

**GENDER ANALYSIS OF COMMITMENT AND PARTICIPATION IN RURAL WATER SUPPLY PROJECT IN  
SUHUM KRABOA COALTAR DISTRICT OF THE EASTERN REGION OF GHANA**

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**ABSTRACT**

The vitality of water to life and development goal attainment is long established. Water scarcity in many developing nations is associated with several factors including population pressure on available water resource accentuated by poor management. Evidence from studies has shown that community participation in water supply management helps effectiveness and sustainability of rural water scheme. The unique role of women and youth in water provision in rural areas and their probable limited access due to socio-cultural dictates makes gender and generational perspective to rural water supply management imperative. Hence, gender and generational analysis of commitment and participation in rural water supply management in Suhum Kraboa Coaltar of Eastern Ghana was investigated. Using survey, supplemented with Focus Group Discussion (FGD), relevant data was sourced from 150 committee members selected through a multistage sampling procedure. While significant relationship was found between gender and participation, no significant relationship was established between age and participation. Study also found that high participation did not necessarily result in effective management. Factors contributing to improved water supply management were isolated, including appropriate motivation and training. Policy implications for improved and sustainable rural community water management were drawn from findings.

**Keywords:** rural water supply management, gender, generational analysis, community participation and effectiveness.

## **INTRODUCTION**

Globally, 1.1 billion people live without access to safe water supply. Greater percentage of these people constitutes the 70% of the world's poor who dwell in rural areas in developing countries (Learning Curves, 2010). Rural water supply has therefore been on the agenda of many governments in developing countries particularly, as a joint effort to address the Millennium development goal on water and sanitation by 2015.

Community participation in rural water supply is known to be a useful strategy that tends to play a significant role in developing and increasing community awareness on safe water and related benefits. It also instills a sense of responsibility and community pride amongst rural folks. In a study on rural water supply in Sierra Leone, Bah (1992) noted that participation is achieved through well-conceived community involvement strategies. He further observed that community self-help is a key to promoting effectively manned schemes in developing countries.

Jimenez and Perez-Forguet (2010) observed a number of weaknesses that continue to undermine strategies for community participation in rural water supply and thus hinder the goal to address some poverty related problems such as time lost in search of water for domestic use. Time is an obvious factor that relates to targeting the poor and women (the main users of water) whose inputs are required for sustainability of rural water project. Another weakness according to Whittington, Prokopy, Komirves, Lukacs, Bakalian & Wakeman (2009), has to do with the rather minimal or token cash contributions by community members which tends to affect the finances of rural water projects; yet another limitation relates to the fact that although both men and women are central to rural water supply projects, gender barriers act as a limitation to women's access to participation and effectiveness of rural water projects and technologies. Gender in this sense, refers to the roles, responsibilities and power relations that are socially constructed and assigned to men and women in a particular society. Because of gender-localized nature, the way men and women participate in rural water project vary from community to community.

This paper argues that the traditional assumption about women's role being primarily reproductive; and to consider the water needs of male and female rural dwellers as essentially homogeneous, and looking at the role men play in rural communities as decision-makers for the entire community is likely to limit access of women to participation and water resource management. In a recent study on "women's voices in water governance and management" in Ghana, Shang-Quartey (2010) reported that women constitute more than 51% and form 60 % of those living in rural areas and some densely populated places in peri-urban area. In this regard, if gender is routinely factored into rural water projects, it may bridge the income and power gaps between men and women.

It is well acknowledged that active participation of women in digging trenches, laying pipes and the movement of construction materials serves as a motivation that enhance effective management and sustainability of projects (Getechah, 1980). Besides, women are key beneficiaries of rural water supply. Infrastructural provision such as water supply potentially reduces women's time burden. Importantly, the time that women spend in search of water represent significant forgone

income. Rural water supply reduces the drudgery involved in collection, loading and purifying water (Costa, Hailu, Silva & Tsukada, 2009). Time saved also enables women to pursue training and to engage in remunerated activities.

