Communities Involvement in the Provision and Management of Rural Water in Ghana

Decardi-Nelson, I.
Solomon-Ayeh, B.
Asare Osei, A.
CSIR-Building and Road Research Institute
Kwame Nkuruma University Science and Technology, Kumasi-Ghana
**E-mail: pkow_mey@yahoo.co.uk*

ABSTRACT

Water is a vital component of sustainable development in every community as access to potable sources of water ensures the well being of people. Access to safe water is a fundamental human right and thus enshrined in declarations and conventions on human rights. However, at the start of the new millennium, over one billion people around the world did not have access to a safe and reliable supply of water. In order to improve upon the supply of safe water to rural communities, Ghana has adopted a Community-Based Approach which focuses on decentralization and community management of water. This paper is based on a survey of water management in three rural settlements in the Ashanti region of Ghana namely Aboaso, Abenkyem and Juansa and assesses the level of involvement of the local people. The aim is to identify the various strategies used by communities in accessing and managing rural water. Data were collected through personal interviews and observation. The data were analysed qualitatively. The study identified the following to be crucial in improving upon the community based approach and enhancing community's involvement in the provision and management of rural water facilities; community sensitization programmes, capacity building for the WATSAN committee, commitment at the top level (Political Commitment), mechanization of boreholes as a management and maintenance mechanism and the creation of an enabling environment to attract private entities.

Keywords: *Water Management, Sanitation, Rural Water, Community Based Approach, Mechanization.*

INTRODUCTION

Access to potable Water is a basic need and its availability is vital for sustainable development and a fundamental human right as enshrined in international declarations and conventions on human rights and the 1992 Constitution of Ghana. UN Committee on Economic, Cultural and Social Rights in 2003, has for instance, stated that 'The human right to water entitles everyone to sufficient, affordable, physically accessible, safe and acceptable water for personal and domestic use' (Lane, 2004). However, at the start of the new millennium, over one billion people around the world did not have access to a safe and reliable supply of water (Wood, 2000). In addition, Baur and Woodhouse (2009) in their study on enhancing private sector participation in rural water supply state that the number of people without an improved water supply in rural Africa was six times greater than that of the urban population. The importance of safe water to human development has again been substantiated in the Millennium Development Goals (MDGs), as one of the goals seek to

reduce the proportion of people who lack potable water by the end of 2015. To achieve this set target , African countries have adopted various strategies and processes in the supply of potable water to its people both at the urban and rural communities; key among them is the decentralization and community management of water. In this regard, Ghana is no exception, as it was one of the first countries to introduce a community-based approach to rural water supply on a large scale (Engel, Iskandarani and del Pilar 2005). Over the past decades, the rural water sector in Ghana has been transformed from a centralized supply-driven model to a demand-driven model, a system in which local governments and communities plan together for the provision and management of water. The official policy with regard to the provision of rural water in Ghana specifies that communities and local governments each must pay five percent of the capital cost with the remaining 90 percent coming from the budget (largely donor-funds) of the Community Water and Sanitation Agency (CWSA). This policy is intended to generate a sense of ownership of the project by the community members, hence enhancing their willingness to maintaining the project.

Providing safe drinking water in rural areas is a major challenge because it is not easy to establish institutional arrangements that will ensure that drinking water facilities are provided, maintained, and managed in an efficient, equitable, and sustainable way (Asante, Birner and Yan, 2010). In fact, providing safe drinking water in rural areas is subject to both market and government failures. The private sector does not usually have sufficient incentives to invest in rural water supplies due to the high costs of infrastructure development in areas with low population density and the high transaction costs of collecting fees for drinking water in such areas, especially if the awareness of the value of safe drinking water is limited and if people can easily resort to other (although unsafe) water sources (Asante, Birner and Yan, 2010). Even though the country has adopted the community-based approach to the provision of rural water, communities are not always involved fully in all the stages of water provision. The WATSAN Committees in the communities for instance are hardly involved in the choice of the contractors in charge of establishing drinking water facilities. They therefore do not have adequate opportunities to express discontent with the contractor's work when they observe problems.

