

WATER RESOURCES GOVERNANCE IN GHANA: DO POLICIES PROMOTE WOMEN INVOLVEMENT?

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ABSTRACT

There have been several policies as well as empowerment platforms that are meant to increase women involvement in water resources all over the globe. One of the major barriers to women involvement in water resources governance has been arguably claimed to be the cultural attributes which emanate from patriarchal structures. This study dwelt on other factors besides traditional attributes as hindrance to women's involvement in water resources governance. Ten traditional authorities were interviewed as well as sixteen FGDs involving community members, males and females were conducted in four urban and four rural communities within the Wa Central Municipal Assembly and the Bosomtwi District. It was found that involvement in water resources governance was found to be both active and passive for women in these communities regardless of policies and empowerment projects. Women were found to be more active in water resources governance in water-stressed communities but were found to be passive in water resource endowed areas. It was also found out that women were more active in patriarchal communities and passive in matriarchal communities. It is therefore recommended that policies designed to empower women in water resources governance should be place specific to address specific condition of women.

Keywords: Patriarchal, Matriarchal, Water-Stressed Areas, Water Resource Endowed Areas, Traditional Authority, women involvement.

Introduction

Water is the second most important natural resource as well as the commonest compound on the planet (UNDP, 2012, 6th World Water Forum, 2012). Natural resources have been in an enormous abundance (Steffen et al, 2005) for civilizations for well over centuries. Current trends show a drastic decline in global natural resource quantities. Hardin, (1968) noted that twofold human factors accelerated the depletion of natural resources. These were the increase in demand for natural resources due to population growth and the effluence that stems from how these resources are extracted and used in the environment, hence the need for a system of governance which embodies several policies that are mostly initiated by the government.

Water resources governance provides systems for regulating water use, water quality and biodiversity conservation and sustainable use of all water resources (WRC, 2011). According to Singh et al. (2009), these systems require water management to be more substantive. The concept of governance is currently being widely applied to the water sector which facilitates the conceptualization of networks between various sectors of society and power relations between the state and society for development. It also allows water resources governance, to incorporate the provision of water services by the state to a regulated market provision, shifting from the centrally administered management to a user-based management system and also from service-oriented management to a more resource-centred management (Cosgrove & Rijsberman 2000; WWAP 2003). Ensuring sustainable management of water resources in the current phase of increased global water demand has not only pressured the environment but also created social tensions which have led to several water policies (Pahl-Wostl et al, 2008; Dellapenna & Gupta, 2008).

Issues of water resources governance affect both genders differently. The Integrated Water Resources Management (IWRM), as part of its principles, addressed the importance of the role of women in water resources governance (Xie, 2006; Ghana National Water Plan, 2012). This gives attention to women who are known to be more affected by how this natural resource is managed. The principle acknowledged that women are more involved in water-related chores such as cooking, rearing of children and much more. Their central roles in water management, safeguarding as well as provision of water is currently being given the due attention. Globally, several policies have been implemented in an attempt to promote the involvement of women in water resources governance. Over the decades, however, there has been a gradual increase in the role of women and their involvement in water resources governance due to gender sensitive policy formulations. This has, however, not improved the involvement of women in water resources governance in all parts of the globe.

Ghana, like many other tropical countries, is bestowed with abundant water resources that come in the form of both surface and ground water resources. It lies in the tropical area of Western Africa. With three main river basins (Volta, South-Western Basin and Coastal basin systems), the country is fairly watered, though the south-western portion of the country is more watered than the coastal and northern portions (Water Resource Commission, 2014, Ghana Districts, 2014). According to the National IWRM Plan-WRC (2012), the population of the country is currently, only harnessing less than 20% of the water resources potential of the country (i. e. 13%-19%). The vision of the Ghana government for the water sector is to ensure that all people living in Ghana have access to adequate, safe, affordable and reliable water service, safe hygiene and that water resources are sustainably

managed. Therefore, since 2007, the WRC has put measures in place to promote the IWRM principles at local and national levels. Therefore the National Water Policies were also tailored to ensure that an enabling environment was created to improve women's involvement in water resources governance. As a result, two studies were undertaken by the Water Resources Commission. These were to assess gender experiences in water resources governance and gender assessment for the year 2009 and 2010. Prior to such gender sensitive approaches, many of the water laws concentrated on physical, technical and the engineering characteristics of water resources governance relegating the cultural aspects such as gender issues to the background. The overhaul of the water sector about two decades ago from the customary water governance system to a more formal or statutory system barely gave any attention to women involvement in water resource issues in the country. The years 2009 and 2010 generated empirical data that further confirmed this. The data gathered showed that despite the efforts made by the government in the form of policies and national agendas, gender inequality which is represented by inequities of opportunities, outcomes and rights between male and females were still evident in water resources governance in the country. The bureaucratic nature of the statutory approach to water resources governance resulted in women being represented with a margin of just 25%. The bureaucratic nature was also revealed in the study through the inability of the WRC to institutionalize effective gender dimensions even at the various levels of the organizations (GWRMS, 2011).

