Gender integration in Local Water Resource Governance Institutions: A Case Study of Community Owned Water Supply Organisations (COWOSOs) in Gairo District, Tanzania

Ambonisye Haule, Fatihiya Ally Massawe

Abstract

Given the growing demand for water resources and its continued scarcity efforts have been in place to change governance mechanisms to ensure its sustainability. The sector transformation focuses on enhancing user's capacity in developing, managing and sharing water resources efficiently. Women are among the actors that are now recognized as managers than mere users of waterresources given their gender roles. Therefore, policies and water resource management strategies in many countries including Tanzania, demand women involvement in Community Owned WaterSupply Organizations (COWSOs). The argument of this paper is that call for womenrepresentation in water governance structures might not necessarily transform gender relationsamong men and women hence making women voices unheard. Therefore, this study presentsgender dynamics in COWSOs in various villages of Gairo District, Tanzania by exploring power and leadership positions held by men and women. The findings show that under the support ofexternal actors, women are holding a various leadership position in COWSOs though the strategicpower of making decisions are still held by men. The study concludes that numbers are not enough without capacity building for women to be able to influence decision making process in water resource governance.

Keywords: Gender, Water, Governance, Institutions

1. Introduction

Water is a key resource for social and economic development and vital for ecosystem functioning and human well-being (De Stefano et al., 2014; Samuel, Mbabazize, & Shukla, 2016). Despite its important water resource is becoming an increasingly scarce and large part of the population around the world has no access to clean and safe water. For example, in Sub Saharan Africa more than two-thirds of its population must leave their home to collect water for use (Graham, Hirai, & Kim, 2016) most of them being women and girls. Given this scenario, the realization of sustainable

development goals in terms of achieving quality life for all by 2030 put at risk. This is because water resource availability is essential for attaining all other sustainable development goals hence putting it at the center of agenda 2030. Therefore, effective and efficient management of water resources will continue to be the global development concern for some years to come.

The increasing global water scarcity and limited success of previous global efforts to ensure its universal availability and access are argued to be contributed by among other factors mismanagement and pollution of water (Tortajada, 2018). In the same line, Lalika, (2015) argued the problem to be worsened by policy failures to enforce water governance hence making a "global water crisis to be a crisis of governance, not of scarcity "(De Stefano *et al*., 2014). Given this evidence, there is a growing global recognition of the fundamental role of effective water resource management (Lalika, 2015). Therefore, to address the problem of governance, countries around the world have undertaken several water sector reforms to enhance the effective and efficient management of water resources sustainably. The term water governance has a different meaning but the simplest definition and one adopted in this paper is the one offered by (De Stefano et al., 2014) who defined "*water governance as the manner in which authority is acquired and exercised on behalf of the public in developing, utilizing and protecting a nation's water resources"*. In this regard, the reforms targeted to change legal and institutional regimes that govern authority over water resource management.

The institutional reforms in most countries were informed by various international water governance frameworks that were adapted to the local contexts. For example, the integrated Water Resource Management (IWRM) is one of the long-standing water governance frameworks that has been adopted and integrated into many countries' water policies and laws including Tanzania (Grafton, Garrick, Manero, & Do 2019). The IWRM framework provides principles of water governance in relation to three key elements of sustainable development i.e. environmental sustainability, economic efficiency and social equity (De Stefano et al., 2014; Grafton et al., 2019). Generally, the key aspect of IWRM which highlights decentralization principles of water management (Johnson, Samwel, Andrew, Devotha, & Japhet, 2018) intends to improve water resource management through enhancing user's capacity in developing, managing and sharing of water resource efficiently (Mosha, Kajembe, Tarimo, Vedeld, & Mbeyale, 2016a). Good water governance creates cooperation and coordination among stakeholders in managing water resources

(Nang Phirun & Ouch Chhuong, 2014) hence making community participation in development projects necessary to influence its performance (Muniu, Gakuu, & Rambo, 2017).