Planning for the WATSAN committees which are the main maintenance and management agencies at the community level in the country had always been a nightmare as a result of inadequate funds. This is basically attributed to the low budgetary allocation to the WATSAN sector. The effect of this is that Assemblies are not able to carry out WATSAN projects on their own without depending on external agencies' and NGOs support (Atipoka, 2008). There is also the issue of low capacity (both human and financial) of some of the districts and communities in the country in carrying out their respective tasks in the provision and management of rural water. Some poor communities especially those with small populations sometimes find it very difficult to raise the five percent capital cost required from them. The effect of this has always been the delay or failure in the provision of potable water for such communities. Again with regard to management of rural water, some communities are unwilling to pay for the use of water after contributing towards the 5 percent capital cost. Most community members hold the perception that

their contributions towards the 5 percent capital cost is enough to guarantee them access to the water provided free of charge. The unwillingness and inability of community members to pay for the use of water affects the management and maintenance of water since there would be no funds to repair boreholes in case of any break down. This paper therefore assesses the involvement of three communities (Aboaso, Abenkyem and Juansa) in the provision and management of rural water while identifying the various strategies used by communities in accessing and managing water.

Institutional Framework for Rural Water Supply in Ghana

Ministry of Water Resources Works and Housing (MWRWH): The MWRWH through the Water Directorate Department, at the national level, is responsible for the sector's policy formulation and coordination. Its functions include developing policy framework for the water and sanitation sector; soliciting for funding from External Support Agencies (ESA); monitoring activities of water supply and sanitation sector, and advising cabinet on water and sanitation issues. With regard to rural water supply, the Directorate coordinates activities of key sector agencies which are the Water Resources Commission and the Community Water and Sanitation Agency (CWSA) as shown in the Figure (Water Directorate, MWRWH, 2007).

Ministry of Local Government and Rural Development: This Ministry exists to promote the establishment and development of a vibrant and well resourced decentralized system of local government for the people of Ghana to ensure good governance and balanced rural based development. The Environmental Health and Sanitation Directorate within the ministry is responsible for coordinating all the key sector institutions involved in the water and sanitation sector. The directorate relates with the Metropolitan, Municipal and District Assemblies in enhancing the decentralization of the water sector to rural communities in the country.

Community Water and Sanitation Agency (CWSA): At the regional level, there is the CWSA which relates directly with the Water Directorate of the MWRWH in facilitating the development of water in rural areas and small towns. As part of its role, the CWSA also formulate strategies, standards and guidelines for the sector; coordinates the work of NGOs and donors; and encourage private sector activity in water and sanitation. It provides support to District Assemblies in promoting the development and sustainability of safe water. The CWSA contracts both private firms and NGOs for borehole construction and supervision (Kleemier, 2002).

District Assemblies: The Assemblies are responsible for rural and small town water and sanitation delivery using the private sector for infrastructure delivery and communities or private operators for management. They have responsibility for preparation of District Water and Sanitation Plans. District Assemblies demonstrate commitment to the sector by setting up District Water and Sanitation Teams (DWST) and contributing five percent of the capital cost. The team comprises of members from the Works, Health and Planning Departments of the Assembly. The DWSTs select beneficiary communities and apply for national program benefits on their behalf. The DWSTs also manage the implementation and approve tariffs set by Community Water and Sanitation Committees and the town

Water and Sanitation Boards. The DWST in the Assemblies also trains members of the WATSAN committees in the various communities.

Non Governmental Organizations (NGOs): Some NGOs also play important roles in the provision and management of rural water in the country. They provide technical assistance to communities during planning, implementation and provision of facilities. They also provide capacity building to community management groups. In some cases, NGOs will provide water and sanitation facilities. The NGOs active in the rural water sector include World Vision International, Water Aid, ProNet and several church funded organizations (Lane, 2004).

Private Sector: The reform of rural water sector in the country led to the involvement of the private sector in the provision of water facilities for some of the communities. The CWSA as parts of its roles sometimes contracts some private firms for borehole construction and supervisions. There are also some instances where some private entities are wholly involved in the provision of water to some of the communities in the country.

Community Members (Water Users): The basic unit for promoting the community-based approach which was one of the main objectives of the rural water reform in the country is the community members. In their quest to accessing potable water, communities have to apply for benefits available from the District Assemblies. Commitment is demonstrated by contributing five percent of the capital cost for each facility. Communities make their own arrangements for payment of facilities and fully operate and manage its use. Community Water and Sanitation (WATSAN) Committees are also established to set tariffs, maintain accounts, and manage day-to-day operations of water points. The WATSAN is in charge of collecting the initial community contribution for construction costs and is also responsible for the maintenance and operation of the water and sanitation systems. The committee is supposed to work closely with the district assemblies. Day-to-day management and operational issues, such as the definition of access, allocation of water, and maintenance of the pump site and hand pumps, are also major tasks of the committee (Eguavoen 2008).

