

# Assessment Of Community Participation In The Provision And Management Of Potable Water Supply In Kariga, Nanumber North District Of Ghana

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**Abstract:** The study was carried out in the Kariga in the Nanumba-North District of Northern Region in Ghana to assess community participation in the provision and management of portable water. In undertaken the research, various methods of data collection techniques was employed. Among the techniques were Focus Group Discussion, Questionnaire administration and Interview. The sample size adopted was 52. Purposive sampling was used to select Nine (9) people from the water and sanitation Committee for the Focus Group Discussion and three (3) key informants from District water and Sanitation Team, Pronet and Dansman Business Consultancy Services Limited (DBCSL). Simple random sampling was used to select forty (40) community members to gather their views on their participation in the provision and management of the point source. Throughout the study in the Kariga community, it was observed that there are three point sources in Kariga community and all the point sources were functioning. It was revealed that there were low levels of functionality in the water management structure of the water and sanitation committee and it was attributed to low level of monitoring of the District Assembly after the project contract duration and this greatly affected the efficiency and effectiveness of the water and sanitation committee in executing their Operation and Management function. The major challenges facing the community participation in the Provision and Management of Potable Water includes; High maintenance costs especially purchase and transportation of spare parts, Poverty reflected by inadequate contributions and difficulties in mobilization of community to participate in Operation and Management , Dormant and absent of the water and sanitation committee among others. The stakeholders of water provision especially District water and sanitation should intensify its monitoring of potable water projects in the communities, there is the need to strengthen the capacity of the community and the water and sanitation committee to own water facilities and this could be achieved through continues sensitization and training of the community and water and sanitation committee on their roles in management for sustainability of the point sources.

**Keywords:** Ghana, Portable water, Community Participation

## I. INTRODUCTION

Rural areas in developing countries have 80% of the people lacking access to safe drinking water, and the number

of people without clean drinking water is more than five times the number in urban areas [2]. Recently, Community participation has been incorporated in project and programmes of Development Agencies such as UN and World Bank [1].

Providing and managing safe drinking water of rural communities was the sole responsibility of the state (centralized supply-driven model). However, with the introduction of reforms (Decentralization and Community Management of Water Approach), an attempt is made to involve communities in all stages of development including operation and maintenance (demand-driven model). At the community level, there is the Water and Sanitation (WATSAN) committee which consists of some of the indigenes from the community who have been trained by the assembly to monitor the operations of the water facility and to repair them in case of any break down. These strategies or reforms that have been adopted by the state and other organizations are laudable idea but still majority of the rural communities have no access to potable water. This has call for the need to assess the strategies used by the community in providing and managing the facility. According to Tandia [6], in most of the projects / programmes of water developed for communities, more than 30 to 45 % of infrastructures have been broken down during the previous decade. The cause resides, most of the time, in the weak maintenance of these infrastructures.

The issue of community participation is one of the major concerns that have led to the abandonment of some water supply project in most rural areas [2]. Most of the community members are only involve to produce the labour needed during the implementation stage of the project and also sometimes they are only involve when they are required to pay the 5% quota expected of them as their contribution to the cost sharing approach adoption [3]. This therefore goes a long way to defeat the idea of authentic participation leading to non-sustainability and ownership of most water supply projects. Looking at the challenges in the provision and management of potable water in rural areas in Ghana, the Kariga community which is located in the Nanumba-North District is no exception. The study therefore assessed the level of participation of Kariga community members in the provision and management of potable water.

## II. MATERIALS AND METHODS

### RESEARCH DESIGN

This study was conducted in Kariga Community in the Nanumba North District of the Northern Region. Qualitative and quantitative methods were used during the study process. Questionnaire, interview guide, observation were used to collect the primary data. Simple random sampling and purposive sampling technique were also used to select respondents for data collection.

### SAMPLE FRAME AND SIZE

The population of Kariga community is 733. The sample size adopted was 52. The respondents for data collection for the study include; the Water and Sanitation (WATSAN) Committees, PRONET, District water and sanitation team, Dansman Business Consultancy Services Limited (DBCS) and community members in Kariga.

### SAMPLING TECHNIQUES

Purposive sampling and Simple random sampling technique were used to determine the study respondents. Purposive sampling was used to select Nine (9) people from the Water and Sanitation (WATSAN) Committee for the Focus Group Discussion. It was also used to select three (3) key informant from District water and sanitation technician, Pronet and Dansman Business Consultancy Services Limited (DBCSL) for interview on the role they play in ensuring community participation in the provision and management of the point source. Simple random sampling was used to select forty (40) community members in the administration of semi-structure questionnaires to gather their views on their participation in the provision and management of the point source.

### DATA ANALYSIS

Both qualitative and quantitative methods were employed to analyze the findings of the study. Primary data collected with the questionnaires were analyzed through the use of Categorization, frequency distribution and measurement.

