



Women and Water in Peri-Urban Tanzania: Supply, Access and Accountability

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List of Acronyms

DAWASA	Dar es Salaam Water and Sewerage Authority
EWURA	Energy and Water utilities Regulatory Authority
IMF	International Monetary Fund
IWRM	Integrated Water Resource Management
NUWA	National Urban Water Authority
NWP	National Urban Water Authority
NBS	National Bureau of Standards
ODI	Oversees Development Institute
SDG's	Sustainable Development Goals
SSA	Sub Saharan Africa
UNICEF	United Nations International Children's Emergency Fund
URT	United Republic of Tanzania
UNDP	United Nations Development Programme
VWC	Village Water Committee
WHO	World Health Organization
WTO	World Trade Organization

Abstract

This study examined how women are involved in water supply and management in peri-urban Tanzania on the outskirts of Dar-es-Salaam. Women are the most important category of water users, compared to men. Because of women's socially constructed role as 'care-takers' in the household, and of children and the husband, Women have this role inside the household although some of them also have work outside of the household. Tanzania has a very high rate of female involvement in the labour force. Despite this, the burden of fetching water on a daily basis falls on women and to some extent on children, particularly the girls. This study was based Kimara ward which is peri-urban area in Dar-es-Salaam region, the capital of Tanzania. Through focus group discussion, interviews and observation with women (water users), formal water providers officer and informal water providers, information was generated about the question of who are the key actors in water supply in the area, how women access water, and problems of supply, access, affordability and accountability. Findings of the study provided an overview of the problems of the water supply as women experience it on a daily basis, and the study concluded with some modest suggestions for how women might be supported in their role of ensuring household water supplies.

Relevance to Development Studies

In debates in Development Studies related to women's and households' basic rights and needs, the concept of governance and water governance in particular, has become increasingly important. In recent years the concept has closely been associated with the rolling out of water supplies being privatised. This case study from peri-urban Tanzania, where women remain largely responsible for ensuring adequate domestic water supplies, shows how complex supply and access questions can be in a local, mixed water governance economy. Overall, the study appears relevant to bridging the gap between policy implementation and cultural norms that hinder women from achieving greater autonomy in water governance.

Keywords: Women; Water Governance, Water Rights; Tanzania; Peri-urban; Access; Accountability, Water Supply.

Chapter 1: Introduction

1.1 Background to the Study

Water is a universally essential and influential resource due to the benefits it brings to individuals in terms of social and economic development. Along with this, the ability to access clean and safe water for use is another significant aspect as far as a society's health and dignified communal life are concerned (Moyo 2011). In the recent past, Mbua (2013) notes that inadequate water supply has been identified as a global crisis mostly affecting developing countries. It certainly affects peri-urban Tanzania, where this study was conducted. Globally, the problem of access to clean and safe water remains a persistent daily reality, including for women in Tanzania. This is although almost three-quarters of the earth's surface is covered by water (Fonjong and Fokum 2017). It can be noted that this problem of access to clean water prevents the achievements of many other developmental goals, such as meeting the essential needs of the poor concerning environmental health, education, and also the achievement of gender equality.

In sub-Saharan Africa (SSA), reports by WHO and UNICEF indicate that across the continent, there has been an improvement in the past decade or so up to 2015, of about 20% in the availability of clean, safe drinking water, although the target of the Millennium Development Goals (MDGs) is not yet achieved (UNICEF/WHO 2017). Nonetheless, there is speculation that clean and safe water is not a guarantee to affordable and sufficient provision. This is attributed to the fact that the changing of MDGs to Sustainable Development Goals (SDGs) has led to changed perceptions of the issue of water access, since aspects of affordability, impartiality and universality¹ have been added to the goals (UNICEF/WHO 2017). In Tanzanian peri-urban areas, there is a strong likelihood of achieving this, but the issue of governance might end up impeding the process.

There is a considerable agreement in policymaking literature that 'good' water governance should provide an effective framework for delivering and managing water-related issues including accessibility and supply, within a framework of overall accountability to citizens and other users (UNDP 2004). 'Good governance' in development policy terms is often associated with improved transparency and accountability mechanisms, through appropriate institutional arrangements where water users can channel their views, and have their voices heard, facilitating competition among stakeholders and responsiveness to expressed needs (McGranahan and Satterthwaite 2006). Besides, for good water governance, the principle should apply that both women and men should have at

¹ "Affordability is about ability of households to be able to comfortably pay for water and water services without being too constrained" (Mushi 2013:12) on the other hand impartiality can be understood as provision of water as basic needs without looking to differences such as gender and class and universality is making sure that water services is for all people without putting any consideration.

least equal rights to access to and allocation of water, and both genders have the opportunity to work as partners in the management of water supplies.

Tukai refers to water supply system governance at the local level in developing countries as producing differences among water-users based on political factors and notes that this tends to favor some groups of people and exclude others. This can be for different reasons, such as politicians fulfilling promises to their voters or giving extra consideration to high-income households individually or as a group; this can result in unequal water access and skewed allocation of water resources to the better-off (Tukai 2005).

In Tanzania, the gendered division of labour is quite distinctive, in the sense that the gender role of women is to take care of the family, not only by performing domestic activities such as looking after children, preparing food and ensuring domestic hygiene, but also ensuring there are food, water, and necessities for the family. On the other hand, the role of men in regard to particular needs of water revolves around livelihood matters, mainly involving watering of livestock and other 'masculine' activities that depend on water in a local context, such as irrigation or brickmaking. From this perspective, different gendered uses of domestic water reflect the practical gender needs of men as well as of women, as denoted by Kabeer (1994, cited in Mandara et al. 2017). It is therefore vital to women fulfilling their socially prescribed gender role, in the context of Tanzania, to have sufficient access to water for a range of domestic uses. By the same token, women in a peri-urban area like Kimara should also be involved in decisions about the supply of water and the accountability of suppliers. As the primary domestic managers and users of water, women need to be able to exercise some control over water matters and to have some autonomy of decision-making about water supply, use, and access (Mandara et al, 2013). Various steps have been taken in this direction, and this study will consider whether such steps have been adequate.

One such step has involved amending the water policies developed in 1999, to include gender-related issues, something envisioned in the National Water Policy (NWP) of 2002. As part of its implementation, the National Water Policy acknowledged water as a fundamental human right, with every human mandated with the right to access clean and safe water for drinking purposes (NWP 2002:31). The NWP recognizes that it is essential to involve women in decision-making processes about water supply, quality, and accessibility (NWP 2002:7). Recognition of this marked the first stage of ensuring gender justice in water supply and access by ensuring women can wield their collective power to hold water providers accountable in their governance of water resources.

Changes have been made to Tanzanian water policies, adopting measures, for example, to increase women's participation, through a quota system mandating their representation (Mandara et al. 2017). Kimara is one of the wards in the Ubungo district and faces typical problems of water access as in other rural, urban and peri-urban areas of Tanzania. The area, like many peri-urban areas, has quite complicated forms of water distribution where a mixed economy for water supply and access is dominant. There is no reliable public water supply and so people depend more on informal water suppliers who might be a group of people or religious institutions particularly mosques and/or churches as well as individuals.

Yet it is notable that efforts made by the government to change the policy to ensure women's participation in water management appear to ignore the reality of household life which revolves almost entirely around women about the right to clean water. Water supply seems to be the focus of those who can afford their supply sources, and this suggests that the efforts of water policy reforms have tended to favor the elite and advantaged group of women over those others who are poor. This accords with the results of research by Kjellen and McGranahan (2006: 20), who concludes that: "poor water environments affect the poorest people" the most.

The present research represents an attempt to assess the rights of women to access the water supply and to secure social accountability in the Kimara ward, a peri-urban area near Tanzania's capital, Dar-es-Salaam. The study is mostly interested in finding out how women are involved in managing and securing household water supplies in Kimara, on a daily and longer-term basis. I was concerned to shed light on local women's ability to influence and bargain for water access, considering the costs of water, its affordability for different women in a range of households, and mechanisms of holding suppliers accountable. Some women in Kimara, like me, prefer to get most of their daily water from an individual provider instead of from the public suppliers or private companies. Where this was the case, the decision was analyzed with and by the women, I spoke with. The study also indicated how Churches and Mosques were significantly involved in supplying water in the local community. Finally, and most significantly, the study explored women's engagement with accountability practices under the umbrella of local government, considering the various and often conflicting dynamics that intertwine with a range of interests and complex drivers of water supply realities. In turn, the study was keen to note any practices within the local community in this peri-urban area, which might hinder greater accountability, making the gender-oriented reforms in the water policy more difficult to enforce.

1.2 Statement of the Research Problem

The Tanzanian government has acknowledged the need to increase and improve water access for all citizens (Kessy and Mahali 2017). This has been part of the government's core development agenda as per the requirements of SDGs with a report from some years ago showing that at least 84% of the population in Tanzania is served by some 19 urban water authorities, and able to access improved water sources (URT 2013). Unjust, uneven and inequitable water services and poor investment remain significant problems in Tanzania and Dar-es-Salaam, however, and water infrastructure has been noted as one of the areas that have had lower investment rates, not only in Tanzania but across the globe, including in urban and peri-urban areas (Kjellen and McGranahan 2006:19). In Dar-es-Salaam, water supply is mostly piped although wells and tankers also provide (sell) water-based to meet private needs (demands). It is estimated that over half of the population in the city relies on the Dar-es-Salaam Water Supply and sewerage authority to supply them with water (Nganyanyuka et al 2014:359).