To cope with the global trend, the government of Tanzania reviewed its water policy of 1991 in the year 2002 to integrate the principals of IWRM and the same were incorporated in Water Resource Management Act No. 11 of 2009. The review intended to improve water resource management including decentralization of power to local water users. The water policy of 2002 creates an avenue for community participation of water users in managing water resources and stipulates the new governance structure that will facilitate their representation. The national water policy of 2002 provided a new direction on water governance where a new institutional framework for water supply and sanitation services is proposed. While the central government remains with the overall coordination role community organizations on the other hand designated with powers to own and manage water supply schemes through Community Owned Water Supply Organisations (COWSOs). COWSOs are bodies legally constituted by a community to own, manage, operate and maintain the water supply systems on behalf of the community. Given the new institutional framework proposed by NAWAPO, COWSO stands to be the lowest governance structure that facilitates users' participation. Also, most of the water resource day to day management roles have entrusted to this committee. Therefore, the effectiveness and efficient performance of these committees are expected to ensure the sustainable utilization of water resources.

In the same line, NAWAPO recognizes the importance of gender sensitivity in water resource management whereby a fair representation of women in village water-user entities promised to be encouraged. Furthermore, the National water sector development strategy of 2009-2015 stipulates that at least 30% of members of the decision making bodies at all levels should be women. This intends to close the gender gap in water resource management since the policy acknowledges having a high gender imbalance in Tanzania. Despite this acknowledgment, it is not known to what extent gender aspects are considered in the lowest governance and the day to day dynamics of women participation in a structure like COWSO. While a significant amount of scholarly work has been directed at the broad aspects of water governance in African and Tanzania in particular, there remains a dearth of research on gender dynamics in water governance. Therefore, this study presents gender dynamics in the water governance structure by focusing on COWSOs in Giro District, Tanzania.

2. Gender and Water Resource Governance: the nexus between the two

Women and men have different roles and use of water resources hence making the water world to be socially constructed. (Bahauddin & Huq, 2018). The socially constructed roles of women and girls and their sexual and reproductive health need to make sustainable access to water of high importance to women. Despite the importance of water resources to women and global initiatives to promote women's inclusion in water resource management evidence exists on inequalities experienced by women than men in another group in relation to water governance (Grant, 2017; Singh, \AAström, Hydén, & Wickenberg, 2008). Moreover, traditional gender roles have vested water resource managerial and administrative roles to men while women and girls are burdened with the role of collecting, managing and maintaining the communal water supply, regulating and controlling its social use and safe maintenance (Hawkins, Lefore, Sakuringwa, & Thathana, 2019).

Globally, there is a better understanding and more awareness of the gender issues involved in water management after realizing that the needs for water between men and women are different (Cleaver & Hamada, 2010) and policies and programs related to water resource utilization and management have different impacts on women and men (Charles & Kindiki, 2015). The positive or negative impacts of water projects and programs on women and other marginalized people will depend on the initial designing of the same. Therefore, systematic consideration of gender needs is required in planning and implementation for successful water projects performance and sustainability. This understanding has resulted into the shift of emphasize of the role the of the women from that of users to managers making them active participants in water management process (Singh, AAström, Hydén, & Wickenberg, 2008). The active involvement of women is expected to raise women voices and strengthened their access and control over water resource.

Gender mainstreaming in water resource management has been one of the challenges facing the water sector in Tanzania, as most societies are patriarchal. In addressing this challenge government of Tanzania through the Ministry of Water and Irrigation renders ownership and management of rural water projects to Community Owned Water Supply Organisations (COWSOs). COWSOs are backed by the 2009 Water and Sanitation Act and the 2002 National Water Policy (NAWAPO). Under law and policy, COWSOs own, manage and operate all rural water structures on behalf of the community. COWSOs are expected to cover all operation costs by charges from consumers (URT, 2009).