## III. RESULTS

### DEMOGRAPHIC FEATURES OF RESPONDENTS (AGE AND SEX DISTRIBUTION)

#### SEX DISTRIBUTIONS OF RESPONDENTS

Gender	Frequency	Percentage
Male	25	62.50
Female	15	37.50
Total	40	100

Source: Field survey, June 2014

Table 1.1: Sex Distributions of Respondents

The sex distribution of the respondents shows the ratio of males and females. Table 1.1 depicts the percentages of males to females who responded to the study. Out of the 40 respondents of the study, females represented 62.50%, whereas males represented 37.50% of the sample size.

#### AGE DISTRIBUTION OF RESPONDENTS

Age Range	Frequency	Percentage
18-25	13	32.50
26-35	7	17.50
36-45	9	22.50
46-55	8	20.00
56 and above	3	7.50

Source: Field survey, 2014.

Table 1.2: Age Distribution of Respondents

The distribution shows that majority of respondents to the study are in the working class, and they form 72.5 % of the total number of respondents. Table 1.2 indicates that 32.5% of the sample size that responded to the study on community participation in the provision and management of the point

source in Kariga community were between the ages of 18 – 25. This represents the highest age group that responded to the study. Majority of the respondents in this group were youth who utilized the point source frequently. It therefore enhanced the data gathering as they shared more experience on the management of the point source. Respondents within the ages of 36 – 45 years represented the next highest group of respondents to the study as they covered 22.5% of the total number of respondents to the study. It is followed by the age within 46 – 55 years and this is also followed by the age group within 26 – 35 years.

#### ROLE OF PUBLIC INSTITUTIONS IN ENSURING COMMUNITY PARTICIPATION IN THE PLANNING PROCESS OF PROVIDING POTABLE WATER

Interview with staff of District Water and Sanitation Team (DWST) in Nanumba North District revealed that, DWST are mandated to follow demand driven approach in providing potable water to rural communities. Their main objective is to achieve Community Ownership and Management (COM). The DWST conduct a survey to gather data for the District Assembly in order to identify communities with or without potable water. It was also revealed that the community is fully involved in the identification of needs of the community, and the focus group discussion with the opinion leaders confirms to it. Further responses from the DWST indicated that, the Community Water and Sanitation Agency (CWSA) play a facilitation role by seeking for funds from donor agencies and based on the fund available, a committee is set by the District Assembly to prioritize and select the communities which are in most need of the project. The District Assembly advertises for consultants (private agencies) to bid for the project, and the agency that wins the contract is given the funds to carry out the project.

#### ROLE OF PRIVATE INSTITUTION IN ENSURING COMMUNITY PARTICIPATION IN THE PROVISION OF POTABLE WATER

From the interview with DWST, it was revealed that, the project contract includes facilitating, training and the construction of the point source by a consultant (private agency). This was also confirmed by Mr. Abdul Rahim of Dansman Business Consultancy Services Limited (DBCSL), a private company in the water sector. Facilitating the selection of WATSAN committee, and training ensures community participation in the provision and management of potable water. According to DBCS, every community provided with a point source needs to be monitored for effective and efficient operation and maintenance. The staff of DWST revealed that, it is the responsibility of the consultant contracted to monitor the functioning of the point source and the WATSAN committee. However, the staff of DBCSL also indicated that they are to monitor the project to the end of the project contract and after that; they hand over the project to the district assembly or the DWST who will be responsible of the project after the project contract. Based on data gathered from the DWST and DBCSL, it was realized from the interviews that after the project duration the DWST and the Consultant

do not monitor the functioning of the point source through the WATSAN committee, and this leads to the breakdown of many point sources of the district. This factor could also lead to the poor sustainability of the point sources in the communities.

#### COMMUNITY CONTRIBUTION TOWARDS INITIAL INVESTMENT, OPERATION AND MAINTENANCE COST

The initial contribution of five percent (5%) by community members is seen as the communities' contribution towards the provision of the point source. In relation to the contributions made by the community members, the WATSAN committee is trained to develop strategies in mobilizing funds for the initial investment cost and maintenance cost for the point source. Based on the Focus Group discussion held with the opinion leaders together with the WATSAN committee members, it was realized that the initial investment cost of five percent (5%) was shared among the four sections in the community, both resident and non-resident. They were able to generate GH¢300 (in 2007) as documented in their record book. Also it was established in the analysis of the study conducted with the community households that, 92.5% of the respondents said that they contributed to the initial investment cost, while 7.5% also said they do not know of the contribution. With reference to the 7.5% who said they do not know of the contribution; this means that the community members made the contribution without their presence. With the commitment level towards the contributions, it was realized that 35% of the respondents said it was excellent, 45% said it was good, 15% said average while 5% said it was poor. Also 45% says that the contribution is saved in the bank while 55% says it is saved in the community by the WATSAN committee.