On the other hand, more than ten years ago, Kjellen and McGranahan reported that 92 percent of urban Dar-es-Salaam households had improved water

sources. Nevertheless, they explained that at that time, that these figures were based on households with piped water. This did not necessarily mean that water was easily accessible through the public water system (Kjellen and McGranahan 2006:20). With the rapid expansion of informal settlements since the mid-2000s, the ration of 92 percent may be over-optimistic, about those households connected to the public piped water supply (DAWASA). The main supplier, DAWASA is facing challenges which have led to more erratic quantities and quality of water in the taps, more rationing and greatly reduced water pressure resulting in local citizens – especially women and children - seeking water from other sources such as vendors and private suppliers with their own wells (Nganyanyuka et al., 2014:359).

Notably, access and supply of water vary considerably, depending on the socio-economic boundaries of Dar-es-Salaam and differences in service-levels between poor and elite households, in both planned and unplanned areas (Nganyanyuka et al., 2014:359). Since elite households can afford the connections to formal water providers compared to those poor households, living mostly in unplanned areas, the wealthy have the great advantage that the national water supply plan includes the construction of water supply infrastructure in their planned areas, but not in the unplanned areas. This helps explain why women in Dar-es-Salaam's peri-urban (and largely unplanned) areas like Kimara, just like women in rural areas, have to spend a great deal of time and effort during the day mostly in water collection as part of their household responsibilities. The difficulty for poorer households is that unless one has a well or a rainwater-catchment tank, obtaining water requires cash.

Yet, women and young girls, as primary actors in access and shipment of water for domestic use, end up facing obstacles both to their education and to income-generating activities, mainly because of the time involved in securing an adequate water supply for the household. Unable to broaden their skills, they have little time or inclination, as we shall see, to get more involved in water governance. Looking for water over long distances, and the heavy task of carrying the supply in some cases reduces women's time for other, more productive work.

There are policies in place that are supposed to improve the accountability, access, and supply of water, notably the NWP. However, the situation in these areas remains the same with a few positive changes for poor women in informal peri-urban areas. Additionally, other aspects of social differences shape the ability of women to access and supply water as well as holding key actors accountable. It does, however, matter whether a woman or household, is poor or rich, educated or not. Better off, more educated women will have an advantage compared with poor women and their households, who may also not have been educated to know their rights, which makes it harder for them to act and take the initiative than uneducated women. In part, the problem lies with the design of the water policy and legal practices that focus narrowly on service delivery, whilst overlooking the broader context and effects arising from such interventions.

Being gender-sensitive in governing water resources has always been attached to women's greater involvement in the policy process, and particularly, incorporating women into managerial positions like heading water committees (Joshi et al. 2003). Nonetheless, despite such attempts, it is still worth noting that there is still a lack of concern generally for gender issues in water projects where

based on (Mushi 2018:16) gender issues in irrigation scheme near Moshi limit women from full participation on agriculture activities as the system favors men in water and resources provision compared to women. Therefore, it can be deduced that a lack of gender parity deprives many women, especially in poorer households, to get involved in decision-making platforms affiliated with water governing bodies, and this leads to gender inequality in the oversight of water provision. Thus, there is a need to establish how women can use the different alternatives they have to access, supply, and hold accountable key actors in water resources management.

1.3 Purpose of the Study and Research Questions

This study aims to assess the involvement of women in planning, implementing and management of water services in Kimara Kimaperi-urban areas of Tanzania. To successfully achieve this purpose, the study is guided by a research question stating:

How are poor women negotiating access to water for their households in the Kimara ward?

Along with this, the following sub-research questions are used:

1. Who are the key actors providing water in the Kimara ward?
2. Which legal and policy frameworks govern these different providers?
3. How do poor women negotiate with these actors and strategize around when to buy water from which provider?
4. What clout, if any, do poor women have to hold some or all of these service providers to account?

1.4 Motivation and Justification of the Study

As a Tanzanian woman working with the Human Rights Commission, I have frequently come across women complaining that they spend a great deal most of their time trying to access reliable and safe drinking, cooking and washing water supplies for household use. Sometimes what water they can find is not safe for drinking, and needs to be boiled or filtered, which can prove costly to do. As a working mother and housewife, I could relate to the stories of the women I spoke with about water, in one way or another. Although I have piped water supplied to me by DAWASA, it is worth pointing out that this supply is quite unreliable, and this inconsistency in water supply obliges me to mainly rely on my neighbor's well. He sells the water to me, but when drought comes, and supplies are short, he halts the sale and I need to look for other means of getting water by myself. So, some of the questions I used to ask myself include, why is the supply of water by DAWASA so erratic? Since those who sell water are mainly men, why are women mainly those who buy the water? Why is it sometimes so difficult for women to access clean and safe water for domestic use? Who are the key players in water governance and what are they doing to ensure equitability water

provision and reduce the burden of accessing water on women? Who is responsible, or accountable, for ensuring water supply in peri-urban households in Kimara? After careful thought, and as a Human Rights Commission employee, I decided that I would dig deeper into the local context where I live. I have structured my fieldwork and research to find some answers to the questions I asked myself for many years and have used literature to reflect on these questions.

Working with the Tanzanian Commission for Human Rights and Good Governance (CHRAGG), the frequency of water disputes intrigued me into trying to understand how women's responsibilities for ensuring water supplies to their households combine with their exclusion from most water-related decision-making across Tanzanian society and water governance in particular. As we monitored women's access to water, we encountered issues that necessitated meeting with the community. Unfortunately, more often than not, it was mostly men who attended these meetings, and I noticed that relatively few women were present, which I found surprising. This may indicate that women lacked autonomous control over water governance and were disadvantaged by other obligations. In this study, I wanted to understand why women are still not empowered enough to be part of the key actors associated with water governance even though existing water policies grant them the liberty (through a quota system) to be involved to a greater extent than they currently are. Thus, the study would appear relevant in bridging the gap between policy implementation and women's obligations associated with local cultural norms in Tanzania, which may handicap women's power to achieve greater autonomy and control over water governance.

The justification for this study is also in part due to a gap in the literature. The available literature, discussed in Chapter 2, depicts different authors' perceptions of women's involvement in water supply and governance, centering on questions of accountability. Efforts to ensure the successful inclusion of women in water systems governance and equip them with the absolute rights to water supply and access are reviewed through the formal policies. This is supposed to ensure their greater involvement in formal decision-making spaces and empowering them by making it possible for women to negotiate for more secure and clean water supply and access. However, the review of the literature suggests that where informal structures are concerned, women's involvement in water governance will tend to be low. Formal accountability issues are also mainly limited to the formal sector concerning water supply and governance, and this has implications for peri-urban areas like Kimara (Mandara et al. 2017). Factors such as cultural norms and values, social relationships and local politics, will all be pointed to as factors – among others – that help to explain why women's right to water and to hold providers fully accountable may not be realized in areas like Kimara.

Only a few studies have yet attempted to show the need for effective bridging between water supply policymaking and its practical implementation in mainly informal, peri-urban areas, as this study tries to do. A wide array of literature either covers water governance in rural areas or urban areas, but very few studies have been conducted on women and water governance in peri-urban areas. Yet, these areas are perhaps just as likely to experience serious water shortages and questions of poor supply quality issues as urban or rural areas. In most available studies on water governance in peri-urban areas, it stands out

clearly that these areas need greater attention since most lack basic infrastructure and this results in the poor overall provision of services, including water supplies (Mapunda et al. 2018: 112).

This indicates that effective water supply, access, and accountability remain a problem in peri-urban areas. Therefore, using the analytical framework presented in the following sub-section, this thesis seeks to bridge these existing gaps in the literature, in a way that might lead to opening up some possible solutions in terms of improving women's engagement with water governance in Kimara ward, and their right to access clean and safe water.

1.5 Significance and Scope of the Study

This study seeks to identify factors that hinder women from accessing secure and safe water supplies in the peri-urban area of Kimara. It also aims to hold those institutions and people concerned with water governance issues, accountable. Thus, the hope is that some outcomes of this study might improve the position of women in the water sector, in terms of giving them more of a sense of collective power which they can exercise about water governance and holding suppliers accountable. Finally, recommendations from this study could help amend policies in such a way that water services in peri-urban areas of Tanzania can be improved through incorporating women's contributions and points of view.

In terms of conceptual scope, the study was limited to assessing the involvement of women in planning, implementing and management of water services in one peri-urban area of Dar-es-Salaam, in Tanzania, namely in Kimara. In other words, the study aims to establish how and why women are not included in securing accountability of suppliers for water quality and access, and how women can be empowered to exercise greater autonomy over water governance in Kimara, and in areas like this. The geographical scope of the study is limited, but its implications may be of interest beyond Kimara, for other peri-urban areas.

1.6 Chapter outline

This research is organized into six chapters. This first chapter has provided some background to the study on women and water in the peri-urban area, questions of water policy and supply, and has briefly defined questions of access and accountability. The second chapter will provide an overview of women's participation and empowerment by presenting theories, concepts, and information on women and water supply. The third chapter discusses the methodology used in data collection, the area of study, and sampling, as well as ethics and some limitations. The fourth chapter provides research findings and analyses the first and second sub-questions by mapping key water providers in Kimara ward as well as the broader legal framework. The fifth chapter presents the third and fourth sub-questions, generating some new insight into how women and water in peri-urban can be discussed about accessibility, affordability, and accountability. The last chapter presents some conclusions and recommendations.