Several researches believe that the focal issue of strategies and policies did not actively involve traditional or indigenous institutions. Therefore, these, institutional reforms, decentralizations and gender responsive policies take longer duration to address gender issues pragmatically. Without gaining and drawing on cultural and social structures that affect water resources governance and its relations to gender issues (Ghana National Gender Policy, 2015), efforts made by both government and activists may not be realized. Evidence from the research conducted by GWRMS (2011) suggested that gender mainstreaming using conventional bureaucratic approaches always met challenges including traditional and indigenous beliefs. Current policies have employed a participatory approach where all stakeholders including sectors which are directly and indirectly involved in water resources governance are brought on board. This, however, is also yet to promote and encourage women involvement in water resources governance nationwide.

The marginal representation of women at all levels and structures as reported by GWRMS (2011) is an average that masks areal implementation of such water policies in the country. Many of the factors that present barriers to women's involvement in water resources governance have been argued to involve cultural barriers which usually emerge from patriarchal structures. This research sought to examine one of the ignored but crucial factors that impact on women's involvement in water resources governance regardless of the policies and strategies implemented. This is the factor of resource availability. The issue of the water resource in question further affects the level of participation of women in water resource governance in different geographical locations with different hydrological characteristics. Therefore, specifically, this study sought to identify the hydro-geographical characteristics of the Wa Municipality and Bosomtwi District, its uses within the respective district and how these hydro-geographical characteristics affect women involvement in water resources governance in their respective districts. In this study, I argue that in a country like Ghana, merging water governance systems alongside gender sensitive policies may create enabling environments for women involvement in water resources governance but their active involvement may be determined by the hydro-geographical characteristics of their environment. I argue that culture and policies may not be the only option to encouraging women involvement in water resources governance. I bring to the bear the need for policy analysts to consider the hydro-geographical characteristics of communities to shape their policy formulations. These physical characteristics may affect either an active or passive women's participation in water resources governance.

The outline of this study is made of up the introduction, which discusses the efforts made through several strategies and policies to promote specific gender inclusion in water resources governance on the global front and in Ghana impaticular. There is, therefore, the need to understand these intricacies surrounding the inclusion of specific genders in water resources governance. The next section of this paper discusses the methods of research which is made up of profiles of the study areas, data collection techniques as well as the sample size of the population. Environmental determinism which is the theory underlying this research is discussed after the section of methods and research. The theory section is followed by the results and discussion section where available water resources within the selected study sights are discussed and the issue of women involvement in water resources governance are discussed. The final section which is made up of the conclusions and recommendations presents issues based on the study for policy formulation and amendment.

Methods Of Research

Profile Of Study Area

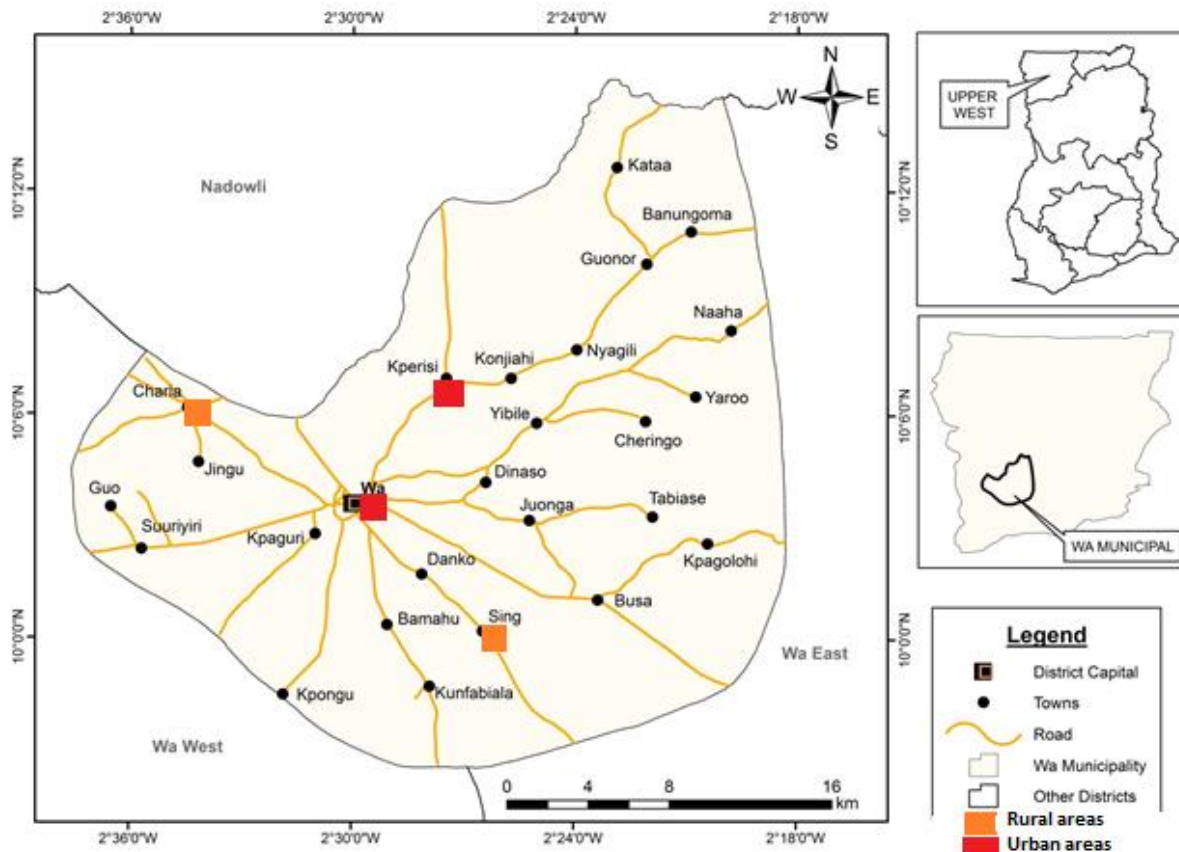
Ghana is made up of ten administrative regions which are further subdivided into two hundred and sixteen metropolitan, municipal and districts assemblies to facilitate effective administration. The country is well endowed with water resources though the quantity varies markedly with the changes in seasons (Harris & Morinville, 2013). There are over a hundred ethnic groups (since the 1960s because since then, there has not been a conscious effort to take note of the number of ethnic groups) in Ghana, with the major ones comprising of 47.5% Akan, 16.6% of Mole-Dagbani, 13.9% of Ewe and 7.6% of Ga-Adangme respectively (GLSS, 2012). The Akans occupies the Ashanti, Central, Western, Brong Ahafo and parts of the Eastern regions; Mole- Dagbani are found in the Northern, Upper East and Upper West of Ghana, the Ewe reside in the south-eastern part of the country while the Ga-Dangme inhabits the coastal portion of Ghana. All these ethnic groups are patriarchal with the exception of the Akan ethnic group which is matriarchal. Although regions are commonly identified by ethnic groupings, no part of the country is ethnically homogeneous. This is due to internal and foreign immigration which is the result of the uneven developmental progress across the country pulling more people to the urban areas. Regardless of these migrations, ethnic identification and bonds are still common features that have remained in most societies (Addai & Pokimica, 2010: Ghana