The water needs of rural households cannot be overemphasized, particularly in maintaining sanitation and hygiene for family health (Oakley, 1991). On the average, households in developing countries consume approximately 40-60 litres of water daily for drinking, cooking, cleaning, personal hygiene and for other household chores. This requires that women walk for several hours to fetch water. In rural communities some water sources are contaminated with human and animal waste and toxic agricultural chemical runoff. Women's involvement in rural water supply is therefore critical. However, their participation is hindered due to their lack of knowledge and confidence about technological matters and particularly negative male attitude towards females in traditional communities.

Longwe (1991) contended that women's deprivation arises not from lack of productivity but from oppression and exploitation. She suggests that there is a fundamental need for gender analysis to be incorporated into rural community development projects and activities such as water supply, stating that, gender issues require the involvement of both women and men. Sara Hlupekile Longwe proposes the women's empowerment framework as a way of analysing development projects

The framework is based on five different 'levels of equality'. The degree to which these are present in any area of social or economic life determines the level of women's empowerment. The framework also allows gender and development workers to analyze development organizations degree of commitment to women's equality and empowerment.

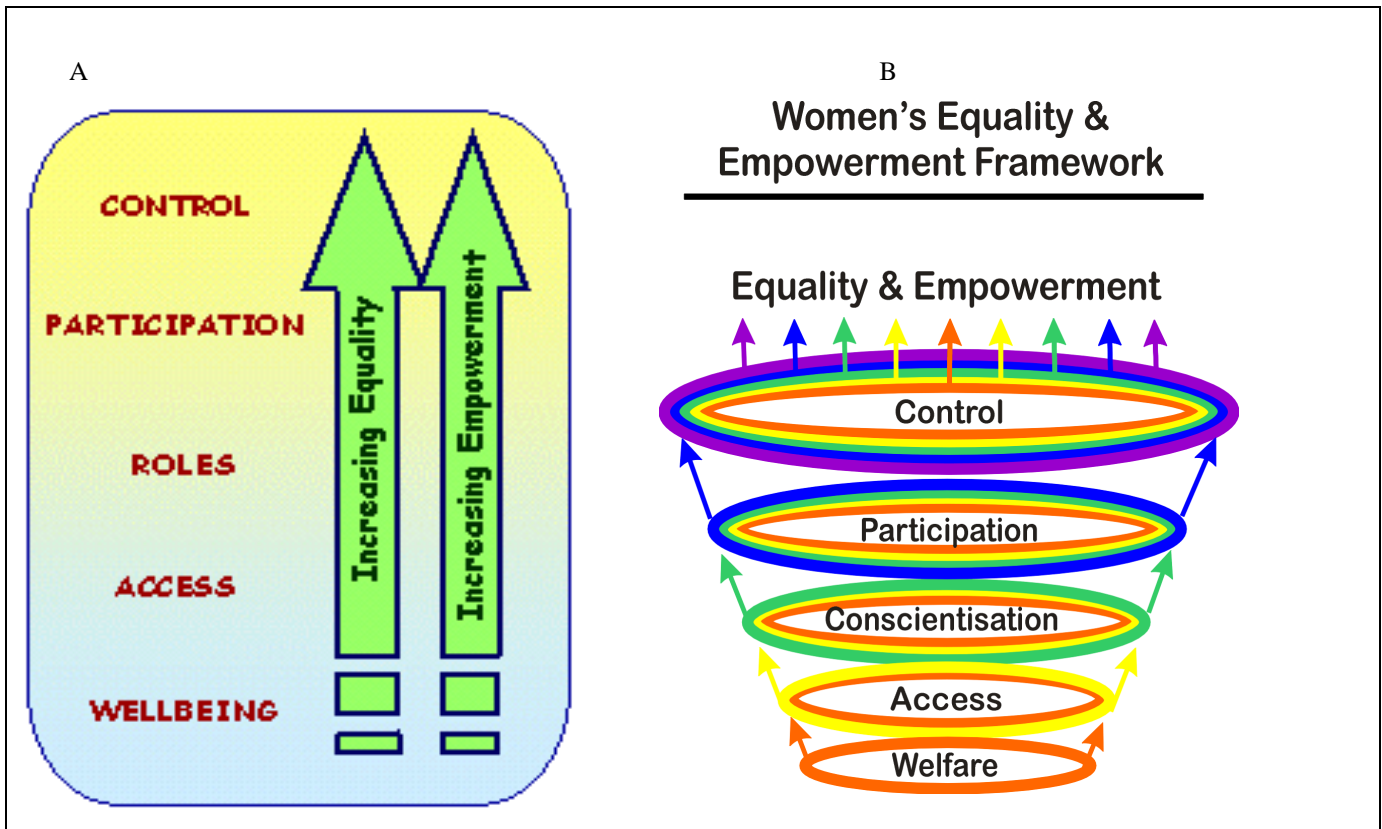
The Longwe Framework's five 'levels of equality' indicates the extent to which women are equal with men, and have achieved empowerment. The levels of equality are:

- **Control:** This term refers to women's control over the decision making process through conscientisation and mobilisation, to achieve equality of control over the factors of production and the distribution of benefits. Equality of control means a balance of control between men and women, so that neither side dominates.
- **Participation:** The framework considers women's equal participation in the decision making process, in policy-making, planning, and administration. It is a particularly important aspect of development projects, where participation means involvement in needs-assessment, project formulation, implementation, and evaluation. Equality of participation means involving women in making the decisions by which their community will be affected, in a proportion which matches their proportion in the wider community.
- **Conscientisation:** This is understood in the Longwe Framework as a conscious understanding of the difference between sex and gender, and an awareness that gender roles are cultural and can be changed. 'Conscientisation' also involves a belief that the sexual division of labour should be fair and agreeable to both sides, and not involve the economic or political domination of one sex by the other.
- **Access:** This is defined as women's access to the factors of production on an equal basis with men; equal access to land, labour, credit, training, marketing facilities, and all public services and benefits. Longwe points out that

equality of access is obtained by applying the principles of equality of opportunity, which typically entails the reform of the law and administrative practice to remove all forms of discrimination against women.

- **Welfare:** Longwe defines this as the level of women’s material welfare, relative to men. Do women have access to resources such as food supply, income and, medical care?

The levels of equality are hierarchical. If a development intervention focuses on the higher levels, there is greater likelihood that women’s empowerment will be increased by



**Figure 1: Longwe’s 1991 Equality Framework**

*Adapted from Longwe (1991): A and B showing the hierarchical levels from different dimensions*

the intervention. If the intervention focuses only on welfare it is very unlikely that the women will find the project empowering. Longwe suggested that it is important to establish whether women’s issues are ignored or recognized by identifying the extent to which project objectives are concerned with women’s development. In this context, women’s issues relate to *all* issues concerned with women’s equality in any social or economic role, and involving any of the levels of equality.

Another key variable addressed in this paper is participation. Cohen & Uphoff (1977; Chambers, 1983) maintained that participation is a process that entails key stages, mainly, decision-making, implementation, benefits and evaluation. Rogers (1993), however, stressed that the term is indeed in danger of being abused by over use; that a number of programmes have

the word “participatory” attached to them without including elements that many people would consider essential for participation. According to Rogers (1993) attendance at educational activities is of course one sense of the word “participation”, but that is not the force behind the use of the term in most cases. Rogers (1993) maintained that participation is the involvement of several parties in the different stages of designing and implementing educational programmes: joint decision making with the participants is in most cases seen as a *sine qua non* of participation. Oakley (1991) further argued that essentially there are three broad interpretations of participation:

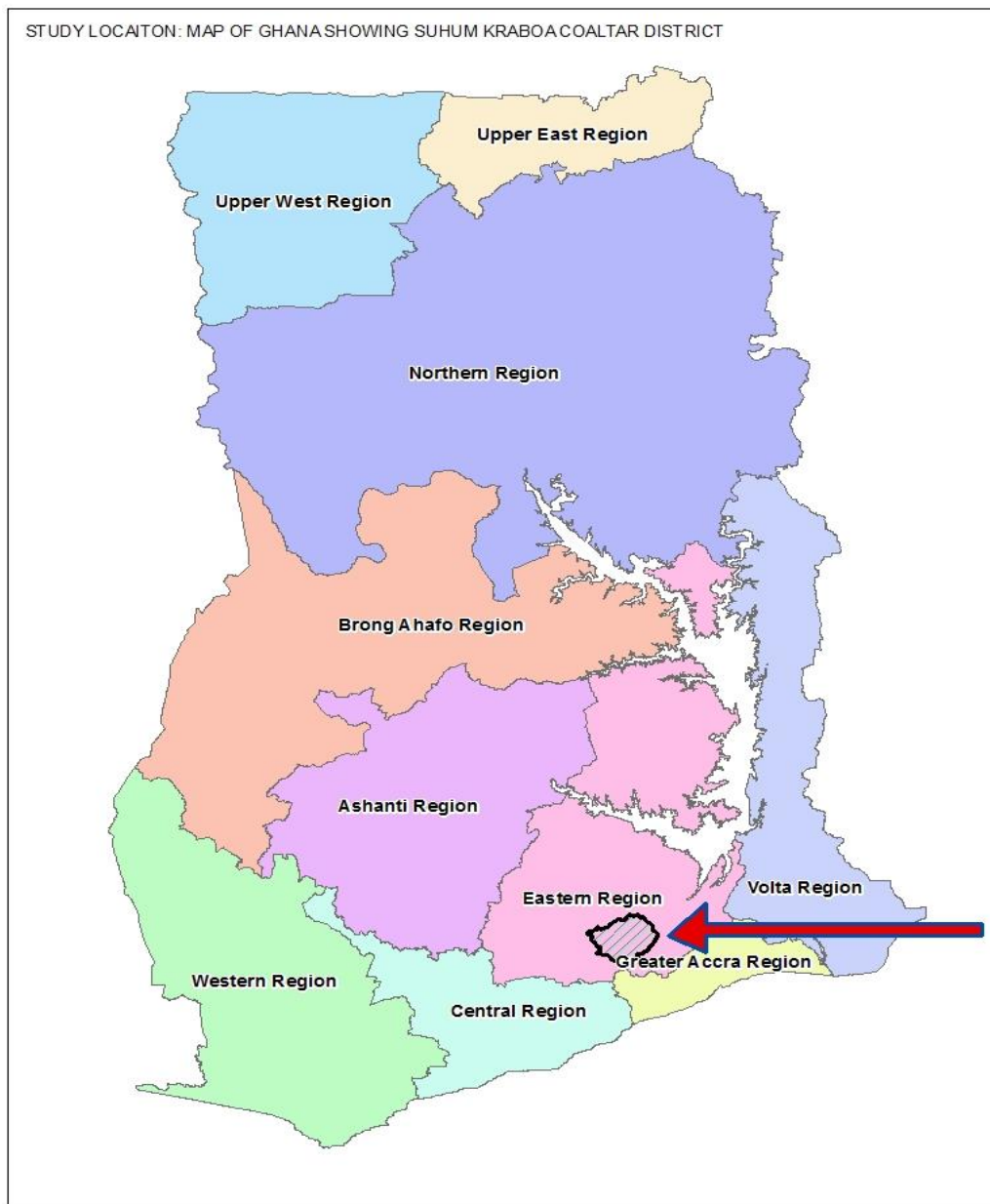
1. Participation as contribution (voluntary involvement with reference to human or material support).
2. Participation as organization (the vehicle through which decisions are carried out and evaluated).
3. Participation as empowering (the distribution of power that influences individual live).

