female representation on the water and sanitation management teams

Studies have shown the marginalization of women in participating in rural WASH projects (Tigabu et al., 2013; Marks et al., 2014; Omorede, 2014; Mensah, 2015). Similarly, in this study (Table 5), five (5) communities (Kubore, Kuboko, Zabazoya, Yelwoko and Gozeisi) had gender-equal representations on the WSMTs whereas six teams (Yikurugu, Saaka, Alamboya, Teogo, Tanga and Zebilla) had the number of men outweighing women and one team (Timonde) had more women than men. In totality, there were forty-one men against thirty-four women on the WSMTs. Interestingly, in Tanga, there was no female representation on the team (Table 4). Unlike the findings by Mensah (2015) where the number of men in WSTMs outweighed women by one in each team, in this study, majority of the communities had men outweighing women by two.

One of the factors (Figure 5) influencing gender representation on the teams was culture values. The cultural certain of the studied communities undermined the contributions of women as they were relegated, and were not allowed to spare head affairs. This is highlighted in Table 5 where all the leaders of the teams were men. Also, the gender bias representation of men and women on the teams was prejudiced by the members' level of education. The men on the various teams were more educated, and thus, easily communicated the progress and plights of the communities in WASH issues for support. The women were less courageous and this undermined their influence as part of the WSMTs. Also, it was observed that women did not recognize the WASH facilities as theirs since they were unable to take part in the construction/implementation stage where physical labor is needed. They did not also place much focus and time on WASH-related issues due to domestic activities and were less motivated to take part. Finally, majority of the women could not contribute financially to the progress of the WASH facilities since they had no sustainable financial sources in serving majorly as housewives. Thus, they were not considered fit to manage WASH issues. However, it was identified that the women on the WSTMs were instrumental in encouraging and mobilizing their colleagues in ensuring the maintenance of WASH facilities by embarking on periodic clean-up exercises.

Educational and financial issues

According to Lane (2018), training WSTMs is an essential component that sustains the longevity of water supply systems. Marks et al. (2014) also indicated that training WSMTs occurred once and at the project inception stage. The study revealed that, though in some communities, team members were trained on how to fix minor mechanical problems on the WASH facilities; none of the WSMTs had been given formal education on the management of water and sanitation issues. However, they ensured maximum cleanliness at the various WASH facilities. Furthermore, unlike the findings by Foster (2013) and Lane (2018) where no relationship was established between the training of WSMTs and the sustainability of water facilities, this study showed a close relationship. Trained WSMTs knew how and where to purchase spare parts, handle finances, seek external support (financial, technical and managerial), and they knew the essence of cleanliness. Communities with trained WSMTs considerably manage WASH facilities better than those with untrained WSMTs. However, similar to the findings by Lane (2018), they had only received training once (before the facilities were

Table 5. Financial issues of the WSMTs.

Community	Training	WSMTs with bank accounts	Financial accountability
Kubore	No	No	No
Azonge		**No WSMT**	
Kamiga		**No WSMT**	
Yikurugu	No	No	No
Saaka	No	No	No
Alamboya	Yes	Yes	Yes
Teogo	No	No	Yes
Timonde	No	No	No
Tanga	Yes	Yes	Yes
Kuboko		No	No
Zabazoya	Yes	Yes	No
Naringo		**No WSMT**	
Zebilla	Yes	Yes	No
Yelwoko	No	No	No
Gozeisi	No	No	No

Figure 5. Factors affecting gender equality on WSMTs.

inaugurated). Therefore, it was difficult to replace absent, dead, ineffective or untrusted team members since the substitute would not have access to proper managerial or technical training to sustain the WASH projects.

From Table 5, out of the twelve communities with WSMTs, Alamboya, Tanga, Zabazoya and Zebilla had bank accounts of which only Alamboya and Tanga WSMTs ensured periodic accountability to their communities. Though Teogo Community had no bank account, its team ensured periodic accountability to its community members. Communities with vibrant and active WSMTs had both functioning and forecasted operational and maintenance plans in place. The inability of WSMTs to conduct periodic accountability to their members or open bank accounts discouraged the community members to be financially involved in WASH

issues as fifty-seven (57%) of the respondents mentioned their disinterest in contributing financially to promote WASH due to the unaccountability of WSMTs and insecurity with the lack of bank accounts.

Successes of WSMTs

Communities with active WSMTs enjoyed the following benefits:

(i) Reliable supply of water; since the WSMTs are also community members who depend on the facilities, they ensured that the facilities were always in good condition to supply water regularly.
(ii) Fewer frequencies in the breakdown of facilities; facilities were managed and maintained regularly
(iii) Periodic maintenance practices; ensure that maintenance practices are carried out at the appropriate time to ensure the functionality and sustainability of the facilities.
(iv) Quicker response to the breakdown water facilities; tariffs were collected from the community members for the maintenance of the facilities so they do not seek funds from any other source which could delay their response to the repairs and maintenance of the facilities.
(v) Timely releasing of funds for maintenance, repairs or the construction of new facilities.
(vi) Effective monitoring of systems and facilities.
(vii) Encourages community involvement, ownership, and participation of WASH-related issues and facilities.

Challenges of the WSMTs

(i) Difficulty in levy collection; though some community members deliberately refrained from paying their respective levies, genuinely, others were financially handicapped to contribute.
(ii) Poor record keeping; some of the teams were not keeping records of expenditure. This hindered transparency and accountability.
(iii) Low motivation from the providers of the facilities; after the facilities have been handed over to them, the providers seem to leave everything in the care of the teams. However, the team members are not paid for the services they render.
(iv) Poor cooperation between the WSMTs and community members
(v) Inadequate training; the WSMTs only gain basic training to fix minor problems. Thus, they are unable to fix major problems. In some cases, they destroy these facilities instead of repairing them.
(vi) Obsolete systems; some of the facilities were old models. It was difficult getting their parts for maintenance and repairs.
(vii) The high cost of spare parts.

CONCLUSION AND RECOMMENDATIONS

The study showed that the formation of effective water and sanitation management teams aids in improving water, sanitation, and hygiene at the local level. They ensure that WASH facilities are properly managed and maintained to promote sustainability. However, they face certain challenges in the delivery of their services such as the influences of uncooperative community members, lack of water and sanitation education, inability to recover funds and poor records keeping. Based on the findings of this study, it is therefore recommended that;

(i) The district assembly should ensure proper coverage of WASH facilities across the district.
(ii) WSMTs should be properly trained on WASH and maintenance issues before projects are handed over.
(iii) The WSMTs should be motivated (financially) by the providers of the facilities to motivate them in the service rendered.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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