The National Water Policy (NAWAPO) in Tanzania acknowledges the key roles and practical interest of women in rural water provision (URT, 2002: 32). A quota system was adopted to ensure women's representation in the formal water management structures at the village level, particularly in the Village Council and Water Committees like COWSOs. This paper argues that despite an institutional call for women participation in water resource management women may fail to effectively participate given the patriarchal nature of most societies in Tanzania. Among other factors, women have limited capacities (skills and experiences), heavy housework, limited support from men, poverty and cultural beliefs that limit their full participation in water resource management (Nang Phirun & Ouch Chhuong, 2014). Therefore, it is important to understand gender dynamics in water governance institutions to identify challenges and propose practical solutions that will facilitate the attainment of gender mainstreaming goals in water resource management.

Poor water resource management has negative multiplier sectorialimpacts that include among others food security, livelihood choices and educational opportunitiesfor poor families across the world. Therefore, the Water Resource Integration DevelopmentInitiatives **(**WARIDI) program was established in Gairo to improve water resource management. WARIDI project is the five years (2016 -2020) funded by USAID to improve the management ofwater resources and water-related services with gender integration and youth inclusion. TheWARIDI project aims to increase the use of sustainable multiple-use of water and sanitation services; strengthen governance for sustainable management of water resources and services; andincrease livelihood opportunities related to Water, Sanitation, and Hygiene (WASH). To achieveits objectives this project was subcontracted to local NGOs to ensure project performance and sustainability. The organization subcontracted in the study area is Empowerment for Marginalized Communities (EMAC) Tanzania which is implementing the project titled "To improve Accessibility and Sustainability of Water Through Capacity Building of COWSOs and Establishment of New COWSOs in Collaboration with Gairo and Morogoro rural districts. The project aimed to establish and build the capacity of Community Owned Water Supply Organisation (COWSO) in the following aspect; administrative, financial management and general management skills, maintenance, operation, technical skills and mainstreaming gender aspects in the project. COWSOs is being implemented in 20 villages (Communities) located in the Gairo district.

As stated before, the extent to which WARIDI through the subcontracted local organization has achieved its objectives of gender integration in the water resource management is not known. This study, therefore, stands to establish empirical evidence in the study area by assessing gender dynamics in water resources management governance.

3. Methodology

This study was conducted in Gairo District in Morogoro Region. The region is located in the Eastern part of Tanzania Mainland. Gairo District is situated in the west of the region. Administratively, the district consists of 18 wards. The district altitude is between 1 076 to 1 631 meters above sea level. Ultimately this study was conducted in four villages including Chakwale, Kibedya, Ihenje, and Kwipipa where by Sustainable water Project by E-mac Tanzania is working and has a long history of its existence on establishing and building capacity to Community Owned Water Supply Organization (COWSO) in Gairo District.

A cross-sectional research design was employed and a simple random technique was adopted to sample 120 respondents from four villages namely Kwipipa, Ihenje, Kibedya, and Chakwale. A purposive technique was used to obtain Ten (10) key informants (KIs). The list of KIs included a representative from Emac-Tanzania and WARIDI project management team, 4 village leaders and 4 COWSO leaders, one from each of the four villages where data were collected. A total of four Focus Group Discussions (FGDs) were conducted involving one FGD in each village. The criteria for selecting FGD participants were personal experience on the WARIDI project and being a permanent resident of the village.

The study was mainly qualitative. The qualitative method was found to be appropriate given that this study aimed to discover how socially attributed meanings by community members influence gender dynamics in water resources management. Prowse (2010) borrowing from Woodhouse (1998) and Murray (2002) upholds that qualitative methods are good at addressing the *how* and *why* research questions, and therefore are good at capturing ways of life, which in part was the focus of this study. Qualitative data from the key informant interviews and focus group discussions were transcribed verbatim and coded for analysis. Quantitative data were descriptively analyzed.

4. Results and discussion

4.1. Sources of water in the community

Although there are different sources as presented in (Table 1), it was revealed that community-managed water kiosks are the main source of water in the study area. The availability of community-managed water kiosks was reported as one of the strategies that helped to reduce women's burden of collecting water for domestic use.