Districts, 2014). The rural areas always tend to preserve and maintain traditional population distribution (Ghana Living Standards, 2010). In the Akan traditional setting, both economic and political organizations are based on matrilineal lineages which guide the succession and inheritance of property. Most of the families are based on the extended family system rather than modern individual families (though modern families do exist in some of its urban areas). This gives much authority to women and females in the community as compared to patriarchal communities. This has helped to shape the traditional roles of females in society by clearly defining their roles as women and also empowering them by giving them important roles in the decision-making process. For instance, the Ashantis' who are also part of the Akan ethnic group give more authority to the queen mother than their Kings. The queen mother often has the final say in decision making with regards to the administration of the kingdom (Boateng, 1991; Goethner-Abendrof, 2012). Currently, however, due to increased formal education, daily work (white colour jobs) and the emergence of individual families in place of the extended family, some are changing the system by the willing of one's property to one's spouse and children (Malleen De Witte, 2001; Folbre, 2012). The rest of the ethnic groups, which constitute more than 50% of the population are patriarchal, making Ghana a patriarchal society. Patriarchal societies, unlike matriarchal ones, give men the power to dominate in all aspects including governance and ownership of property. Patriarchy is usually seen by feminists as a negation of matriarchy since it deprives women of the opportunity of participating in the decision-making process and disempower them instead of empowering them (Robinson, 2012).

The fundamental basis for identifying the population to be studied and selecting the sample for the present study was underscored by the main research objective of this study. In order to accommodate gender issues as stipulated earlier, regional differences in availability of water resources (hydro-geographic characteristics), ethnic distribution and peculiarities of different ethnic groups, the following rationales for choosing the localities for the present study are outlined.

The Upper West Region of the country was selected specifically because it had its unique culture compared to the other regions in the country. Though their communities are patriarchal, it has been known through research and literature that the domination of men over women is rigorous (Bonye, 2012; Diawuo & Issifu, 2015), and this is of the essence to this research. This for many years has been evident in some of their cultural practices such as betrothal of female children to old men, female genital cutting to control female sexuality, no traditional position/platform for a queen mother amongst others. Apart from the fact that it hosts the second largest ethnic group in the country which is Mole-Dagbani, it is also the poorest region in the country. Though almost 40% of the country's population live below the poverty line, about 79% to 96% of the people living in this region are living below the poverty line. This has resulted in the intense migration of people from this region to the southern part of the country in search of fertile land for farmland (Luginaah et al. 2009). Upper West Region is both the youngest and the least populated region in the country with a population of 702,110. This total population is made up of 341,182 (48.6%) males and 360,928 (51.4%) females. In total, the region hosts only 2.8 % share of the country's total population with a growth rate of 1.9%. Wa Municipality is one of the nine districts in the Upper West Region (Refer to Fig 1). The Wa Municipality was selected because it is located in one of the driest areas in the country (Wa Central Municipal Assembly, 2014).