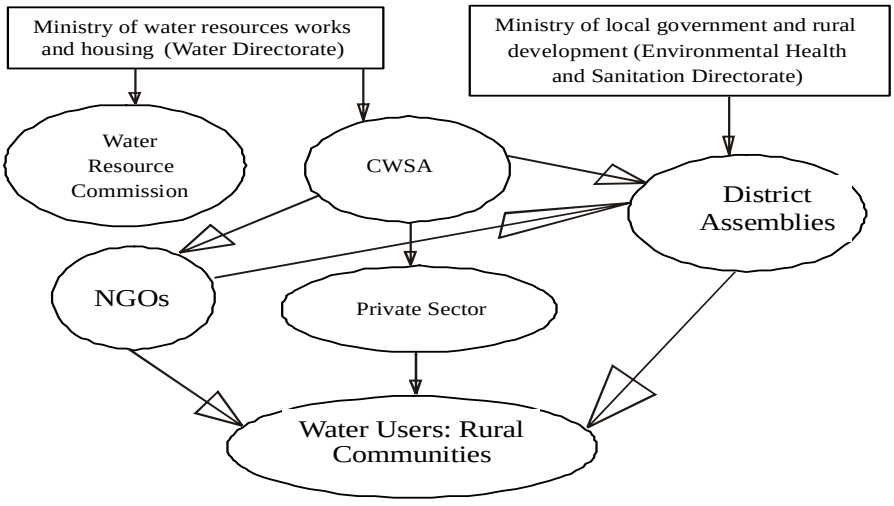

Figure 1: Institutional Framework for Rural Water Supply. **Source:** Baur and Woodhouse (2004)

METHOD

The survey research design which involves case study approach was adopted for the study. The Units of enquiry or sources of data included the WATSAN Committees, Assembly and Unit Committee members and the Traditional Authorities in the communities (Aboaso, Abenkyem and Juansa) studied. Interview guides and observations were the tools used in gathering data from the field. The data collected were analysed qualitatively to identify the various strategies and process adopted by the communities in the provision and management of potable sources of water as well as the potentials, opportunities, constraints and challenges of these strategies.

RESULTS AND DISCUSSION

Means of Potable Water Acquisition in Aboaso: Ownership and management of potable water supply in the Aboaso community are both by public and private entities; hence the various strategies that have been adopted by the community to ensure the provision of potable water were categorized into public and private means.

Public Initiative and Means of Acquiring Potable Water in Aboaso: The survey identified that the provision of public sources of water for the Aboaso community were demand-driven, as the desire for potable sources of water came from the community members themselves. To realize this desire, the community had to take the initiative by first registering at the district assembly. In the registration process, the community paid five percent of the total construction cost (capital cost) of each borehole provided before the assembly and the Community Water and Sanitation Agency (CWSA) supplemented it with five percent and 90 percent respectively for the construction. In raising funds for the five percent registration fees required by the assembly for the construction of boreholes in the Aboaso community, an amount was paid by every household within the sphere of influence where each of the boreholes were constructed. For instance in 2009, each household within the Zongo community contributed five Ghana cedis for the construction of a borehole in their vicinity. Another strategy adopted by the communities in ensuring the provision and regular supply of water was the mechanization of two of its boreholes that were constructed some years back. The Aboaso community by their own efforts had mechanized two boreholes that were frequently breaking down, hence leading to shortage of water in some parts of the community. Funds for the mechanization was through the sale of water from these initial non mechanized boreholes to the community as well as proceeds from the amount collected from the use of the community's public toilets.

Management and Maintenance of Public Sources of Water in Aboaso: Public sources of water are managed by the Water and Sanitation (WATSAN) Committee and the Unit Committee in the community. The WATSAN committee consists of some of the indigenes from the community who had been trained by the assembly to monitor the operations of the boreholes and to repair them in case of any break down. Maintenance of the borehole is the responsibility of the WATSAN committee. They ensure that malfunctioning boreholes are repaired where necessary using some of the amount obtained from the sale of the water to the community. The community has adopted the Pay-as you-fetch approach in

providing water for its users. With this approach, two buckets of water sell for 5 Ghana pesewas for the non mechanized boreholes and one bucket for 5 pesewas with the mechanized boreholes.