Table 1: The Main household sources of water

Sources of water	Frequency	Percentage
Community managed water kiosk or points	84	69.7
Boreholes	28	23
Rain Water	6	5.3
River	2	2
Total	**120**	**100**

The study also noted that there are power dynamics between women and men in managing various sources of water resources. The power dynamics tend to vary according to the type of sources of water and seasons (wet or dry). For example, it was reported that women have more access and control of community-managed water sources like water kiosk or selling point than natural sources such as natural spring and rivers which are governed by traditional norms, normally under the supervision of traditional leaders. This happened because the community considers some sources of water as open access and common-pool resource. One of the FGD participants said the following;

> *"……power in managing water sources tend to vary according to the nature of sources of water within the entire community …….. women have limited control on natural sources due to traditional beliefs''* (FGD Participant in Chakwale Village)

Thus based on the findings, it is obvious that differences in power dynamics in the study area create gender inequalities between women and men in managing water resources. We have seen

that women are not allowed to control natural sources of water governed by traditional norms and taboos which normally favors men who are traditional leaders.This has an effect on women's access to water resources during the dry season when natural sources of water expected to serve a large part of the community.

4.2. Gender roles in collection and uses of water

The study sought to establish the position of both women and men in water resource management in terms of collection and use. The findings from FGD in all study villages indicate that women and girls were the major water collectors, users, and managers at home. For instance, one of the participants said;

> "…. *Going to the water sources daily increases my knowledge on where to find water and know how to store water in the house''* (Female Participant from FGD in Kibedya village).

The quotation place woman at an appropriate position to be included in water resources management based on knowledge on key aspects of water management. Also, discussions with the project team revealed that women are the major promoters of household and community hygiene and sanitation activities. This corresponds with the previous study by Mandara & Niehof, (2013) which found that in various villages of Dodoma women and girls bear the predominant role of fetching water for reproductive use. This is common in many parts of Tanzania where women normally fetch water for reproductive use while men once engaged do it for productive use.

It was further found that Chakwale village has been experiencing water use and management problems among different groups. For instance, in the dry season when there is water scarcity, high competition occurs between livestock keepers, domestic users, and small scale irrigators. During this period woman face more difficulties in accessing water because men have the power to control the resources for animals and irrigation activities as compared to women who fetch water for domestic use. Both KI interviews and FGDs revealed that most women both elderly and young ones mainly use water for domestic purposes. In one of the FGDs, one participant reported that:

> *During the dry season, women inter into big competition with men in searching for water… in this season the business of selling water becomes hot and lucrative hence the majority of men engage in this business…. Men collect water both from natural sources and water kiosks. Since many water kiosk projects are under women leadership, the high water*

demand and stiff competitions in dry season makes women leaders lose confidence in supervising the projects (FGD participant –Ihenje village)

Similarly, it was revealed that, traditionally, Tanzania societies perceive men as breadwinner hence expected to be responsible for looking after the family, providing meals and other household needs hence render the role of fetching water to women. For example, one of the KI participants narrated;

"…*Men here at Gairo are involved much in water collection for business purposes that fuelled by water scarcity problems in the area* (KI participant).

These findings concur with the study done by (Lusuva, 2009; Mandara & Niehof, 2013) who observes traditionally men are responsible for productive uses of water, mainly for crop production and livestock while women also need water for production but their priority is domestic use of water. In the case of water scarcity, women suffer most given less control of water resources.

4.3. Gender dynamics in COWSOs

4.3.1. Membership of men and women in COWSOs

Since the WARIDI project intended to facilitate communities to establish a gender sensitive village water management committee specifically COWSOs in the project villages, the study assessed the composition of village water committees before and after project implementation. Findings in Table 2 shows that, despite the long term emphasis by national water policy and other water resource management legal frameworks in Tanzania to promote 30% representation of women in water resource management committee, there were no criteria which could make women and men's having equal chances to be registered as members in water institutions like COWSOs. This happened due to gender roles influenced by the patriarchal culture that forbids and excludes women from attending public water meetings, as well as stereotypical characters that tend to privilege men's representation. This evidence was also confirmed during FGD discussions as participants said:

"…. Before the project men had a lot of power here and women were not valued when decisions are being made. Traditionally, men are the heads and women-only follow'' (FGD participant from Kwipipa Village)

Table 2: Number of women and men representative before and after project in COWSOs committee

Project Village	Before Project			After Project		
	No. Female	No. Male	Total	No. Female	No. Male	Total
Ihenje	3	7	10	6	6	12
Kibedya	1	10	11	6	6	12
Chakwale	4	8	12	6	6	12
Kwipipa	3	9	12	6	6	12

Source: WARIDI 2018

It was found that the WARIDI project made customarily changes mainly in two areas, firstly was to transform the mindset of the community members to value the contribution of women, and provided guidelines that supported the review and establishment of gender-sensitive water users constitutions. Thereafter; constitutions and bylaws were reviewed and categorically stated the criteria of who can be registered to be a member of COWSOS in the village. This approach creates a mandatory room for women to be involved in water decision bodies.

Although, the changes were not smooth since some men denied their wives' rights to register as members in those committees. For example, in some of the households when men had already registered in the association women were restricted to registered. This was confirmed by one of the key informants as follow

> *"...A woman needs her spouse's or a male guardian's permission to participate and most of the time do not support the women participating in such positions and activities" (*KI Participant from WARIDI Project)

It was also discovered that the central government intervened at some point insisting on the need for formulating constitutions and bylaws. As a result, in all the villages under study area had women representation in some water users committees. Despite the involvement of women, their role in decision making and other opportunities like training related to water resource management and the like were rarely involved. Therefore, one is convinced to argue the equal representation of men and women in COWOSOs to be a result of circumstantial necessity as stated in the

COWSOs constitutions and largely by coercion since external actors, in this case, WARIDI project influence the change.

4.3.2. Distribution of leadership positions in COWSOs committees

The COWSO leadership structure is comprised of a chairman, vice-chairman, secretary, vice secretary, treasurer and pump-caretakers (Table 3). Each position had some specific roles to be played towards the effective management of the water project as guided by COWSO Constitutions. According to the project baseline report, before the WARIDI project, women in COWSO committee in the study area were holding less powerful and supportive positions as opposed to men who held more powerful positions, such as chairman, vice-chairman, and secretary. This was also confirmed by a one-man participant from FGD as follows;

> *"…A man commented in a jovial manner; giving the treasury position to a male will mean giving him the opportunity and power to make more girlfriends. We cannot take such risks*" (FGD Participant from Chakwale village)

The quotation implies that although women were given positions, care was taken to give them a position that will not give them a voice in the committee. As shown in the question, giving treasure position to women was based on the trust and nature of women's commitment that they cannot run away from the village. Also, the position does not give them full decision making authority since any decision on financial management will be done collectively in the meeting with the presence of men leaders.

Table 3: Distribution of leadership positions in COWSOs committees

Village	COWSO Name	Position	Sex of the holder of the position
Chakwale	Kimachang'osa	Chairman	Male
		Secretary	Male
		Treasure	Female
Kibedya	Kibedya water user association	Chairman	Female
		Secretary	Male
		Treasure	Female
Ihenje	Ihenje water user association	Chairman	Male
		Secretary	Female
		Treasure	Female
Kwipipa	Kwipipa water user association	Chairman	Female
		Secretary	Female
		Treasure	male

To ensure the sustainability of various water projects, WARIDI trained on pump caretakers in each village whereby the criteria for training were based on an equal number of trainers i.e one male and female trainee. The trainees were identified by the villages where the project was implemented. The findings revealed that among all 28 (14 F & 14 M) pump caretakers trained by the project only 16 (10 F and 6 M) are still working. It was further noted that in almost all the villages women pump caretakers are the ones who are still actively working. The reason behind this is that; the post has no financial incentive since the pump caretakers are required to work voluntarily. Men are not ready to work without being paid.