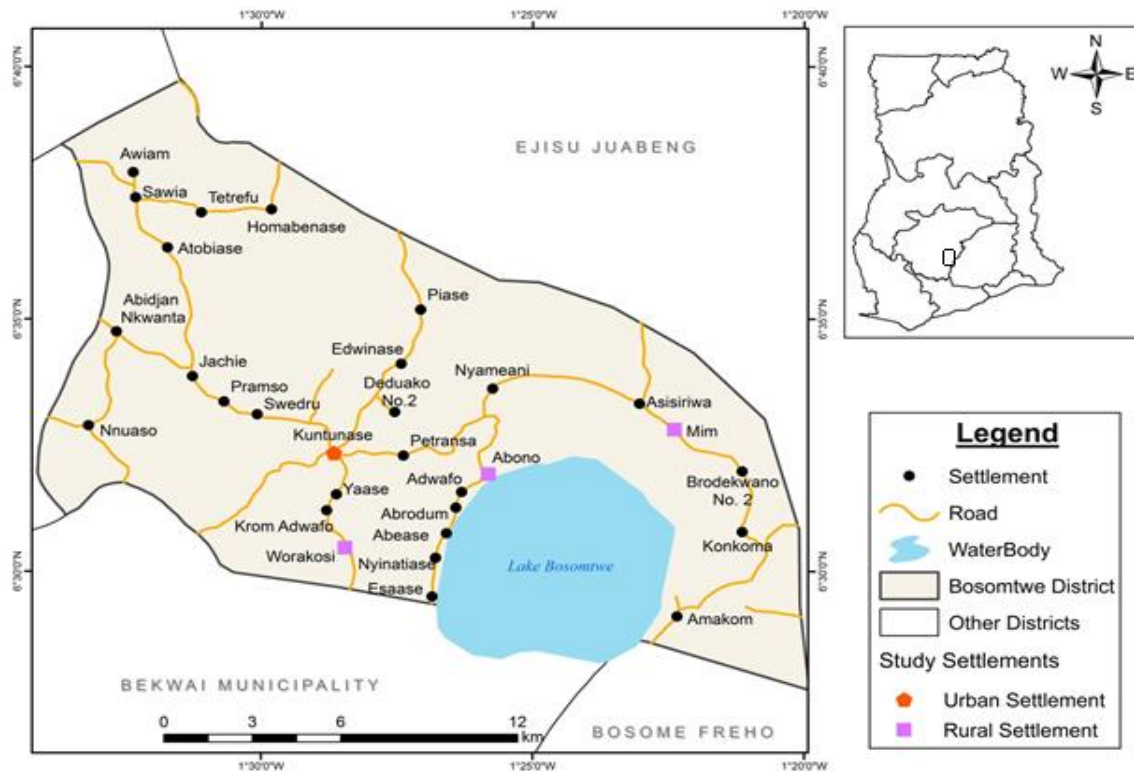
Figure 11: A map showing selected communities in the Wa Municipality (Upper West Region)



Source: Wa Municipal Assembly & Department of Geography and Regional Planning, University of Cape Coast. (2014)

The Ashanti region was selected for peculiar reasons and to allow for comparison. Apart from the fact that one of the most powerful and surviving kingdoms (Golden/Ashanti Kingdom) is located in this region, it is also a well-known region for their royalty as well as their matriarchal ways of doing things. The Akans are one of the few ethnic groups in West Africa that still uses a matriarchal social structure regardless of the pressures from the government to formally change some of their culturally structured ways such as their system of inheritance. Its social organization is built fundamentally on the matrilineal translating into some of their practices such as the system of inheritance, identity, wealth and politics. Though when it comes to the leadership positions, men are traditionally given the mandate to hold such positions, these are still determined by the man's relationship with the woman in his matrilineal. However, all the matrilineal founders are females (Boateng 1, 1992; Crook, 2005; Mental Floss, 2012). Women are given a lot of prominence in this society which is of the essence to this research. The Bosomtwi district is one of the thirty districts found in the Ashanti Region of Ghana. Ashanti Region is also home to the majority of the widest ethnic group in the country which is the Akan. This district also hosts the largest freshwater lake in the country called Lake Bosomtwi. It is a crater lake where several internal drainages flow into from surrounding highlands. Though rivers in the district are perennial, they are also affected by seasonal changes. Apart from water resources, the district is also endowed with a number of resources which include timber from the forest, sand and stone deposits as well as gold and diamond deposits. These resources serve as a source of livelihoods for the people in the district. For instance, there are over twenty-two communities living around Lake Bosomtwi and the majority of them are into fishing and farming in the hinterland (Bosomtwi District Assembly, 2014).