Chapter 2: Fundamental Concepts and Theories

2.1 Introduction

To have a clear understanding of women's rights to water access, supply, and accountability, the literature on gender and water resources governance will be presented in this chapter across different dimensions. The descriptions of different stakeholders regarding their perceptions of gender aspects and their understanding of the significance of integrating women in the management of water resources will also be discussed. In the process of examining the existing body of literature associated with women and water governance, an existing knowledge gap will be presented around women's role in water governance in peri-urban areas in particular, and the analytical framework that has guided the entire study will be elaborated on.

2.2 Empirical Literature Review

This section discusses the empirical literature regarding what is known about women and water in terms of their rights to access and supply water as well as women and water governance in terms of accountability. This subchapter is crucial in establishing the knowledge gap that this thesis has sought to address.

2.2.1 Women and Water Supply and Access in Context

According to IFAD (2007), most of those who experience water scarcity in South Asian and Sub-Saharan African countries, are poor women living in rural areas. In Tanzania, most of these women practice small-scale agriculture to sustain their livelihoods and their households. Water scarcity, whether seasonal or periodic, means increased hardship for women, given the difficulty of accessing water for domestic use and agricultural purposes. Moreover, other sectors such as industries and power generation plants compete with citizens for water. The latter in turn increases the difficulty for poor women of gaining secure access to water for consumption and social use.

In a summary of case studies concerned with gender hygiene, Alouka (2006) reports that in Africa women have the primary responsibility of overseeing the supply of household water and ensuring that sanitation is observed. Women depend on various water resources to ensure that they always get water in the required quality and quantity. As a result, they have with time developed more knowledge affiliated with the quality, location and storage techniques of water. Nonetheless, Alouka (2006) notes that the efforts put in place to enhance the management of water resources leading to the provision of safer water for domestic use still tend to overlook women's role in managing water resources within the household and neglect their knowledge of water supply and quality issues.

The need to include women in water-related matters is confirmed by another study by Moriaty et al (2013). The researchers stress the importance of working

with women in water development projects, given the multiple productive, reproductive and community roles that women play, revolving around domestic and productive water utilization. These researchers have also emphasized that policymakers and planners should not overlook the contribution of women to ensuring good water supply management. For poor women, it is worth noting that water is not a 'free good', as they are often denied control and even access, as is shown in the next sub-section dealing with water governance.

Brett et al (2007) analyzed a project that was concerned with supplying water in the rural areas of Mali. The researchers were focused on the participation and sustainability of three communities and how the stakeholders' involvement impacted water resources management and utilization patterns in both agriculture and domestic settings. The analysis revealed that it was women who most adamantly demanded alternatives to the current techniques used to provide water supplies since women believed these changes would make access to water easier for them. According to Brett et al (2007), the demand from women was not that surprising owing to women's social responsibilities as far as the provision of water for domestic purposes is concerned. The study by Brett et al (2007) did not include the question of whether and how women held water providers accountable. This study fills a knowledge gap and finds finding out how women in peri-urban areas hold water providers accountable.

2.2.2 Water Governance in Relation to Gender

In debates affiliated with development in society, the concept of governance has become increasingly important. In recent years the concept has been closely the alternating roles of a country where globalization is occurring progressively with policies focusing more on development goals (Ramasar 2014). According to Cleaver and Franks (2007) governance allows a nation to conceptualize the relationship networks between society's different actors.

Various actors play a role in governance at varied scales and levels (from global, to national and local). Up to the 1970s or so, political power tended to be centralized with governments ordering societies through 'plans' and centralized interventions (Ramasar 2014). However, after the 1980s, the tendency was for a political power to become more decentralized with governments shifting to the regional and local governance, inspired by ideas about the need to 'decentralize' economic growth. The government's interventions in economic matters were at the same time reduced by what was termed neoliberalism (Ramasar 2014). In other words, there were reforms in every public sector aimed at creating lasting solutions to the neoliberal policies and political models of the economy (Batterbury and Fernando 2006). These decentralization and liberalization policies were then extended to the water sector since water is both essential to production processes and for household needs.

Fostering 'good governance' in the water sector involves different state and non-state actors who participate in policymaking. There are market actors who set the prices for water and global organizations that oversee the water governance agendas such as WTO, IMF and the World Bank (Ramasar 2014). The international conference on Water and Environment held in 1992 saw the adoption of the Dublin statement on water and sustainability and since then has

been a source of guidance for decision-making in matters related to water internationally (Ramasar 2014). The statement established a set of principles that govern the water sector, known as IWRM (Integrated Water Resource Management) with four main principles:

1. Water as an essential resource that can foster sustenance, development, and the environment.
2. Water as a development and managerial agenda that should involve participatory approaches with consumers, policymakers, and planners involved in every niche.
3. Women as key players in water management, provision and safeguarding of the resource.
4. Water as an economic good comprising economic essence in its every competing use.

This thesis focuses on principles 3 and 4. In one sense, principle 3 has been perceived by Bennet et al. (2005) as the most marginalized due to there being the least understanding among practitioners about its significance. On the other hand, principle 4 has been a key contributor to the paradigm shift in water policies, transforming water from a basic human right to a commodity supplied for profit maximization. The fourth principle has led to the assumption that the third principle, concerning improved gender parities, is simply about women's equal access to affordable water, rather than women being involved in the governing of water resources and policies (Bennet et al. 2005).

The research of Cleaver and Hamada (2010) regarding water governance articulates that it has been difficult to achieve sound outcomes in gender equity due to the narrow focus of gender-sensitive factors employed in water supply particularly the idea of water user committees. The researchers contemplate that there is a need to broaden the understanding of water governance from two perspectives: i) understanding the resource allocation process in a community particularly the economic policies and legislation that govern the process of water allocation, and ii) to consider the ability of different people in influencing the arrangements of a particular outcome in relation to the desired gender outcomes. This is a major concern for wellbeing in terms of health, promoting needed access to water resources and women users having a political voice in these processes.

2.2.3 Women and Water in Tanzanian Context

As mentioned in Chapter 1, the Tanzanian government has recognized that there is an urgent need to improve access to improved water supplies for the population (Kessy and Mahali 2017). The government is required to commit to this goal under the SDGs (URT 2013). Nganyanyuka et al. (2014) report that even so, residents in the capital rely on informal water providers, buying from small-scale vendors and many rely on unimproved water sources, including from open water sources and private wells. In Dar-es-Salaam, reports show that public water suppliers supply only about half of the city's residents' needs (EWURA 2012). Nonetheless, this supply from public water providers (DAWASA) is erratic and at times there is extreme rationing, with low water pressure leading citizens looking for other alternatives particularly from vendors, wells and bottled mineral water

(Nganyanyuka et al. 2014). There are significant variations in water access across Dar-es-Salaam in terms of socio-economic and geographical scope. According to Nganyanyuka et al. (2014), the contrast is both high in strategic areas where there is piped water as well as non-strategic areas with a lack of piped water. Also, the difference in access varies between poor and rich households. Available data consistently shows that there has been a significant increase in the supply of water to various urban centers of Tanzania over the past few years (URT 2014). Around Dar-es-Salaam, water supply has increased although the household budget for urban areas has been recording a reduction at the same time, reducing household average access over time (URT 2014).

Table 1: Water governance regimes in Dar-es-Salaam over time

Period	Responsible Department/Ministry	Responsibilities
Before independence	British Colonial Government	Planning, management, and supply
1961 - 1977	Ministry of water and power	Policy formulation, supply, and management
1981 - privatization	National Urban Water Authority (NUWA)	Improve technical and financial management
1997	Dar-es-Salaam Water Supply and Sewerage Authority (DAWASA)	Responsible for water supply and infrastructure management
2002 to date	DAWASA	Public water supplier

Source: Kjellen 2006 as summarised by Mushi 2013

The issue of water supply can also be looked at in terms of power relations among the actors involved. Victor (2014), in his research regarding dynamics of power relations among actors participating in projects for supplying communities with water, established that a powerless group of actors are usually the ones denied a chance to exercise autonomy in the parameters of the project such as design and the form of technology applied. The findings of Victor (2014) concurred with Kaliba's (2002) study, which revealed that the most powerless people are not always involved in deciding how technology should be used well, about the choice for water sources in projects affiliated with the sustainability of water supplies in rural areas of Tanzania. According to Kaliba (2002), that would negatively impact on sustainability.

In promoting gender mainstreaming in water supply in rural areas, Mandara et al (2017) discuss the intersection between formal registered (involving the government and policies) and informal (cultural perception and norms of the society and governmental structures unlicensed private institutions about the participation of women in water resources. According to Mandara et al. (2017),

the informal context seems to greatly influence the ability of women not only to access water in practical terms but also to take part informally created spaces for decision-making processes affiliated with water management systems. Overall, Mandara et al. (2017) point out that women are less likely than men to get involved in local governance structures. Nonetheless, they are represented fairly well in social welfare committees, presumably due to the connection with the more traditional labor division and the practical gender needs of women in this sector. Even though village water committees have a quota system that requires women's representation, they tend to be present as followers rather than as key participants or leaders. At times, even if husbands might want to support their wives, patriarchal culture and norms, arising from entrenched negative stereotypes about women's management capacities, frustrate every effort to ensure the inclusion of women in spaces of decision-making in water governance at the local level.