Therefore, the changes that happen after the project that allows women to join in high leadership positions by COWSOs constitutions thought to be contrary to the traditional leadership norms where women are not allowed to be leaders. The selection of women in that position was influenced by the COWSOs constitutions and by-laws that emphasizing the involvement of all sex in management by half-half. However, it was discovered that even though women are largely

represented in water resource management, they still face some challenges in accessing various positions and sometimes not allowed to make decisions regarding some components of water resource management such as technical aspect, maintenance, and operation aspects. It was also found that, within communities, women who take up leadership positions are sometimes stigmatized and ostracized by powerful members of the community. The participation and leadership of women require significant inputs from them in terms of time, labor, skills, and resources.

On the other hand, the study further found that the treasurer position was mostly held by women because of the historical and traditional belief that women are faithful and trustworthy when keeping the money as opposed to men. This is supported by many participants in FGD in the following quote;

> *"…When women are given the role of keeping the money, they are good at the proper use of funds such as routine maintenance, and even if there is a break down there will be funds to do the maintenance. They are much more concerned, so when they are put in those positions it is better."* (FGD Female participant, Ihenje)

The study further noted some challenges associated with COWSOs leaderships including the unlimited term of service. It was observed that a person can be re-elected for more than two terms for the same position. Also, lack of bank account, not charging water users and having no receipt book were reported as some challenges along wrecked, or non-functional, water points. These challenges, however, were related to poor men leaderships as where they had a woman chairperson everything was in order. The study observed that the patriarchy system still orders relations among different gender groups in water resources management. According to the study done by Tagutanazvo *et al.* (2014), the patriarchy system divides water resource management into a masculine and feminine sphere and decision-making circles, with men holding the most power. This is also reflected in Naiga *et al* (2016) explanation that women are given a low level of verbal participation in decision-making, despite their responsibilities as water managers. Such a low level of participation, according to Asaba (2015); led to project failure as women on the committees may not be able to influence decisions.

4.3.3. Power dynamics in decision making within COWSOs Committees

There are power struggles between women and men when deciding a management position, and often women voice does not listen regarding water resource management (E-mac Tanzania, 2017). The study reveals that unequal power relations and the ability to access resources between women and men are influenced by historical, societal, economic, religious and cultural realities that are embedded in society for a long time.

During the KI interview with COWSOs and village leaders, it was revealed that when the community handed over their responsibilities to the COWSOs authorized association they expected to have control over the water resource. This has been associated with the shifting of institutional and strategic powers on water management from men to women as it was reported by one key informant.

> *"…Women have a larger role in decision-making on water resources than it has historically been the norm"* (KI, WARIDI project).

It was found out that although women are in high leadership positions of water management associations; there are some circumstances where they cannot speak up in front of men. There are a few women who do raise their voices, however, in rare cases. It was also reported that traditionally in Gairo District men are too talkative especially in the mixed groups of men and women in the existing power structures. Although some women also have the power to speak more than men do, they are restricted by taboos. Along the same line, the study found that community members generally believe that men have better leadership skills because traditionally they are the head of the household and they are expected to be responsible. This perception, however, has been worked upon as it was learned that the project strived hard to increase women's participation that lead to greater equity, enhance women's status and increase women's voice in decision-making in general through increased self-esteem and self-confidence.

5. Conclusion and recommendations

From the study, women have secured the avenue to participate in management by holding various positions in COWOSs. Although there is some instance where women fail to raise and influence

decision this can be attributed to various hindrances such as cultural customs among others which affect their communication and participation. While the project strategy on mainstreaming gender started by increasing the number of women in decision making body, in this case, COWSOs, we consider this to be a step towards improving women's strategic power to influence the decision. Therefore, concluding that numbers are not enough without capacity building for women to be able to influence decision making. The successful gender mainstreaming in COWSOs was accompanied and influenced by training and mentorship strategies used by the project to implement gender integration. Despite the progressive mechanism that promotes women's and men's participation, their meaningful inclusion in water resource management is yet to be realized.

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