Figure 12: A Map Showing Bosomtwi District and the Selected Communities (Ashanti Region)



Source: Bosomtwi District & Department of Geography and Regional Planning, University of Cape Coast, (2014)

Data Collection Techniques And Sample Size

The unit of analysis for the research is the cases selected for the investigation based on their hydro-geographical attributes, ethnicity and cultural orientation to ensure that customs and traditions, as well as gender issues of water resources, were brought into play. The qualitative method was employed specifically, case study design. In the present study, the main data collection techniques employed was In-depth Interviews (IDI), Focus Group Discussion and Observation (Merriam, 2009). Two rural areas and two urban areas were selected in each of the two districts. A total of sixteen FGDs were conducted in the eight selected communities in the two districts. One interview was conducted each for two workers from the Community Water and Sanitation Agency (CWSA) and the Ghana Water Company Limited (GWCL) in the Wa Municipality. Also, an interview was conducted for a staff of the Water and Sanitation Committee (WATSAN). A total of two chiefs from two of the selected communities were interviewed while a representative from the paramount chief’s palace (Wa Na) was also interviewed bringing the total to three traditional authorities. One interview was conducted for an individual philanthropist who donated a water supply system to his community. In the Bosomtwi District, three IDIs were also conducted (Two traditional leaders and one representative from the CWSA) in Kuntanase. The observation technique was also employed to gather further data especially on the physical characteristics of drainage and relief in this district.

Table 1: Selected Urban and Rural Areas

District	Selected Urban areas	Selected Rural areas
Wa Municipality	Wa & Charia	Kperisi & Sing
Bosomtwi District	Kuntanase	Worakose, Mim & Abonu

Source: Ghana Statistical Service, (2012)

Data collected from the field were mainly in the form of field notes, pictures and voice recordings. These were, therefore, translated, transcribed, coded, categorized and analyzed using the Cresswell (2008) model for qualitative data analysis.

Theory Of Environmental Determinism

The spaces we occupy as humans are very central especially in shaping human behaviour and activities (Relph, 1987). One of the theories or paradigms which influenced the study of man-environment relations was environmental determinism (Telbisz & Mari, 2015). Environmental determinism was an ideology in Geography that held the notion that one’s natural environment was

responsible for his development in society. According to Lethwaite, (1966), it is a notion that humans owe their level and speed of growth as well as other forms of developments to the physical environment which they occupy. The environment or nature controls human activities (Livingstone, 2011). Environment in this sense was defined by Semple, (1911), as man's surroundings in which he lives. Other disciplines such as the geosciences are emphatic on the inclusion of ecosystems, biomes, landscapes as well as human activities in the definition of environment (Harding, 2009).

This ideology was actually propounded by a German Geography Professor (Friedrich Ratzel) in the 19th Century who was in turn greatly influenced by Herbert Spencer's ideas on Charles Darwin's natural selection. Several years after, many researchers sought to actually unravel how human behaviours could be impacted on by their natural environment. Semple (1911) did argue that the impact is not only unilateral but also bilateral. As the environment impacts on the activities and behaviour of humans, humans also equally have some form of impact on their environment. Telbisz & Mari, (2015) argues that two main viewpoints come to play in contemporary scientific studies. Firstly, that all social processes are controlled by the environment and this notion is very common in Hungary. A few also believe that there is a second viewpoint which emphasizes that society in return also develops its own laws making the environment or nature just a frame of its own activities (a term referred to as possibilism/nihilism).

Environmental determinism played a crucial role in the social sciences by providing platforms where human geography, as well as the physical sciences, merged (Hardin, 2009). This has been an area of interest for not only physical geographers but also researchers working to contribute knowledge in the area of human geography.

Environmental determinism was employed in early anthropology to explain and understand factors such as human race and cultural variations amongst others (Erickson, 1999). Further research on the human and environment interaction gave birth to another field in anthropology called anthropogeography (Telbisz & Mari, 2015).

Scholars like Semple did recognize that the environment and man could not be studied apart because; the relationship between both presented several complexities (Semple, 1911). The environment serves as a home for man as well as presents him with his very source of survival in the form of natural resources such as land, forest and water; hence the saying that humans are products of their environment. Therefore, human cultures may have to continually adjust to the varying environment because the environment is dynamic and subject to change (Erickson, 1999; Botkin, 1990).

This translates into the understanding that one's environment influences his behaviour as well as the decisions and choices he makes. Correia, (2013), noted that the geographical differences go a long way into explaining the trajectories of human and social development, therefore, this is thought to be the main factor as to whether a society will flourish or collapse. Many of the discoveries made by Geographers established the fact that several cultures present at the various latitudes were not similar hence, environmental determinism theory was obvious to many Geographers (Coombes & Barber, 2005).

Environmental determinism played several roles in the history, culture and the evolution of societies where the natural environment directed human activities, actions, and behaviour. Though this theory has been heavily criticized even by geographers themselves, it is a fact that the notion of the theory still applies to the interaction between the environment and man (Tochim, 2006). Current emergence of science and technology has become the platform where many scholars have criticized this theory and its ability to control and direct human actions. However, the fact remains that humans are affecting and being affected by the natural environment where they live.

Current studies including some scientific research have been based on environmental determinism. Some scholars emphasize on the fact that even the formation of the European culture was connected to significant environmental features. This environmental features specifically their climatic condition and topography have created their nations to be both mentally and physically resistant (Castree, 2011). Jundkins, et al (2008) argued that many of the environmental factors determines or causes several differences such as moral values, ingenuity as well as even the ultimate capabilities of a given society. A great number of geographers strongly emphasize the impact of the environment on man's activity (Fekadu, 2014).