However, research suggests that without the participation of women in water governance, the gender-responsiveness of the water sector is unlikely to improve (Fisher 2006). Over time, policies have made it necessary for women to participate in local decision-making spaces on other matters; indeed sometimes it seems like the policies are compelling women to participate rather than the government letting women exercise their own free will to take part in governance processes (Udas 2012). Still, there is a dearth of knowledge about how the representation of women in water management structures can be improved in such a way that it is converted into their active involvement.

As Udas (2012) notes in a study of policy and culture in gender issues in Asia, local socio-cultural settings with their particular gender relations and roles rarely seem to be considered when the representation of women in decision-making bodies is being enforced. The assumption seems to be that individual women will exercise their free will and the playing field will be 'voluntarily' leveled by their taking part. However, this is a problematic assumption, since gender itself and gender roles have aspects of historical contingency and are constructions that are simultaneously engulfed in social institutions and cultural meanings and may find it difficult to challenge those same institutions and meanings (Lamphere et al 1997: 4).

In Tanzania, the National Water Policy (NWP) recognizes the fundamental roles of women in the water supply as well as their political interest in its governance (accountability) (URT 2002). This is why Mandara et al. (2017) reports that there was an adoption of a quota system to ensure the representation of women in the formal structures of water governance at the local level particularly the Village Water Committees (VWC). Despite the policy being meaningful to women, there is a need to note that its implementation was to take place in a country surrounded by diverse norms and particular beliefs attached to gender. In most African countries Tanzania included, incorporating women in the local bodies affiliated with water management has been quite hard as it is perceived to challenge the socio-cultural norms that regard such bodies as public and thus a male-dominated zone while private use of water regarded as women's domain (Mandara et al. 2017). This implies that even though women can still be incorporated in the public decision-making spaces there seem to be higher chances that their power does not surpass the men's.

2.3 Fundamental concepts

2.3.1 Power

Power as a concept can be explained in different ways. Kabeer (1999: 436) perceives power as a way of achieving autonomy i.e. one's ability to make a choice. Lack of power on the hand is regarded as being denied a choice. People often associate power with negativity in what Rowlands (1997) refers to as 'zero-sum power' implying that if one gets power the other one gets less. Nonetheless, Rowlands (1997) still denotes that power can manifest itself in various forms particularly in four categories namely power over, power with, the power to and power from within.

Power over is normally associated with 'zero-sum power' as it involves manipulating others (Rowlands 1997). In the water sector, men can fear losing control, hence they would continue embracing power over to deny women the power to hold others accountable. This forms the basis for the patriarchal system in Tanzania which has continued to uphold the informal structures denying women power from a cultural perspective.

On the other hand, the power to relate to the notion that every person is at liberty to create a difference in his/her life. Power from within involves the uniqueness of each person and the strength-based on self-acceptance and self-respect. Rowlands (1997) perceives these two forms of power as constituents of empowerment and emphasizes that no one should see them as a threat to dominate.

Finally, power refers to the notion of finding common ground and establishing a common strength due to unity (Rowlands 1997). In power with, susceptible and weak people come together and develop some power (FAO 2012). This can involve the use of groups or cooperatives.

2.3.2 Gender

Stolen and Vaa (1991) coined gender as the active roles designated for both men and women in society. Such roles are constructed socio-culturally and historical implying that they are not naturally occurring. For instance, if considering politics, the success of men and women in this arena would be determined by gender

From the different research conducted in peri-urban Tanzania, it seems there is an attribute of bias in gender-power affiliations in local governance, particularly in peri-urban settings. Women are often involved in the implementation of a policy/decision but quite neglected when it comes to the decision-making process. As far as women's rights are concerned this study was also interested in examining the magnitude in which women's voice is heard in holding the local government accountable for water issues as well as their participation in supplying water. In the end, the study would devise ways of imparting gender equality in local governance.

Court and Mease defined local governance as, “the formation and stewardship of the formal and informal rules that regulate the public realm, the arena in which state, as well as economic and societal actors, interact to make decisions” (Court and Mease, 2004: 16). According to Ofei-Aboagye (2000), it encompasses

equipping the members of the society with the autonomy that can help them make decisions freely and participate in civic awareness. Estrella (2001) identified five primary factors that can be useful to measure governance at local governance namely: effective leadership styles, participation, ability to manage public resources, respecting the law and human rights and accountability and transparency.

2.3.3 Practical and Strategic Gender Needs

Molyneux (1981) established a framework that categorized gender interests into practical and strategic needs. The practical interests refer to the disadvantageous position women experience due to deprivations or poverty while the strategic aspect is concerned with challenging the subordinate position of women about men.

Later, Moser developed the framework further by translating the practical and strategic interests into needs. According to Moser (1989), the roles of men and women in society should be understood from the perspectives of gender as a socially constructed category, with various factors such as culture, economy, religion, history and so on, influencing gender roles. Moser (1989) concludes that women have different needs from men, owing to the community and reproductive roles they play, in addition to the productive role also played by men.

Practical gender needs focus on inadequacies women experience in their daily lives such as lack of employment, lack of access to land or finance, and so on. On the other hand, strategic gender needs are those that challenge the redistributions of roles in the household, in public legislation and the reform of various institutions to embrace principles of gender impartiality. Strategic gender needs are mostly associated with a feminist approach (Moser 1989). Hence, strategic needs aim at achieving gender equality and transforming the societal culture that subordinates women. As a result, they tend to focus more on change which makes them rather abstract and quite radical compared to the practical gender needs.

Moser (1989) perceived that it is possible to meet women's practical gender needs by equipping them with techniques and tools to manage their everyday lives. On the other hand, these strategic needs are quite complicated as they require planning from a political perspective, through the state in most cases, to transform power relations of gender structurally. In other words, the theory of practical and strategic gender needs can deepen our understanding towards women who seek to achieve empowerment that embraces a practical approach to change the overall known structure that subordinates women, and for women to be able to exercise their rights and enjoy their liberties. This was the major reason for having the theory incorporated in this thesis.

2.4 Local governance

The current study perceived local governance as essential in the sense that it has expanded our understanding of how it can work to ensure a better quality of ser-

vices in a united manner as the community prioritizes. Also, it can help to effective targeting of community's budgets as per the needs and priorities of the citizens rather than those of bureaucrats. In other words, this thesis perceived local governance to have high relations with accountability. Also, local governance is likely to provide opportunities for enhanced provision of social services and partnering with local authorities in strengthening the role of elected leaders. And given that local governance is concerned with service provision that influence households directly, then women, who are rather perceived as housekeepers should have a direct opportunity in local governance.

2.5 Analytical Framework

The framework adopted for this study builds on Batley and Wales 2015 and the work of Agarwal 2010 on accountability and politics of service delivery but goes beyond this to incorporate practical and strategic gender needs with accountability issues about water supply and access for women in peri-urban Tanzania. The problem with the framework of Moser is that it lacked the elements of participation and accountability. This brings out the practical and conceptual aspects of gender relations and power relations. This study, in seeking to address the part women play in water management, does this through the lens of power and accountability, and to a lesser extent, participation.

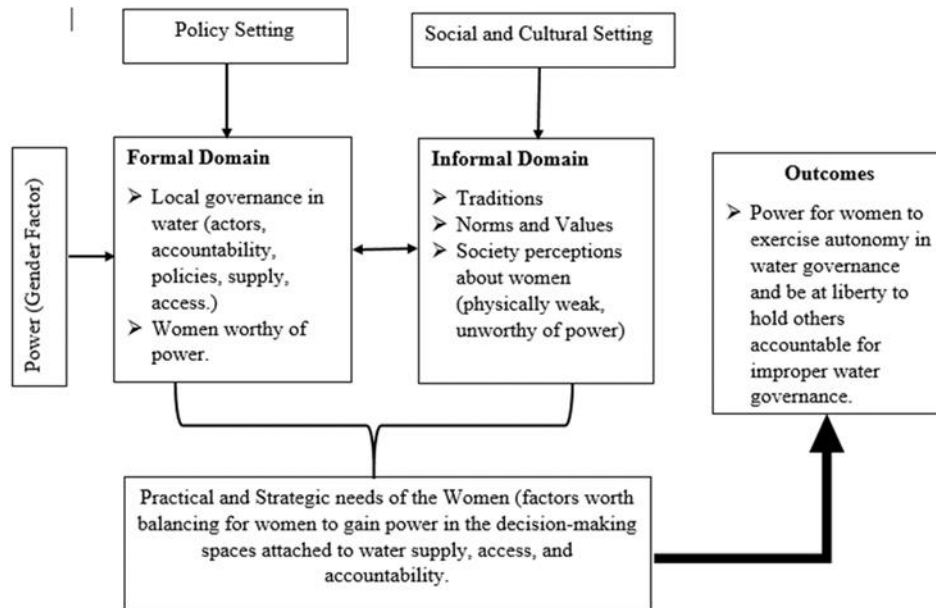
Water is a dire need for women based on their household roles and as such, they might be having critical information that can help in effective water management. Nevertheless, their representation in the local decision- making spaces attached to water governance remains a point of concern as it is affected by the strategic gender needs (informal structures). In my study area, various factors revolving around politics, social system, economic and administrative systems seem to affect the effectiveness of water governance under the broad umbrella of involving women water access, supply, and accountability. The women seem underrepresented in informal domains and ignored informal governance. It is worth noting that incorporating women in local governance is critical in decision making. Yet, few women are participating in local governance in Kimara despite the evidence that women are more knowledgeable about household water needs in particular than men. It can be seen as important for the local governance to embrace gender-balanced participation since this should help solve the problems of both men and women, and since a more appropriate gender balance leads to improved performance of local governance, more effective development and poverty mitigation. Currently, the state of women under-representation in the local governance leads to practical needs which about the right to water include access, supply, and accountability. Considering that the needs of women have been perceived in the dimension of a private sphere with no public interest, the model I adopted for this study was a change model that aimed to exhibit an analysis of the formal and informal domains that impact women participation in the local decision making affiliated with water governance. The model advocated for the need to change the rules leading to parity in social systems at the individual and community levels. Thus, integrating the practical and strategic gender needs with analysis of formal and informal domains that dictate women's participation in local governance of water through

taking part in decision making that can lead to effective water access, supply and accountability formed the foundation of my analysis model depicted.