Private Initiative in the Provision of Potable Water in Aboaso: In ensuring regular supply of water in Aboaso, a private man is involved in the provision of water to supplement water provided by the public facilities. In 1993, an individual in Aboaso ventured into the provision of water. After some financial agreement with the leaders in the community there was the transfer of ownership and management of one of the community's boreholes from the community to this private individual. The transfer was as a result of the regular break down coupled with the difficulty in accessing water from the borehole by the community members. Operations of the borehole by the private individual began with an initial mechanization of the borehole to pump water for the community using electricity. However, at the initial stage of operations, the profit made was small since the pump could not generate enough water to be sold to the community. With the desire to achieving the intended objective of ensuring the provision of water as well as making profit from this venture, another borehole was drilled by the man at his own cost after getting permission from the leaders of the community. The borehole was then mechanized and connected to three different locations within the community. Hence, by this process only one drilled hole was able to provide water for the community at different locations.

Management and Maintenance of Private Sources of Water in Aboaso: Private sources of water in the community are solely managed by the man who had invested into this venture. However, to enhance its operations, two other people had been employed by the man to monitor the activities of the water in each of the two locations. These two employees make accounts to the owner at the end of each day's sales. To ensure successful operation there is regular supervision by the owner at the other two sites. In providing water for the community, the Pay-as you-fetch method has also been adopted where one bucket is sold for 5 Ghana pesewas. With regard to maintenance, some of the amount obtained from the sale of the water to the community is used.

Fig. 2: One of the Private-Owned Mechanized Sources of Water in Aboaso
Photo: Decardi-Nelson, I.

Table 1: POCC Analysis for the Provision and Management of Potable Sources of Water in Aboaso

Issues	*Potentials*	*Opportunities*	*Constraints*	*Challenges*
Access to potable sources of water	1. Willingness of the community members to contribute towards the provision of potable water. 2. The adoption of the Pay-as-you-fetch method in selling water to community members. 3.Availability of electricity to help in the mechanization of boreholes 4. Availability of the WATSAN committee to help in the management and maintenance of boreholes. 5. Enabling environment to attract private individuals wishing to venture into the provision of potable water.	1. Existence of the District Assembly to supplement the community in the construction of the boreholes as well as provide training for the WATSAN committee members. 2. The existence of the CWSA to provide support for the community and the assembly as a whole.	Inadequate coordination between the WATSAN committee and Assembly members. This has sometimes resulted to misunderstandings on who to employ to sell water to community members.	1.Regular break down of boreholes (especially those with non mechanized fix pumps.) 2. High cost of electricity for the generation of water with the mechanized boreholes.
Conclusion: The availability of the potentials and opportunities would help address some of the challenges and constraints. For instance, the existence of the WATSAN committee as well as the adoption of the Pay-as-you-fetch method would make resources (funds and expertise) available to repair broken down boreholes. Effective dialogue between the management committee of water would also enhance the coordination between them.				

Source: Field Survey, 2011.

Means of Potable Water Acquisition in Abenkyem: The survey revealed that the Abenkyem community like that of Aboaso also desired potable water, hence the need for potable water was initiated by the members of the community themselves. The community therefore had to register at the assembly with an initial amount of 250 cedis in 2009. The amount paid by the community was less than the normal five percent required by any community due to the small size of the community. In raising funds for the registration fees at the assembly, each individual above 18 years in the community paid five cedis. The next action to have been taken was the construction of the bore hole in the community by the Assembly. There was however a delay in the fixing of the pumping machine after the drilling of the hole for construction by the Assembly. Even though no concrete reasons were assigned for this delay, it would not be out of context to conclude that, it was due to the inability of the community to raise the five percent of the capital cost. The chief and leaders in the community therefore had no option but to sell a plot of land which covered where the hole was drilled by the assembly to a private individual who agreed to drill another hole together with its pumping machine at a different location within the community at his own cost. With this a fully constructed borehole which was ready to be used was provided for the community as compared to the initial hole drilled by the assembly. After this, the private individual mechanized the drilled hole on his plot with electricity to pump water for personal use in his house.