This theory was adapted as the theoretical underpinnings of this study because it aids the researcher in understanding how the hydro-geographical characteristics specifically, availability of water resources as a natural resource influences the involvement of women. It determines their level of involvement to be either actively or passively involved in water resources governance regardless of the efforts being made by government through policies to involve the marginalized gender in water issues.

Results And Discussions

Water Resources In The Wa Municipality

Due to the small amount of annual rainfall within this area compared to other regions in the forest zone, there were fewer water resources available in the region. The available few surface water resources were heavily impacted by seasonal variations since there was little rainfall to recharge these sources even during the wet season. Traditionally people used several strategies to access this basic human need. One of these strategies was that few communities dam available surface water to retain water for a longer period of time.

Since there is little rainfall, we the men within this community try to dig around the water catchment areas so that it can retain the water for a longer period of time (Mohammed, No 1 (Charia, FGD-Men's group, Wa Municipality) (Fieldwork, 2014).

The problem with these dams was that since there was high evaporation and deficit in the recharge rate, they were usually heavily contaminated and turbid. Others dry up eventually before the rainfall season arrives hence the need for further digging to reach the seeping water. Since these dams served as the main water resource for communities, they were used by everybody and for all purposes. For instance, water from one dam in a community may be used to feed animals, household water needs and other small scale industrial needs. According to one of the workers in the Ghana Water Company Limited, about a decade ago, such sources of water became the point of waterborne diseases outbreaks like river blindness and guinea worm infestation. The closest major surface water was the Black Volta River which was many kilometres away from the municipality. This meant that people would have to travel several kilometres to access water for their household and to satisfy other water demands. This seemed impossible especially for people living far from this major surface water resource. There were no pipelines and connections that could bring water from this source closer to them. There was hence the need for alternative water resources. The only other option was groundwater sources (refer to Plate 1). Few families and communities came together to construct hand dug wells which had to be as deep as possible to enable them to reach the water table in the ground.

The government and some NGOs constructed boreholes and wells as an intervention to reduce the spread of water-borne diseases. Therefore, most of the inhabitants depend heavily on groundwater sources. These groundwater sources are harnessed through hand-dug wells and boreholes. Groundwater resources seemed to be the most feasible and available water resource for many communities within the Wa Municipality. Much of the agricultural activities are rain-fed hence there are limited irrigation activities in the Wa Central Municipality.

Plate 1: Borehole in the Wa Community (WCMA)



Source: Fieldwork, (2014)

Water Resources In The Bosomtwi District

Within this district, there were three main sources of water. These were groundwater sources, harnessed through boreholes and wells, springs from the mountain top and water from the lake. Though these sources were affected significantly by seasonal changes, the fact that there are multiple sources of water available for communities within this district gave people alternatives to choose from. According to the chief of Abono:

'In the olden days, people look for water bodies before building their settlements. Our ancestors came to meet the spring from the top of the mountain and decided to stay here. The water from the spring is what we drink and use for virtually everything. Water also from the lake was used for a whole lot of things such as fishing etc. but currently, it is not as potable as the one from the spring and groundwater borehole.' (Nana Kwedjo (IDI, TL, Abono, BDA, AR) (Fieldwork, 2014)

The quality status of the water also determined its use. Water from the spring within this community located on the bank of the Lake Bosomtwi was known to be of high quality because; it was believed that its origin was from a grove where a river god resided. This knowledge made people value not only the physical essence of this water source but also its spirituality as well. Therefore, water from this source was used for drinking, cleansing the body from infirmities which is a ritual performed by people with infirmities, cooking amongst others. One challenge regarding water from this source was the fact that it was badly affected by seasonal changes. One woman from the Mim community in a Focused Group Discussion stated that:

'We already believe that water from the spring is naturally filtered because it passes through some rocks on the mountain top before it finally gets here... The only problem is that the spring dries up during the dry season but during the rainy season, there is more than enough to meet the demands of the community' (Akosua, No 3 (women's FGD, Mim) (Fieldwork, 2014).

The challenge of seasonal effects on this particular water source has over the years been attributed to a population growth in the community due to its popularity in ecotourism as well as climate variability. Other communities within the district also had access to such springs flowing through their communities. Few of these communities stated also that some of these surface water resources disappeared not only because of seasonal variability but for the fact that people started encroaching on some of these wetlands. For instance, people in the Mim community which is located a few miles away from the lake stated that:

When we decided to migrate here, we also met a stream which we named Nsuboni. That river was very clean and good. That was what we were using before even the government came in to construct the boreholes. Now the river goddess has migrated to another area. It is no longer where it was... Many of the youth back then were breaking the rules and just violating the taboos of the river goddess. So the river dried up.....Others say that the river migrated because people were farming too close to it and also a lot of people fell the trees that shaded it from the sun. The weather too has changed and the rains do not come in as much as it did before (Kojo, (Men's FGD, Mim), (Fieldwork, 2014).