Critically, the water management and development policies intertwine well with both formal (Government aspects) and informal domains (society aspects). As such, this feature should not be overlooked since the formal domain is meant to equip women with the right to engage fully in decision-making processes. However, the informal domain is what dictates their actual participation in accessing water, and in holding accountable key actors in the water sector. In Tanzania, the informal domain has predominated in water supply in peri-urban areas more than the formal domain, divided up between different water governance sectors. As such, this study is interested in finding out about women in the water sector in the peri-urban area of Kimara. We ask how women strategize to access water and how their power to hold water providers accountable is exercised if it is.

The analytical framework considered the participation of both men and women in Kimara Peri-urban area in terms of government agencies such as formal -DAWASA (accountability) and particular activities affiliated with water management such as access points, supply, and water pipes. The participation of women in all of these activities remains necessary to allow them to gain the right to water management. As far as the participation of women in water management decision making is concerned, the analytical framework drew on Agarwal's (2010) perceptions of participation. The typology of Agarwal highlights various participation levels ranging from passive to interactive participation with the latter being the empowering one as it involves holding an active position in the decision-making process. By analyzing the right of women to water supply, access, and accountability, I explained participation in two categories of gender namely power relations and arenas. The gender relations encompass practices perceived as socially constructed and exhibit themselves in various areas of labor, resources management, responsibilities, and roles attached to women and men about patterns of behavior, perceptions, and attitude (Agarwal, 2010). On the other hand, the gender arenas about the needs of this study encapsulated domestic context with need, utilization, and management of water and the community where local governance of water resources is exercised using different guiding policies.

Figure 1: Analytical framework for analyzing women and water supply, access and accountability



Source: Author's Construct with concepts from Moser (1989: 1799-1803)

Based on the framework above, power appears as an element of accountability in the formal domain. In this context, local government and the policies developed to give women the power to be involved in water governance. Nonetheless, implementation of such abilities remains insufficient with the politics of service delivery (leading to exclusion, collective action) depriving women of the ability to achieve accountability at a formal level. The case is also similar for the informal domain where women's power is affected by cultural norms and values which confine them to domestic roles of water provision rather than allowing them to embrace leadership roles in water governance.

2.6 Summary

This chapter focused on concepts and theories concerned with water and women's ability to hold water providers accountable. Specifically, the chapter reviewed empirical studies associated with women's rights in accessing and supplying water as well as the informal factors such as norms and cultural practices which hindering them from actively being involved in water governance to promote accountability of water resources. Available literature has shown that there are policies already established to facilitate the involvement of women in water-related matters in Tanzania. Thus, achieving women's power in water matters has seemed difficult. Nonetheless, the analytical framework provided at the end of this chapter helps us to understand policies and practice implementation to facilitate the integration of women in matters of water supply, access, and accountability. The next chapter describes the methodologies that were obtained from the participants used in this study.

Chapter 3: Methodology

3.1 Introduction

This section of the paper presents the different research steps that were taken throughout the research study and covers the following; research methods and methodology which include; description of the research area, others are targeted population, sample and sampling technique, data collection and analysis, ethical consideration and limitations.

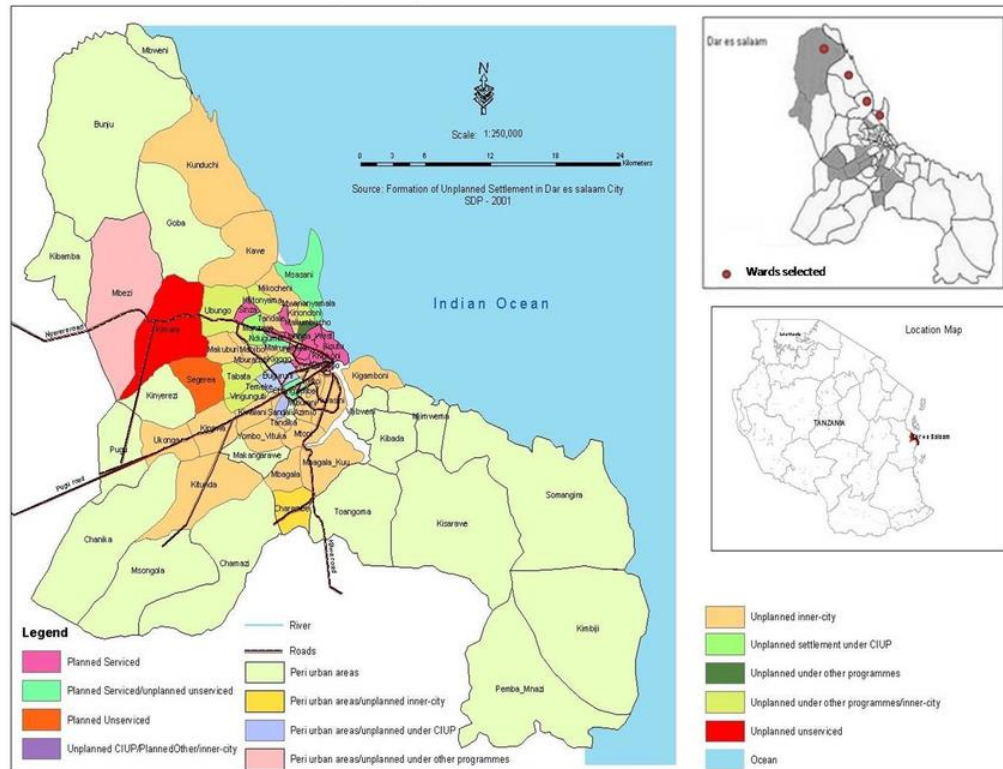
3.2 Research Methods and Design

3.2.1 Description of the Study Area

This study was carried out in Kimara ward in Ubungo municipality. Ubungo municipality is one of the two new Municipalities located in the North West of Dar es Salaam region. Kimara was under Kinondoni district until 2016 and now it is in a new Ubungo Municipality so all information regarding Kimara is still under Kinondoni District. Kimara ward has an area of 13 km² – density 5,564/km² (2012). The population of Kimara is 76,577 where males are 36,654 and female are 39,923 and household is estimated to be 14,328 (NBS 2012).

The research area has been experiencing population surge leading to a dire need for water supply to accommodate the growing population and save the women from using much energy and time to fetch water. Although many wards suffer from the same problem, I chose Kimara ward as a representative of other wards in Ubungo district since they tend to have similar water issues (Juma et al 2018) and the findings can be extended to these areas. Kimara area is presented by red color in a socio-economic survey map as an indicator of an unplanned and unserved area which among others might be the reason for poor water services.

Map 1: The Research Area



Source: Social-Economic survey city of Dar-es-Salaam done by Ricci (2012)

3.3 Target Population

The main unit of analysis in this study was women in different contexts revolving around water use and supply. There are several reasons why this study chose women. First, they are the ones responsible for water provision in a household. Secondly, society confines them into the domestic supply of water and therefore my interest here was to find out if they have any clout that can facilitate them becoming involved in water governance despite the societal drawbacks.

3.4 Sample and Sampling

This study used random sampling to select water user respondents and purposive sampling in the selection of key informants from the Public water providers, DAWASA, Mosque, and Individual water supplier. A simple random sample involves each unit in the accessible population standing an equal chance of being incorporated in the sample and the probability of the unit being selected is never influenced by the selection of other units from the accessible population (Teddlie and Tashakkori, 2010). Thus, a random selection of the household listed in a notebook was done for the first FGD and random selection of participants in Kimara ward who found in DAWASA office was done in the second FGD. This was the best way of selecting respondents as it enables to gain respondents from different background to share their views and experience in water supply, access, and accountability.

Through this procedure, 17 water users were selected and participated in Focus group discussions in a division of 6 and 8 respondents per group and 3 were interviewed. Also, 2 officers from DAWASA and 7 respondents from the Private water supply group selected and interviewed.