Management and Maintenance of Potable Water in Abenkyem: Management of the borehole is by the WATSAN committee. They ensure that surroundings of the borehole are always tidy as well as ensuring regular flow of water. One member of the committee

has been appointed to sell water to the community. In selling water to the community, the Pay-as-you-fetch method has also been adopted in Abenkyem where two buckets of water go for five pesewas. However one issue that was identified by the study with the adoption of this approach in the Abenkyem community was the unwillingness of some community members to pay for the use of the water as these community members sometimes had the perception that their contributions towards the five percent capital cost was enough to guarantee them access to the water free of charge. Even though the borehole had not encountered any problem as of the time of the study, there was the WATSAN committee whose members had been trained to provide repair services in case of any break down. Some of the amount obtained from the sale of the water would also be used for repairs when the need arises.

Table 2: POCC Analysis for the Provision and Management of Potable Sources of Water in Abenkyem

Issues	***Potentials***	***Opportunities***	***Constraints***	***Challenges***
Access to potable sources of water	1. Willingness of the community members to contribute towards the capital cost for the provision of potable water. 2. Availability of the WATSAN committee to help in the management and maintenance of boreholes.3. The adoption of the Pay-as-you-fetch method in selling water to community members.	1.Existence of the District Assembly to supplement the community in the construction of the boreholes as well as providing training for the WATSAN committee members. 2.The existence of the CWSA to provide support for the community and the assembly as a whole.	Unwillingness of some community members to pay for the use of water.	-
Conclusion: The existence of the WATSAN committee as well as the adoption of the Pay-as-you-fetch method would make resources (funds and experts) available to repair broken down boreholes should such a situation happen in the near future. Effective dialogue between the management committee and the community on the importance of paying for water would help limit the stated constraint.				

Source: Field Survey, 2011.

Means of Potable Water Acquisition in Juansa: The major sources of water supply had been the government through the Assembly and the World Vision International which is one of the NGOs that operates fully in the Asante Akim North Municipality. There are a total of 14 boreholes in the community. In all the World Vision has provided 9 boreholes with the remaining 5 constructed by the Assembly. Aside the fourteen (14) boreholes that were provided by the World Vision at their own cost, the community like all the other communities had to pay for the five percent registration fee for each of the boreholes at the Assembly. Interestingly, the mode of fund raising for the five percent registration fees in Juansa was different from the other two communities (Aboaso and Abenkyem) studied. In attaining the five percent, it was announced to the community to invite people who were willing and had the resources to contribute the five percent requirement for each of the boreholes which would be later refunded to them from the sales of the boreholes when constructed. Part of the agreement was however that these boreholes would be constructed near the places of residence of the contributors.

This proposal from the leadership of the community attracted some well to do members of the community (five of them) who paid the five percent each as the registration fees for the construction of five boreholes at different locations (near their places of residence) within the community. The construction of the boreholes near the residence of these people was made possible since access to the water table at these places was not difficult. One major problem identified by this method of fund raising in the community was the location of some of the boreholes as most of the people have not been patronizing them. Two of the boreholes constructed near the residence of the initial contributors of the five percent, received little patronage as these boreholes are located far away from the community.

Management and Maintenance of the boreholes in Juansa: The management team of the boreholes in the community consists of the Assembly members, the Unit Committee members and the WATSAN Committee members. These members see to the day to day operation of the boreholes in other to attain their targeted objectives in the community. The initial process of obtaining funds for maintenance was through the collection of monthly amounts from each household in the community by the management team. This method however did not function appropriately as most of the households were unwilling to pay this amount. An instance was an electoral area of about 489 households where less than 40 of them paid these monthly fees. The Pay-as-you-fetch method was then introduced in 2007, where two buckets of water was sold at five Ghana pesewas. Some members of the WATSAN have therefore been appointed by the management team to sell water from these boreholes to the community. With this process enough money is obtained for repairs of the borehole by the WATSAN committee in case of any break down.

Table 3: POCC Analysis for the Provision and Management of Potable Sources of Water in Juansa.