Participation enhances commitment, ownership and eventual sustainability of community projects. Government interventions with minimal local content, no matter the magnitude and economic value have difficulty in becoming entrenched in the community and sustained.

It is against this background that the research question was posed: How does gender and generational analysis relate to participation in rural water supply in the Suhum Kraboa Coaltar District of Ghana?

## **METHODOLOGY**

The research design was a cross-sectional survey supplemented with focus group discussion. Using a structured questionnaire, data was collected from 150 community members from five purposively selected localities in the rural district of Suhum Kraboa Coaltar in the Eastern Region of Ghana. In addition 50 water committee members, five from each of the selected



**Figure 2: Map of study area showing Suhum Kraboa Coaltar District in the Eastern Region of Ghana**

communities were interviewed. Focus Group Discussion was used to solicit information from key informants in the community. Figure 2 shows Suhum Kraboa Coaltar District among other districts of the Eastern Region of Ghana.

The quantitative data were subjected to SPSS (Statistical Package for the Social Sciences) and data from the Focus Group Discussion were analyzed manually, noting emerging themes and how they related to the research question. To establish levels of participation, indicators of participation highlighted in the conceptual framework and incorporated in the items of the questionnaire were combined to derive or recode another variable – levels of participation. These indicators were:

Attendance of meetings; Contributions of respondents; Frequency of attendance of meetings; Reasons for attendance of meeting; How one got involved; Stage of involvement. Each question was given a weight of four (4), so that 4 by the 6 questions gives a total of 24. Twenty-four thus is divided into three (3) 0-8 (low participation), 9-16 (medium participation), 17-24 (high participation). This was supplemented with the levels of the empowerment from Longwe’s analytical framework (Longwe, 1991).

## **FINDINGS AND DISCUSSION**

The findings and discussion are presented against the background highlighted in the literature earlier. That is, whenever there is a ‘gender-gap’, in other words, whenever responsibilities into gender roles result in inequality in the division of the work inputs received, there is said to be a gender-gap. According to Longwe (1991) when this occurs as in this study, the situation is said to be promoting gender discrimination.

### **General description of distribution of respondents by sex**

The study examined male and female relationships that tend to influence participation in rural water and sanitation projects. The distribution of respondents by gender is presented in Table 1.

**Table 1: Distribution of respondents by gender**

Sex	No. of Respondent	Total (%)
Male	62	62.0
Female	38	38.0
Total	100	100.0

Field Data: 2010

The findings depicted in Table 1 show that the sample consisted of 62 males and 38 females. The disparity between male and female may be attributed to the way the respondents were randomly selected.

### **Distribution on gender by levels of participation**

The distribution on gender by levels of participation is presented in Table 2. The findings show how many participated at the various levels (high, moderate and low). A total of 62 males participated at the various levels indicating 40 (high), 18 (moderate) and 4 (low) respectively. The female distribution indicated 19 (high), 10 (moderate) and 9 (low). An interesting observation from Table 2 is that more females were recorded at low level of participation than males despite the fewer number of females in the sample. With reference to Longwe’s (1991) analytical framework, when women are conscientised and sensitized, women tend to be actively involved in the development process, and eventually the belief that their marginalized position due to systems of discrimination which is socially constructed could be changed because women are empowered to participate in public decision-making. Since women have bigger stake in water availability and usage at the household level, improved participation will encourage sustainability of the rural water project.

**Table 2: Distribution of gender by levels of participation**

Sex	Levels of Participation			Total
	High	Moderate	Low	
Male	40	18	4	62
Female	19	10	9	38
Total	59	28	13	100

Field Data 2010

### $\chi^2$ for distribution of respondents on sex by levels of participation

Using a significant level of 0.05, the study further verified the relationship between gender and levels of participation; this is depicted in Table.3.

The  $\chi^2$  result shows a positive relationship between the sexes and levels of participation. The p-value of 0.04 is less than the critical value of 0.05. The difference is therefore significant. This reveals that male and female relationship tended to influence participation in rural water project.