Table No. 2 Respondents

WATER USERS RESPONDENTS				
AGE	NO	SEX		HOUSEHOLD SIZE
		Male	Female	
20 – 35	5	2	3	4- 6 members
35 above	1 2	0	12	4 - 8 members
	Formal (DAWASA) officers			
20 – 35	2	0	2	
	Informal sector			
Mosque	3	2	1	
Individual	4	1	3	
Total	26			

Source: fieldwork data collected in July-August 2019

3.5 Data Collection and analysis

The study employed a semi-structured interview to fulfill the needs of the qualitative aspect of the study. These heightened the level of closeness to the participants and perceive the subject matter of the study from their viewpoint. The study used open-ended questions to avoid leading the participants in a specific direction. So, every interviewee had the liberty to tell their story as they deemed fit without any bias chipping in. thus, I was able to get deeper insights regarding the process through which women negotiate as actors and strategize on when to buy water and from different water providers.

Focus group discussion was conducted with two groups among water users in Kimara ward; the first group has 6 respondents and the second one with eight respondents. Interviews and observation were other forms of data collection technique where Interview was done with officers from the public sector, Water users and private water providers while observation on the water infrastructures and services in the study area was observed

The study used secondary data from different literature reviews of government reports on gender profile and policies, Ministry of Water and

Irrigation and partner's reports such as UN-Water, WASH, Water Aid, journals, published books and previous research.

The research faced challenges which include the following: Firstly, the questions were in English, as a researcher I faced a challenge of translating the questionnaires from English to the Swahili language because it is the main means of communication in the study area. As a Swahili speaker, I changed the questions, used English to Swahili translation in a few questions and also tasted questions to my family members and make corrections until I got the right version.

3.5.1 Demographic and Socioeconomic Characteristics of Participants.

Table 2 below summarises the distribution of the participants used in this study in terms of gender and occupation. From the table, there was more participation from women (80.8%) than men (19.2%). Although it was quite hard to tabulate this characteristic in terms of percentage since some participants particularly the officials used in the study never stated their marital status as they were asked but did not want to share their marital status. Finally, turning to occupation, most of the participants (57.7%) were in formal employment with some as teachers, water supply officer and customer care officer at DAWASA water suppliers etc. 26.9% were in informal employment that is housewives and another 15.4% were in unknown occupations (for instance the former ward representative, the woman head of the house, women water user, etc.).

Table 3: Participant's Characteristics

Characteristic	Frequency	Percentage
Gender		
➤ Male	5	19.2%
➤ Female	21	80.8%
Occupation		
➤ Formal	15	57.7%
➤ Informal	7	26.9%
➤ Unknown	4	15.4%

Source: fieldwork data collected in July 2019

3.6 Ethical Consideration

The research ensured integrity, quality, and transparency. The assurance of confidentiality on any information from the respondents was well explained and accepted. The study followed formalities included having approval from the Institute of Social studies (ISS) as well as approval from the institutions responsible for water supply in Tanzania where the research was conducted. The purpose of the research was communicated openly to all key informants and stakeholders. Nevertheless, before starting the research the researcher asked the

consent of the respondent as it is voluntary activities as well as their permission to record or writes down information they provide.

3.7 Limitations

During the research I had some limitations where among them were a delay of getting consents from the Dar-es-Salaam Water Supply and Sewerage Authority which are the formal water provider in Kimara ward, this was due to bureaucracy where I had to go to the main office located in Kinondoni District to start a process. Also, I was not to get respondents from the Ministry of water because it moved to the Capital city of Tanzania Dodoma. Local government election which is going to take place this year was also among the problem where the officer who was out of the office to prepare for the coming election. Due to all above constraints, I faced time limit limitation as I was not able to finish my work on time as I planned, I had to make follow up which took me three weeks to gain consent from formal and informal water providers

Chapter 4: Mapping Water Providers and the Legal Framework

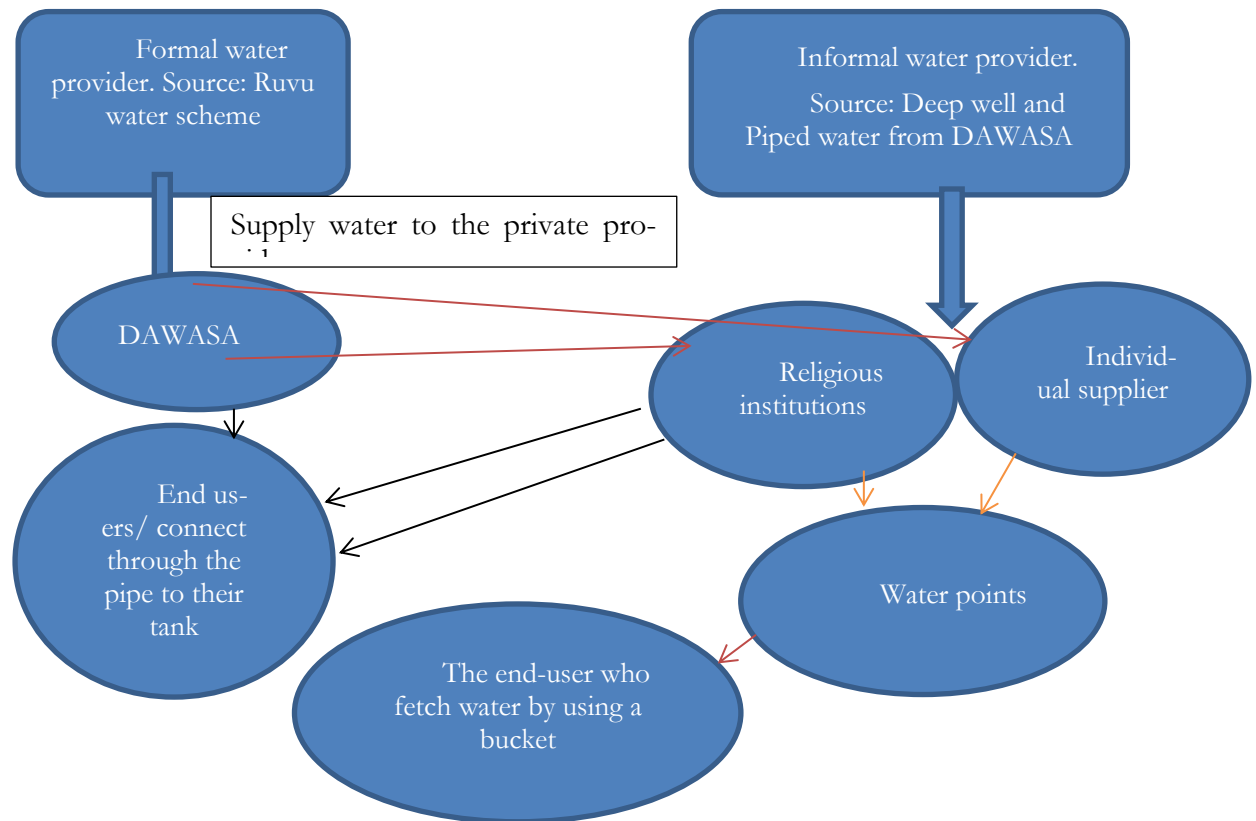
4.1 Introduction

This chapter presents the findings of the study obtained from the interviews, field observations, and deductions from the focus group discussions. The first section presents the water suppliers available in the Kimara ward. The second section looks at how legislation and policy frameworks of Tanzania govern the water suppliers. This will be answering sub-questions where the first was to identify key water providers in Kimara ward, which legal and policy frameworks are governing these different providers, how do poor women negotiate with actors and strategize on where to buy water and from which provider and lastly what clout, if any do poor women have in order to hold accountable some or all of these water providers to account.

4.2 Mapping key water supply actors

The research established that various actors in the water sector act as the key suppliers in various processes that avail water to the consumer.

Figure 2: Key actors in the Water Sector in Kimara ward, the arrows indicate water supply among different sources



Source: Fieldwork findings 2019

The water availed to the consumers finds its way from the Ruvu water scheme following different channels with the first destination point being DAWASA. From DAWASA, the water is distributed through pipes to different supplier's particularly religious institutions, individual suppliers and different water points where people gather to fetch water. The Ruvu water scheme is a public water entity but there are also private water providers who rely on deep wells.

DAWASA was identified as the main supplier because all respondents' use it as drinking water as it was said that by water users and providers,

"We use other water sources for cleaning and toilet, but I always make sure I have one bucket of water from DAWASA providers as a drinking water, other sources in our area is reliable, although we do not use them as drinking water" (FGD1-HW2, Bunyokwa 17/07/2019)

On the other hand, one of the respondents recognized the importance of formal water supplier but did not agree with those who mentioned DAWASA as the main water supplier in Kimara ward as follows;

"I agree on the importance of DAWASA water as the main provider but I have different views, although we all think their main provider because we all use this source as drinking water but I cannot position them in a first-place as we can stay for more than two weeks without water, some of us are still struggling to

access DAWASA water, so despite its importance there is no improvement" (FGD1-HW1, in Bunyokwa 17/07/2019)

This idea of not positioning DAWASA as main water providers in Kimara ward was supported by other people in FGD1 and also mentioned in FGD2 by (FGD1-HW2, FGD2-HW2, HW3 17- 23/08/2019) water supply officer from DAWASA also explained this as follows;

"We have made an effort to ensure all areas of Kimara get our services despite the challenges of infrastructure; at least we have managed to increase accessibility which is important for women not to walk for long distances as before. We acknowledge the importance of water services in this area as we receive a lot of request for water connection" (SO, 6/08/2019 in Kimara mwisho)

Hence, formal water providers seem to focus on an individual in services provision rather than the community.