#### LOCATION, FUNCTIONALITY AND UTILIZATION OF THE BOREHOLES

The study on the location, functionality and utilization of the boreholes revealed that the community member uses only the boreholes as their main water source in their daily activities. It was observed on the field survey that the minimum distance from the nearest house to the point sources is about 4 meters while the maximum is approximately 600 metres. In selecting the location of the point source, the water and sanitation (WATSAN) Committee indicated that, "the community chooses the location for the point source, but if the consultant team comes and find out that water cannot be accessed from the location, the consultant team identifies the place where they can access the water with the agreement of the community. Also Mr. Abdul Rahim (DBCSL) confirmed to the statement made by the water and sanitation (WATSAN) committee when interviewed. However, according to him, some controversies do occur when there is no consensus between the community and the consultant team in the location of the point source and sometimes leads to low participation.

## CHALLENGES OF COMMUNITY PARTICIPATION IN THE PROVISION AND MANAGEMENT OF POTABLE WATER IN THE KARIGA COMMUNITY

Some challenges revealed in the study included; high maintenance costs especially purchase and transportation of spare parts, poverty reflected by inadequate contributions and difficulties in mobilization of community to participate in operations and management, absent and dormant of the water and sanitation (WATSAN) committee, among others.

### IV. DISCUSSION

#### DEMOGRAPHIC FEATURES OF RESPONDENTS

The reason for female being dominant was as a result of the fact that they were mostly present and available in the community. Besides, they were the sex group that uses the point source in the community. Respondents within the ages of 55 and above represented the lowest group of respondents as they covered 7.5% of the total number of respondents to the study. This indicates that the youth in Kariga community were active in the participation of the provision and management of the point source. According to [4], females are mostly involve in water usage while majority of the youth are involved in participation of the provision and management of water in rural communities. It was not surprise that the females were dominant in the water usage in this study and the youth with age ranges 18-55 were actively involved in provision and management of water under the study area.

#### ROLE OF PUBLIC AND PRIVATE INSTITUTIONS IN ENSURING COMMUNITY PARTICIPATION IN THE PROVISION AND MANAGEMENT OF POTABLE WATER

The field survey revealed low levels of functionality in the water management structure of the water and sanitation committee. This was attributed to low level of monitoring of the District Assembly after the project contract duration. This greatly affected the efficiency and effectiveness of the water and sanitation (WATSAN) committee in executing their operation and management function and organizing the community toward improved rural water supply and sustainability. According to [5], poor monitoring systems by local authorities greatly affect the functionality of any project. This therefore suggest that the leaders of the various District Assembly must put on strong monitoring systems to make all project functional.

#### COMMUNITY CONTRIBUTION TOWARDS INITIAL INVESTMENT COST

In line with government's decentralization policy of rural water supply which drives on the principle of demand responsive approach, the provision of water in Kariga was demand-driven as community members expressed the desire for potable water. Even though the contribution of the initial cost of 5% by communities which was seen as an approach to

community participation has been eliminated in the government policy, some private agencies and NGOs still use this 5% initial investment cost as a strategy to raise money for the operation and maintenance in the management of the point sources. This has added to the level of community contribution and sense of ownership. According [7] United, contributions from members in community projects can greatly sustain the success of a project and sometimes generate a sense of ownership.

#### LOCATION, FUNCTIONALITY, UTILIZATION AND CONTRIBUTION TOWARDS OPERATION AND MAINTENANCE OF THE BOREHOLES

Throughout the study in the Kariga community, it was observed that there are three point sources in Kariga community and all the point sources was functioning, but one was locked with a chain locker, with the decision that when one or both point source need repairs the other one locked will be opened for use. The study revealed slight differences in the mode of raising funds for operation and management. As the point source is in function, contribution is done (user fee) for a period of time and then stop when the amount stipulated for repair is realized, pay as you fetch system (user fee) is use to mobilize fund, and in case the cost is more expensive that the money mobilized earlier for repairs, they then cost it to each household in the community. Also the leadership of the community contacts some well to do and willing members of the community who are non-resident to contribute towards operation and maintenance. One plan that has also helped the community to mobilize funds for the management of the point source is the collection of farm produce from households who cannot contribute financially.

#### CHALLENGES OF COMMUNITY PARTICIPATION IN PROVISION AND MANAGEMENT OF POTABLE WATER

The study generated several other cross-cutting factors reported as challenges facing Community participation in provision and management of potable water in the community. This includes:

- ✓ High maintenance costs especially purchase and transportation of spare parts.
- ✓ Poverty reflected by inadequate contributions and difficulties in mobilization of community to participate in operation and management
- ✓ Dormant and absent of the water and sanitation (WATSAN) committee
- ✓ Improper accountability and transparency.
- ✓ Cultural issues.
- ✓ Inadequate follow-up support from the Government and development partners.
- ✓ Political promises.

## V. CONCLUSIONS AND RECOMMENDATION

Community participation in the provision and management of potable water in Kariga community in the Nanumba North District has contributed to the development of the community in general. Community ownership of rural water supply may not be possible unless there is effective water and sanitation (WATSAN) Committee to coordinate participation and management efforts of all community members. This depends to a larger extent on effective leadership to coordinate and mobilize the community on operation and management activities if participation is to be guaranteed.

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