**Table 3:  $\chi^2$  Table for distribution of respondents on sex by levels of participation**

Sex	Levels of Participation			Total
	High	Moderate	Low	
Male	40	18	4	62
Female	19	10	9	38
Total	59	28	13	100

Field Data: 2010  $\chi^2 = 6.29$  df = 2, p = .05 > p > .04

### **Barriers to Women's participation**

The study further investigated activities of 50 WATSON committee members to identify factors which constituted barriers to women's participation. The findings are presented in Table 4.



**Table 4: Barriers to Women’s Participation**

Barrier	Frequency	No Response	Percentage of Cases (%)
Poor Health	23	27	23
Workload	44	6	44
Lack of Money	45	5	45
Lack of time	47	3	47
Lack of Confidence	42	8	42

Total n ≠ 50 (due to multiple responses)

Field Data 2010

As evident from Table 4, time is a major constraint to women’s participation in rural water activities. It was found that 47% of the respondents indicated that they did not have time to participate in project activities. This is confirmed by the deductions from the focus group discussions. Few women showed up at meeting and some of them left the meetings before the meeting closed. It was observed that women are burdened with farm work coupled with domestic chores so that even when they mention that water is of crucial concern, and an urgent need, they seemed not to have ample time on their hands to participate regularly in project activities.

Lack of money was also identified by 45 % of respondents as an obstacle to women’s participation. The management committee expected women to contribute a fixed amount of 2000 old cedis (20 cents) which according to some women, was rather on the high side.

Again, lack of confidence was mentioned by 42% of the respondents. It may be for this reason that Longwe (1991) stressed that, women socio-economic position is imposed by system of discrimination which is socially structured which can be altered. Longwe (1991) thus proposed at stage 5 of the empowerment framework and equality of control which implies a balance of power (economic and social between men and women) so that either in the position of dominance or feel inadequate to participate in project activities.

**Contribution of women at meetings**

Male and female participation as explained earlier, meaning women as well as men were actively involved in the development process. Respondents were requested to indicate if women contributed and expressed their views about water project during meetings. The results are presented in Table 5.

**Table 5: Women’s vocal attributes during meetings**

Verbal contribution of Women during Meetings	Frequency	Percentage
Yes	21	21
No	28	28
No Response	1	1
Total	50	50

Source: Field Data, 2010

The results in Table 5 show that majority (28%) of respondents were of the opinion that women do not contribute at meetings. Only 21% of the respondents on the other hand said women contribute at meetings, 1 however, was indifferent. Reviewed literature has it that women’s interest and needs are different from men’s; and also their freedom to participate on equal footing with man is often seriously hampered by social and cultural traditions (Burkey, 1993).

This finding was congruent with a study in a poor women’s organization in a village in Bangladesh; women were asked if they would consider merging their group with that of their men-folk, the response was that in a joint organization many women members would not be able to speak at meetings because women are not supposed to speak in the presence of their Bhashurs (elder brothers or husband). Interestingly, the study observed a similar situation during the focus group discussion in the study communities. The facilitator had on several occasions to encourage women to express their opinion. According to Burkey (1993), although this represents a very specific prohibition, women in most societies have been conditioned from childhood to remain passive in the presence of men.

#### **Utilization of women’s ideas in rural water management**

Respondents were asked to indicate if ideas expressed by women were utilized in the management process. The results are presented in Table 6.

**Table 6: Utilization of Women’s Ideas**

Women’s Ideals were Utilized	Yes	No	No Response	Total
	49	0	1	50

Field Data: 2010

The findings in Table 6 reveal that 49 out of the 50 respondents are of the view that the contribution made by women at water project meetings is utilized by the management committees. One respondent however, is indifferent. The focus group meetings show that women have urgent and peculiar need for water and such make valid contributions to the management

committees whenever they are encourage to do so. And committee members pay particular attention to the ideas contributed by women.