4.2.1 Women depends on multiple water source

This is the government water supply organization and the main water provider in Dar-es-Salaam. DAWASA stands for Dar-es-Salaam water and Sewerage Authority. In both focus groups, discussion respondents had different views on the main water supply in their area as it differed due to their places. One participant stated:

"Water sources are complicated because we do not depend on one source, I am connected with Dawasa pipe water but I get water twice in a week and sometimes three times in a month so I go to my neighbor to fetch water" (FGD1 –WPR, 17/08/19 in Bunyokwa).

Nonetheless, the majority (10 out of 17) water users mentioned DAWASA as the main water supplier in Kimara Ward but others stated that they use both public and private water suppliers:

"We use both providers as we fetch drinking water and water for other uses, this is because water from the mosque is salt and we cannot drink" (FGD1 –WC, FGD1-HW1, FGD1 – FGD1-HWW on 17/08/2019 in Bunyokwa Subward in Kimara ward).

Despite DAWASA being the main source of water for residents, it was noted that provides its customers with an erratic water supply due to inadequate maintenance by the government. In fact, this finding tallies with those of Nganyanyuka et al. (2014) and Juma, Nuhu and Juma (2018). These researchers established that water from DAWASA is not always available and is characterized by unreliability in water pressure and quantity, with occasional extreme rationing, and routine low pressure over long periods. The result is that customers of DAWASA mostly do not rely on this as their sole source of water. Instead, people look for water from private vendors, from religious institutions, especially mosques and from private deep wells. In the current study, one participant reported that:

"My job (making bricks) requires me to have water all the time so I prefer to use private supplier as it assures me with supply every day compared to Dawasa, I think for me main and reliable water comes from those who have deep well so I

get my water from the mosque" (FGD2-BM 23/07/2019 Kimara mwisho sub ward).

Hence these indicate that whilst most respondents identified the formal water supplies of DAWASA as important, especially because of the relatively good quality of the water for drinking, it was seen as defective in other ways for their overall daily water needs.

4.2.2 Religious Institutions

The research established that the mosques play a vital role in water supply in Kimara ward where they do connect to the household and also have water centers where people fetch water by using bucket, majority of people especial those who are not connected fetch water from the Mosque, also respondents revealed that even those who are connected to DAWASA water fetch water from the Mosque since DAWASA water is not reliable as one respondent highlighted:

“So far I can say Mosque is a reliable source of water in this area, not only because other providers are a bit far from here but also because it ensures we get water the whole week, which is different from other water providers, where DAWASA water comes three times in a week and sometimes even once in a week” (FGD1-HW1 in Kimara Bunyokwa 17/7/2019).

Nonetheless, there were other people who stated that they never rely on the mosques for drinking water due to the high amounts of salt in the water. In the first focus group discussion only three respondents said that they do not fetch water from the Mosque because they have their own well. Although many people rely on this source, some respondents said that Mosque water was salty, so they used it for other household activities but did not use it for drinking or cooking.

“Most people use multiple providers based on their use, I have deep well but I fetch water from those who have public water because of the difference in qualities, mine is salt while I use water from DAWASA for cooking and drink” (FMHH in Kimara Mwisho on 24/8/2019)

Such water has only been suitable for other domestic tasks, like washing clothes, utensils and so forth. There is a need to note that this research mentioned church as one of the water suppliers in Tanzania. Some previous research work such as Marandu (2009) has shown that churches can play a vital role in water projects. This was evident in the Hai district in his study. However, for Kimara ward, the study revealed that churches are not part of the water suppliers. Water users did not mention church as one of the water service providers. Churches could only supply water to people when they are in services where I visited a couple of churches found in Kimara ward including Lutheran and Catholic church for learning on water supply but I found out there were no water supply services, although they have water sources example Roman Catholic church connected with public water they do not sell, however water from the church are used by people who attend services for drink and toilets.

Figure 3: Showing mosque tank and supply pipe



Source: fieldwork July-August 2019

4.2.3 Individual householder suppliers

Individual household supplier refers to the household which connects water to their neighbors for sale or as a gift, these providers emerged in the Kimara community as a service provider, not for the purpose of taking state position of providing water but to cover or increase access to water because the formal sector could not ensure adequate access. As it was shown on figure 2, Individual supplier was mentioned as among of the key actors in informal sector water providers, their source of water is deep-well and connection from the formal providers (DAWASA).

"I have been doing this business for five years now, in the beginning I started to connect pipe water to my immediate neighbor so other people came and ask for connection, I had to improve the well and make sure I get enough water to supply in my neighborhood and create water points where those who cannot afford the connection will also get water. So, for now, I provide direct service to 7 households and I have 3 points including the one which is in front of my house" (said by WWS2 on 16/08/2019 in Kimara Kwabeka sub ward)

During FGD Two respondents revealed to be connected to Individual water supplier and the rest are fetching water from the water point. one of the connected respondents appreciated the connect as she said

"It is easy for the individual supplier to understand and keep providing services when customer delays the payment which is not the case on formal providers where people do not get water when they delay payment" (WWU on 24/08/2019 in Kwabeka sub ward)

These relate to the Batley and Wales idea when they were looking at service characteristics and engagement of citizen that in the provision of water services it is easy for the provider to terminate service when the customer delay or do not

pay for that service on time (2015:3). Hence this idea is real and applicable as it was confirmed by water users and providers that water services can be terminated when the customer/ user fails to pay or violate other rules which among others mentioned is to make the connection to another person without involving the provider.

4.2.4 Local Narrative: Dilemma and issues

Findings indicate that women are responsible for water supply in the household without despite of the fact that some of them are employed and others are not and the payment of water is on their expense as it was said by one FGD1-FHW that, “half of the money I get for day is going to get water and I remain with little which sometimes is not enough for having three meals per day” (Kimara ward 24/8/2019).

Also men consider water fetching as women in a household responsibility, female work which cannot be done by men unless they want work in their work as it was explained by BM in focus group discussion that, “my responsibility is to make sure I get enough water in my workplace and I give enough money to my wife to take care of the household” (FGD2-BM 28/8/2019). This indicates that it is normal narratives that fetching water is gendered; only women and girl child can perform that work.

Conclusively, the efficacy of water supply in Kimara ward depends on who is providing. Reflecting from **figure 2**, it is clear that DAWASA has erratic water supply with unknown times when the water is available. On the other hand, individual suppliers and mosques supply people with water almost every day. This sets a clear indication that the government is not doing enough to ensure that the people tapped to its water services access it sufficiently and at the right time of need.

Figure no.4 showing water supply centre



Source: fieldwork done in July – August 2019

4.3 Mapping the Legal and Policy Framework for Water Governance

4.3.1 Introduction

This part of the research will provide insight on the legal framework in peri-urban areas in Tanzania as well as discussion on the legal framework in Kimara ward as the answer to research question two which was asking on legal and policy frameworks are governing these different providers in Kimara wards. Together with the findings the insight on peri-urban areas in Tanzania by looking at how these areas are presented in the policies followed by a discussion of the findings on legal and policy framework governing these providers and governance of water complaints and deputies.

4.3.2 Insight on water provision in peri-urban areas in Tanzania

The selection of this area of study was because of the experience I have in the water supply but in conducting this study I realized that most peri-urban areas in developing countries have similar characteristics. Most of these places are poor areas without social services and have poor infrastructure as most of them are unplanned areas; these places emerge as a result of the increase in population in urban areas. Peri-urban areas are not recognized as the area of attention in services provision as it is considered as part of urban areas. According to Allen et al, "informal peri-urban practices are at best overlooked and at worst resisted by the regulations, policies and practices that guide and support the formal system" (2006:343) so in giving more explanation on this Allen et al also said that the needs of peri-urban people comes from informal organizations which they referred as, " non-conventional and often officially unrecognized means such as informal operators, privately operated wells, gifts from neighbors, rainwater harvesting and clandestine connections"(2006:334)

Thus, peri-urban areas are included in the figures of water supply covered area given by policies as part of urban Area and more attention on water provision is on poor urban areas. However, in these areas includes low income and home workers face difficulties more than higher-income households as they do not have enough money and power to influence water provision in their household as it was said,

"In here those who have money can easily get water services compared to me, they also have a connection to services providers example one of my neighbor is government officer and he was connected to formal water even before he moved into his house" by (FGD1-WHH in 17/07/2019 in Bunyokwa sub ward).

This also was explained by Allen et al (2006:343) that,

"Low-income peri-urban dwellers and home workers tend to be more vulnerable than higher-income ones, as they often lack the financial and political means to improve their access to water and sanitation services in a manner that is not only affordable to them but also secure in the long term"

Thus based on those narratives peri-urban water-poor still need attention from the formal water supplier and its implementation must be recognized in

formal authorities such as policies and it should be known that these areas adopted the privatization system where water is taken as a commodity which every person or household struggle to afford. The current situation indicate that water supply and management in low income areas needs more support from the formal authorities just as it was explained by Allen in their research conducted in other peri-urban areas in Dar-es-Salaam that “support from the utility and local government in the operation and management of water services in low-income settlements is generally in short supply” Allen et al 2017.