Issues	***Potentials***	***Opportunities***	***Constraints***	***Challenges***
Access to potable sources of water	1. The adoption of the Pay-as-you-fetch method in selling water to community members. 2.Availability of electricity to help in the mechanization of boreholes 3. Availability of the WATSAN committee to help in the management and maintenance of boreholes.	1. Existence of the Municipal Assembly to supplement the community in the construction of the boreholes as well as provide training for the WATSAN committee members. 2. Existence of an NGO (World Vision International) which has interest in the provision of potable water.	Less patronage of some of the boreholes as a result of their locations.	Regular break down of boreholes (especially the manual ones)
Conclusion: The availability of the potentials and opportunities would help address some of the challenges and constraints. For instance, the existence of the WATSAN committee as well as the adoption of the Pay-as-you-fetch method would make resources (funds and expert) available to repair broken down boreholes. Again, the availability of electricity could also enhance mechanization of boreholes which are more resilient as compared to the non mechanized ones. The mode of fund raising for the registration fees of 5% to the Assembly should be reversed to allow all beneficiaries of would be water projects to contribute so as to avoid the instances of locating boreholes at places where patronage would be low.				

Source: Field Survey, 2011.

Out of the three communities studied, the only community with mechanized pump boreholes was Aboaso. The adoption of the mechanization process for instance, made it possible for the community to provide water at three different locations from the same source (one drilled hole). Again, with the issue of frequent break down of the non mechanized pump boreholes, water users can also depend on the mechanized ones and thereby reduce the incidents of water shortage within the community. Aboaso was also the only community that had a private individual operating the water business for profit. The operations of this private individual were seen to be vital as it supplemented the operations of the publicly owned boreholes. In line with government's decentralization policy of rural water supply which drives on the principle of demand responsive approach as identified in the previous chapter, the provision of water in all the three communities studied were demand-driven as community members expressed the desire for potable water. Even though all the three communities contributed towards the capital cost for construction to their respective Assemblies, the Abenkyem community could not raise all the five percent as required by the rural water decentralization policy. This could be attributed to the small population size (150) of the community. The effect of this was the delay in fixing the pumping machine by the assembly. The implication of this therefore means that with this policy, some poor communities especially those with small populations might find it difficult to access potable sources of water.

The study revealed slight differences in the mode of raising funds by the three communities towards the capital cost for construction. In Aboaso, a fixed amount was paid by each household within the sphere of influence where a borehole was constructed, whereas each individual above 18 years in Abenkyem paid a fixed amount that was proposed by the leadership of the community. Interestingly, in Juansa, leadership of the community contacted some well to do and willing members (5 of them) who contributed towards the capital cost of each borehole provided, on condition that the boreholes would be constructed near their places of residence. It could be inferred from this mode of fund raising in Juansa that the location of boreholes might not be able to serve all the intended beneficiaries of the project. This situation was evident when the study revealed that two of such boreholes were not being patronised by most of the community members due to their locations.

One remarkable initiative by the Aboaso community in their quest to have regular access to potable water was the mechanization of two of its borehole pumps that were frequently breaking down. The management and maintenance of water facilities in the three communities were found to be similar, as all the communities had adopted the community based approach to management, where communities managed and maintained their facilities themselves, as stipulated by the rural water policy reforms. All communities had the WATSAN committee who see to the day to day running of the water facilities. Aside the WATSAN committee, there were also the unit committee and assembly members who were in charge of maintenance and management of water facilities in the Aboaso and Abenkyem communities. The presence of the WATSAN committees for management and maintenance in the communities would mean that the communities would depend less on

the external agencies for maintenance of water facilities, thereby making the communities more responsive to any breakdown of boreholes. This important role of the WATSAN committee therefore means that they should be provided with the needed training by the assembly and other stakeholders. To make funds readily available for maintenance, the study revealed that all the three communities had adopted the Pay-as-you-fetch approach, where water users have to pay for the facilities. One issue that emerged from the adoption of this method was the unwillingness of some community members to pay for the use of the water as these community members sometimes perceived that their contributions towards the five percent capital cost was enough to guarantee them access to the water for free. This situation as revealed by the study was particularly prominent in Abenkyem.

CONCLUSION AND RECOMMENDATIONS

Community involvement in rural water supply and management is an important component in ensuring the ultimate aim of the government in improving access of safe water to rural people. Effective involvement of the communities or otherwise would therefore determine the degree of water access to these communities. It is therefore imperative that the recommendations outlined in this study are given the needed consideration to enhance access to potable water to rural communities in Ghana. The adoption of Community Based Approach in the provision and management of water facilities is a vital component in improving access of potable water to rural communities and small towns. The study therefore recommends the following as a means of enhancing the community's involvement in the provision and management of rural water facilities.