The other available water resource was groundwater sources which were harnessed through boreholes in the community. Majority of the boreholes within the district were constructed recently within the last decade by the government through the CWSA. A few, however, were constructed by donor bodies such as religious bodies during missionary work. These boreholes were accessed based on the perception of the water quality it yields. For instance, in the Woroakose community both the government and a religious body who were catholic missionaries constructed a borehole each to improve access to potable water in the community. Interviews with some of the community members showed that there was a preference for the borehole constructed by missionaries as compared to the one constructed by the government. The reason given was that water from the former source was "blessed" and, therefore, it was tastier and softer compared to the one the government constructed. Many households accessed this water for all their water needs as a result.

Kuntense as the only urban community in this district also had few available water resources. These included groundwater sources through boreholes constructed by the government and surface water resources. The Kuntense community was located a few kilometres from the lake but had few streams flowing through it. As the district capital, the population placed a lot of pressure on the available water resources. Even the available surface water was heavily contaminated while the other surface water resources disappeared due to encroachment on the river banks. The CWSA apart from harnessing groundwater for distribution also harnessed one of the surface water which it treated before distribution through public standpipes. These public standpipes were strategically positioned for easy access by all community members. One unique thing about this particular community with regards to its water resources governance apart from the lake was that efforts were made by traditional authorities to protect some of the surface water resources that served traditional importance within the community.

'The river water was what we depended on... After some time when the population of this community grew, the chief of the community thought it is wise to protect the river from any form of 'abuse'. Therefore, there are actually selected people who are there to guard the river. They make sure that sacred days are adhered to and also perform the necessary rituals each year.' (Yaa No. 7 (FGD, Women's group, Kuntense) (Fieldwork, 2014).

As confirmed by Osei-Tutu (2014), some of the structures and mechanisms of traditional natural resources governance have survived societal transformation and still continue to influence local practices in various communities.

Women Involvement In Water Resources Governance

Ghana's water vision (by the year 2025) is to mainly promote the efficient and effective management system and environmentally sound development of all water resources in Ghana (National Water Policy, 2007). The vision is supposed to make way for uniting all stakeholders such as water users, practitioners, decision makers, NGOs as well as the government itself in water resources governance. The country is known to be endowed with water resources and as a steward of water resources, the goal of the Ghanaian government is to ensure that all Ghanaians have access to adequate, potable, affordable and consistent water services before the year 2025. This is expected to be achieved through the adoption of frameworks that employed methods that ensure the sustainable management of water resources. These measures came in the form of new policies, the formation of several institutions to ease the burden on central administrations, financial mechanisms as well new technologies which were eminent in water infrastructures in the country. The main issues which seem to affect the different genders with regards to water resources governance as are in the data gathered included discrimination, inequality, empowerment and disempowerment. Traditionally, societies which were patriarchal excluded the female gender's control over natural resources such as land (these included the communities occupying the Northern part Ghana of which the Upper West Region is a part). In a patriarchal community of the Mole Dagbani's where the female genders were considered strangers in the communities, they were traditionally not allowed to gain control over natural resources or even be part of the decision-making process.

We believe traditionally that a female is a stranger. We consider them as strangers because, when they grow up, they will get married and go to stay with their husbands for the rest of their lives. Because of this, it will not be prudent for us to apportion a community's natural resource to them when they may leave it one day. It is the male genders who inherit and have access to and control over resources because they stay and bring

wives from other communities to stay here. (Na (chief) (IDI, traditional authority, Sing, WMA, UPWR) Fieldwork, 2014)

Under this condition, the female gender is disempowered due to traditionally assigned perception. However, these patriarchal structures did not completely reduce women involvement in water resources governance. Due to the fact women mostly accessed water for virtually all uses in the home, they made very good use of the limited avenues given them by their male counterparts. In the northern part of Ghana, average annual rainfall was very low which affected both the quantity and quality of water throughout the year. Water scarcity made the women very active in water resources governance. The involvement of women in water resources governance in this part of the country was very active. One woman who was found to be a member of the Water and Sanitation Committee stated:

We have to do all we can as women in this community when it comes to water issues. We are the ones in charge of making sure that there is water in the home and not just that, making sure that this is on a continuous basis. Anything that affects the supply of water greatly affects us more than our male counterparts. As you can see, this region is not as endowed with water resources as those in the south, so we have to be active if we want to survive (Fatima, FGD Women's group, Wa, WMA, UPWR), Fieldwork, 2014).

Therefore, the policy of making sure that water committees were made up of at least 30% which was an attempt on the part of the government to increase the involvement of women in water resources governance was successful based on two premises; due to unavailability of water resources in the region and; due to the adverse effects that water resources governance may have on women in this region

In the case of the matriarchal communities, customary water resources governance took a different dimension. These were communities where traditionally, the inheritance of properties such as natural resources was carried out through the female line. The Bosomtwi district was one of the few districts in the country with the highest female-headed households (41%) (Ghana Living Standards Survey, 2012). Females were empowered to take leadership responsibilities of their families as well as their properties. These included them being part of the decision-making committees in issues concerning their families and the community as a whole. Water resources governance was found to be a bit different in the matriarchal society of the Ashanti's. During an FGD session with the female group of the rural community of Abono, it was found that women commanded some form of authority. They were independent and took initiatives in decision making which was rightfully supported by their male counterparts. Decisions made in the chief's palace with his council of elders still sought the input of women before it was finalized. Though positions were given to male genders, they were seen as representatives. The decisions made were checked with women before they are implemented. Decisions regarding natural resources access and control were made on the conditions of support or approval of women leaders from the matriclan. It was expected, however, that the data gathered will continue to show a significant amount of women involvement in the governance of water resources. This was not actually so. The data gathered from an FGD for the women's group in the rural and urban communities of the Bosomtwi district (i.e. Mim, Worakose, Kuntunase and Abono), showed that very few women were involved in water resources governance.