**Women and Appropriateness of technology (ability to use water pumps)**

A major objective of rural water supply and sanitation projects is to alleviate the daily drudgery that women and children go through to fetch water for the family and livestock consumption. In order to assess whether the water pumps are adequately designed, 50 respondents (Committee Members) were requested to indicate the ability of women to pump or use water at the ‘improved design water pump at the well’. The findings are presented in Table 7.

**Table 7: Women’s ability to pump water**

Ability to Water Pumps	Frequency	Percentage
Yes	10	20.0
No	38	76.0
No Response	2	4.0
Total	50	100.0

Field Data, 2010

The findings show that 78% were of the view that women had difficulty pumping water, 20% however, were of the view that women were able to pump water, 4% respondents did not respond to this question. According to (Burkey, 1993) improved technology could undoubtedly lessen women’s task in their reproductive community management role. She further maintained that drudgery reducing techniques could make life easier for women, increase their health by easing tedious work. This finding is in line with Stamp’s (1989) study that suggested that people responsible for technology choices are usually those least affected by them. Moreover, water technologies are poor design as such they are not women user-friendly.

**Gender and allocation of resources**

Tinker (1990) noted that gender differences based on the social construction of biological sex distinctions are one of the great “fault lines” of societies. According to Tinker (1990) gender relations, the interaction between male and females, reflect and reinforce gender differences as “allocational principles”. She maintained that gender relations and gender differences are of special importance within the domestic groups. Resource allocation processes within groups is closely linked to power and authority but the linkage is not always obvious.

Tinker (1990) therefore proposed the concept of social and cultural entitlement to resource shares. According to her the term “entitlement” refers to the socially and culturally recognized rights of specific categories of persons to particular resources. Such rights are expressed in common statement as “who gets what and why”. The researcher conforming to the concept of Resource Allocation by Tinker (1990); made keen observations of what patterns exist in the study area. The focus group discussions revealed that women had access to resources through their husbands. It was observed that the external agents coming to the communities tended to discuss the resource availability issues with the opinion leaders who happened to be

men leaving out the women who are the key beneficiaries of water. The deduction from this observation is that “any rural development programme that does not place emphasis on women has not comprehended rural realities” (Burkey, 1993). It could be inferred that effective and sustainable rural community water supply scheme is also contingent upon proper understanding of gender role and power play prevailing in the community.

## **CONCLUSION**

The ‘gender gap’ in women’s participation is the most visible and obvious phenomenon. Gender participation as explained earlier, means women equally with men, are actively involved in the development process. There is a positive relationship between the male and female respondents who participated in the rural water project. The chi-square test result was ( $0.05 > p > .04$ ) which is significant. According to Longwe (1991: 28) development analysts are concerned with equality in terms of women’s equal participation in the decision making process. She said: “In a development project it would mean women being represented in the process of need assessment, problem identification, project planning management, implementation and evaluation. She added: “Equality to participation is not easily obtained in a patriarchal society.” This principle therefore has to consciously be built into development interventions to ensure good performance. Going by Rao’s (1991) view that development is more than increased access to resources and improved welfare, but a process by which these benefits are obtained and sustained. It implies that the opportunities that stakeholders including women have, in a development process through participation, go a long way in determining effectiveness and sustainability of such interventions.

In developing countries women are poorly represented in district development committees and other local planning bodies. Women’s roles in their communities were characterized by the separation of male and female spheres and activities and by women’s lack of access to the political arena in which decisions about development programmes, opportunities and procedures is not disseminated in ways which make it available to women.

It is unfortunate, on the part of women, according to Savage and Witz (1992) citing Forgyson who explained, that women have the capacity to go about getting things done in a manner different from that of men. Women’s ideas and ways of doing participation tend to add value to project performance. The findings, however, showed that relatively few women participated in water projects. Conscious effort to make women participate more round the process in rural community water supply project would engender better and sustainable results.

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