Community Sensitization Programme: Sensitization programs need to be embarked on in the communities by the leadership of communities and WATSAN committee members. Community members need to be sensitized on the processes and strategies involved in the Community-Based Approach with regard to rural water supply. Through these sensitization campaigns, community members should be made aware of the importance of contributing towards the capital cost for the construction of water facilities as well as the advantages of potable sources of water. In order to make sure that funds are readily available for maintenance in case of any breakdown of water facilities, members should also be made aware of the need to pay a token for the use of the facilitiey in their respective communities at any point in time. Sensitizing the community on the importance of contributing and paying for water facilities would encourage them to do what is expected of them and thereby help to improve and sustain access to potable water in rural communities.

Commitment at the Top Level: Successful implementation of the community based approach to rural water supply would also depend on the commitment level of the government. Resourcing the various institutions involved in this approach by the government is therefore crucial for the development of rural water supply. The budget allocations for the various CWSAs and the District Assemblies should be increased by the government. The District Assemblies, on their parts should also increase their budgetary allocation on water facilities. These would go a long way to enhance the provision of potable water in rural communities.

Mechanization of Boreholes: One management and maintenance approach to rural water supply that is recommended for adoption by communities is the mechanization of borehole pumps. This approach was adopted by one of the communities (Aboaso) and had proved to be vital in enhancing access to potable water. The community by their own initiative mechanized two of their boreholes that frequently broke down. Funds for mechanization was through the sale of water from these initial non mechanized boreholes to the community as well as proceedings from the amount collected from the use of the community's public toilets. This initiative is also recommended for adoption by other communities where there are frequent break down of boreholes with non-mechanized pumps.

Creation of Enabling Environment to Attract Private Entities: To attract private individuals and entities to invest in rural water, the study recommends that the communities create an enabling environment that would attract private individuals and entities. Again using the example at Aboaso, (which was the only community that had a private individual operating in the water business), the private investor indicated that the conducive environment that existed between him and the leadership of the community and the community as a whole was among the factors that enhanced his success. Leadership of communities should be willing to welcome private investors and the communities on their parts should also be willing to pay for the use of water from these private investors.

Enhancing the Coordination between WATSAN and Other Members: Where the management of water facilities is by WATSAN Committee and other members such as the Assembly members and unit committee members, there is the need for effective coordination between these groups to enhance maintenance and management of water facilities.

REFERENCES

Asante, F., Birner, R. and **Yan, S.** (2010). *Opportunities and Challenges of Community-Based Rural Drinking Supplies: An Analysis of Water and Sanitation Committees in Ghana*. Environment and Production Technology Division Washington, D.C.: International Food Policy Research Institute.

Atipoka, F. (2008). Water Supply Challenges in Rural Ghana. *Desalination*, 248 (1-3), 15/11/2009

Baur, P. and **Woodhouse. M.** (2009). Enhancing private sector in rural water supply: An action-oriented study. <*.http://www.gwclim.org/presentations/session1/baur.pdf*>. Accessed on December 17, 2011.

Eguavoen, I. (2008a). Drinking water policy, water rights and allocation practice in rural northern Ghana. Paper presented at the 33rd Water, Engineering and Development Center International Conference, April 7–11. Accra, Ghana.

Engel, S., M. Iskandarani and **M. del Pilar Useche** (2005). Improved water supply in the Ghanaian Volta basin: Who uses it and who participates in community decision-making? Environment and Production Technology Division Discussion Paper 129. Washington, D.C.: International Food Policy Research Institute.

Kleemeier, E. (2002). Rural Water Sector Reform in Ghana: A Major Change in Policy and Structure. Blue Gold Field Note 2. Water and Sanitation Program, World Bank, Washington, D.C.

Lane, J. (2004). Ghana, Lesotho, and South Africa: Regional expansion of water supply in rural areas. Paper presented at the Scaling Up Poverty Reduction: A Global Learning Process and Conference, May 25–27, in Shanghai.

Ministry of Water Resources Works and Housing (2007). *Ghana National Water Policy.* Accra: Government of Ghana.

Ministry of Water Resources Works and Housing (2009). *Ghana National Water Policy.* Accra: Government of Ghana.

UN Committee on Economic, Social and Cultural Rights (2003). General Comment 15. The right to water. Twenty-ninth session, 2003.

WASH (Water, Sanitation and Hygiene). *Technical Report 66.* Washington, D.C.: United States Agency for International Development,

Wood, M. (2000). *Water, Sanitation and Hygiene: Challenges of the Millenniums.* Uganda: Managing Small Towns and Water Supply.