'Currently, the WATSAN committee is a 9 member committee made up of 2 women and 7 men. The women are usually reluctant in volunteering. I think this is mainly due to the fact that they feel they have too many responsibilities to be part of other committees. Already they are playing other equally important roles with regards to water management and governance within this community. The treasury department and sale of water to the public is usually handled by the women'. (Nana Kwejo (Chief of Abono, BDA, AR) Fieldwork, 2014)

Data gathered showed that it was a few of the water committee members who were able to achieve the 30% minimum of women involvement in water resources governance issues. The data further showed that in such communities where issues of traditions did not affect women involvement in water resources governance, policies would be better implemented in such areas. Critical analysis of the data showed that women were not actively involving themselves in water resources governance though they were the prime users. The data showed that this was because they happened to live in water endowed areas where water was always available even from multiple sources. This made them take active involvement in water resources governance for granted which could not be afforded to their fellow women in the water-stressed regions. This made their involvement in water resources governance a passive one though they were presented with several opportunities and advantages over their colleagues in the northern part of the country.

Conclusions And Recommendations

The two districts understudied were found to have differences in water resources availability with the Bosomtwi district being more watered than the Wa municipality. The multiple sources of water resources presented several livelihood opportunities to the people in the Bosomtwi district than the Wa Municipality who had limited water resources. The hydro-geographical characteristic was found to be one of the main determinants of women's involvement in water resources governance. Women seemed to be more actively involved in water resources in water-stressed areas which were specifically in the Wa municipality. Their environment necessitated their active involvement to ensure their survival in the space they occupied. On the other hand, however, women in water resourced areas where there were multiple water resources, were passively involved in water resources governance. The presence of several sources of water which were also not significantly affected by seasonal changes made women's involvement in water resources governance passive in the Bosomtwi district. This was mainly due to the fact that their water needs were met by the various sources of water located within the district.

While the policy of the WRC specifies that the minimum number of women on water committees, for instance, should be at least 30%, some community members understood this as it being the maximum of women needed on water committees. This has influenced the number of women involved in the study areas. Majority of the communities involved in the research had not been able to meet this 30% minimum quota for female participation on water committees. This could be solved, however, through education and further public awareness programs.

Besides this, the quota system is also one of the reasons why some women loose interest in joining water committees. In most of the FGDs held with the female groups, it was said that some of them felt intimidated as well as overpowered looking at the number of women involved compared to their male counterparts. Nobody likes to be alone and less, be found in the minority group. Though this may not be a political group to have a minority and majority group, it was expected that the gender that was more affected by any lapses in water resources governance would be in the majority. This was not so.

Apart from the quota system discussed earlier being an element that can both empower and disempower gender, it is also noticed that inadequate motivation may also be a source of disempowerment for specific genders. Majority of the water committees are not motivated enough to encourage them to stay active in the group. They are not given incentives or given further training to enable them acquire more skills and specialize in the field they operate in within these water committees. Sometimes, there are no funds made available to support the adoptions of new technologies and strategies to ensure efficient governance of water resources. Institutions within the water sector are also not lucrative especially where the water committees are involved. The majority of the people involved in the water committees do so as volunteers and hardly received any form of remuneration. If people cannot see what they do as a source of income, this could demotivate them through reducing their interest.

Therefore, it is proposed that in order to ensure that maximum empowering elements are strengthened; the following mechanisms should be employed. It is important to reduce the workload or responsibilities allocated to the female gender to give them time to enable them to join and play roles in water resources governance. Traditional authorities may help to culturally modify some of these culturally assigned roles for the female gender. This needs a lot of efforts and cultural reformations to enable the male genders to support their female genders through taking off some of the workloads of their female counterparts. Amending the quota system to 50% will also reduce misconceptions as well empower women to participate in the decision-making issues. According to the data gathered, it is either the quota system is abandoned completely or more or equal percentages are allocated to women. This would encourage them and prevent the notion of them always being in the minority. Also, institutions within the water sector should be motivated and made lucrative enough to encourage more women to join. The Government should make available funds to train and build capacities, especially in the rural communities. This will increase women involvement actively in water resources governance regardless of their geographical location. Limitations of the study are discussed below.

Ghana is made up of over 240 metropolitans, municipalities and districts assemblies (MMDAs). This research was limited to just two of these MMDAs which reflected issues of gender concerns in water resources governance, hence the inability to generalize such studies to all areas of the countries. However, this study can be replicated to cover more districts where the necessary funds are made available. Issues of other factors such as inadequate education, funds in implementation of policies and strategies in water resources governance is beyond the scope of this research.

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