4.3.3 Legal framework in Kimara ward

The study found out that private water providers are being guided by Ministry of Water and Irrigation where those who have well said that they the only legal process they follow is application of a permit to dig or extend wells or borehole digging (**Fig. 4**) in Municipalities as well as use meter to measure the amount of water used when they connect customers in order for payment.

Figure 5: Application for a permit to sinking/digging or expanding a well or borehole

Water Resources Management (Water Abstraction, Use and Discharge)
G.N. No. 190 (contd.)

Form C

APPLICATION FOR PERMIT TO SINK OR ENLARGE A WELL
OR BOREHOLE

The Water Resources Management Act, 2009
(Section 71)
(To be completed in quintuplicate)

To: The Water Officer.
 Basin/Catchment/Sub-catchment:
 Postal Address:

 E-mail: Telephone No.:

1. Name of Applicant:
 2. Postal Address:
 3. E-mail: Telephone No.:

4. Particulars of land in respect of which application is made—
 (a) District: Region:
 (b) Location or Village Name:
 (c) Land Offer No.
 (d) Hectarage
 (e) Freehold/leasehold/right of Occupancy for years
 (other interest):
 (f) Title of applicant:
 (g) Name and address of owner of reversion, if any, other than the President
 (if none, state none):
 (f) Details of other sources of water used on the land.

5. In case a Permit to enlarge an existing well is applied for, was a Water Use Permit
 granted for the use of the water? Yes/No

6. Particulars of Permit for which application is made:—
 (1) Details of land on which borehole is intended to be sunk:

 (2) Description of borehole/well (diameter, depth):

Source: Ministry of water and irrigation

Among the seven water providers who were interviewed, 4 of them do not use the meter to determine payment and claimed not to be aware of that legal requirement and 3 of them use a meter but do not know what the law indicates on charging on the meter so they use bargaining on the payment.

Public water providers follow the National water policy and Water Supply and Sanitation act which is the one established DAWASA in section 19 (a) of Water Supply and Sanitation Act, Cap 272. So, as water providers follow rules and regulations and make sure all who are connected are abided to the rules of water supply and sanitation.

Although Tanzania National water Policy prioritizes women in domestic water participation the study revealed that some women are not aware of the water policy, rights to water or their right to enquire in the case when they face water challenges as they are not aware of the presence of the water committees in their area. Out of the 26 participants interviewed, only 12 seemed to be aware of water policies. This explains why they did not know whom to hold accountable as it will be later seen in the accountability section. All in all, the private water suppliers seem quite responsible to people connected to their waters one respondent reported that:

“As water supplier, I always take seriously my customers complains because selling water is my only source of income as a single mother of three kids, I need to improve my service so as I can get money for school fees and food. I have five connected customers and three water point, I do service (cleaning tanks and repairing pipes to make sure there is no water leakage) every month” (MWS, on 21/08/2019 at Kwakichwa in Kimara)

The services mentioned above are done to make sure all pipes are good and clean as she explained that sometimes people cut the pipes to access water which leads to a shortage of water to her customers.

4.3.4 Governance of water complaints and disputes

Water governance is under the Ministry of water which gave mandates local government authorities which are district and urban authorities to ensure water governance at the local level. Among of the responsibilities are mentioned in Section 38 (4a-d) of The Water Supply and Sanitation Act, No 12 of 2009 that, local government authorities shall solve disputes occurred community and water providers be it formal or informal in order to ensure safe environment for both, service users and providers (URT, 2009:454).

The main dispute seems to occur in these area touch both land and water where during water supply some of the pipe pass through other people land without any information which brings misunderstanding, as it was explained by former ward officer that, "we do not receive many complains about the water supply unless ones connect water and pass the pipe in other people area (neighbor) without information where others used to cut the pipe. Most of the disputes are directed to DAWASA" (FWR, 24/8/2019 in Kimara ward)

4.4 Conclusion

This chapter presented discussion on the first and second sub questions which were about key actors in water provision in peri urban areas as well as mapping of legal framework, in the finding it was revealed that most of peri urban areas are not legally identified as their counted as part of the urban areas, therefore, there is no clear data on water supply coverage in the peri urban areas

Chapter 5: New insights: Women and Water in Peri-urban areas

5.0 Introduction

This chapter will provide in-depth discussion on the key issues based on the findings on women and water access, supply and accountability in peri-urban areas by making an insight on water provision in Peri-urban areas in Tanzania which will provide more explanation and make more sense of the third and fourth sub-questions, Also will look at water and power relation in the household which will focus on looking at the norms and social structure of the societies and how it impacts women, provider, and user's accountability and its effect.

5.1 Accessibility and Affordability

The findings indicate that Accessibility of water supply in Kimara ward has improved where it was observed several water service centers near the household, based on the meaning of accessibility given by Kansal et al (2017:493) that "Accessibility can be measured by extent of service coverage offered by water supply utilities and total number of people served to distance from collection". Having different providers indicate that, accessibility has been approved and helps to save women's time of walking for long distance in searching for water.

However, the findings shows that respondents were relating accessibility with other variables not only coverage and distance as it was defined by Kansal but also affordability where most of them complained about high cost of connection and water charges end of the month because most of the people in this area comes from low-income household as it was narrated in case study 1. This idea also appeared in the research done by Allen et al (2006:343) where they mentioned "affordability, sufficiency, regularity, quality and safety" as among the things to pay attention to when looking at accessibility. Hence the ability to pay and connect water from suppliers was taken as among the forms of accessibility.

In both FGD respondents did not separate accessibility from affordability where they mentioned DAWASA system of water supply as example; one needs to pay for pipe and other materials needed to be connected so only those who can afford are connected, in both FGD which had total number of 17 only 2 people were connected by DAWASA and 5 are connected, informal water suppliers.

Also, the study revealed that informal water supply is reliable as it can ensure service provision all the time compared to formal as it was said,

"In terms of reliability I can say public providers is not reliable at all in our areas, only a few people are connected and we get water twice in a week or two weeks, there is a time where we drink water from a well because we have no alternative" (FGD1- WPR in Bunyokwa 17/7/2019)

The findings of Brett et al (2007) concurred with a previous study conducted in Nigeria which showed that there is an increased chance of people using water of poor quality as long as it is accessible and closer compared to water of good

quality that is quite far (Nyong and Kanaroglou 2001) which relate to the situation of Kimara where people prefer to fetch water from providers who are near their home despite the fact that the water is not safe for drink.

Table 4: Water Provision Modalities in Tanzania.

Providers	Frequency	Time (opening- closing)	Users
Public (DAWASA)	3 times per week	No specific time	Individual household connected
Individual	4 – 5 days	9:00am - 4:00pm	Household and sell to those who are not connected
Church & Mosque	Daily – deep well water	6:00am- 8:00pm	Connect directly to household and those who fetch by using a bucket

Source: Research work findings 2019

5.2 Participation and Power relation in the households

In this part, the power concept will be viewed based on the formal domain of water supply which will focus on looking at women's power to participate or influence governance at the local level. "Water governance can be understood as a system of actors, resources, mechanism, and process that mediate a society's access to water" (Masanyiwa, 2014:920). Based on the finding's women did not participate in water governance and they were not aware of water committees as I asked them if there is anyone who is in the water committee. Also, in other reviews, I realized that most of these committees are active in rural areas more than an urban area, so when it comes to water problem information has been taken directly to the ward committee which is an overall committee.

Tanzania water supply policy (NWP) has emphasized women's participation in all levels of water governance and supply but the study indicates that these emphasize was not in practice where women in peri-urban areas do not only participate in water governance but also, they are not aware of the policy issues. In Kimara majority of interviewed women are not aware of the Water policy and its implementation despite of "the current emphasis is on participatory approaches involving users, planners, and policy-makers at all levels, recognizing the role of women as providers, users, and guardians of water, and seeing water as an economic good" as it was explained by Masanyiwa (2014:921)

This also was viewed as a result of power as the ability to influence and affect changes, as it was discussed above low-income households are more vulnerable in access to water than high-income households. This notion can be the same in making an influence on water supply and management,

5.3 Accountability; social accountability

According to Katomero (2017:2), the lack of an agreed definition of accountability made the term remain a 'buzzword', though "...organizations have been linking accountability with the improvement of public service delivery" for some time. Although, other qualities can be added to that understand in order to make the meaningful accountability where transparency and inclusion should be added to it, based on the study conducted in Kimara ward water users and informal water providers seem to work together as a seem in improving quality of service compared to formal water providers this was due to different reasons such as lack of awareness and power.

The study finding reveals that many people are not aware of their rights to water and holding accountable those who are responsible for water supply rather than making sure they get water by themselves and count it women's failure to take care of the family in case of absence or water scarcity. Thus, women are held accountable in the household when it comes to water scarcity, but they do not know where to direct their complaints and if they seek the services of DAWASA, they are compelled to pay as one female participant reported that:

"I do not have DAWASA customer service number although am their customer for past 5 years, I always go to the office when I need their service and I pay for that service otherwise they do not come to fix the problem" (said by WWS1, at Kimara Matangini sub ward on 14/08/2019).

The respondents did not know if they have the right of holding local government leaders as well as DAWASA officers accountable in case of poor water services and few of them have knowledge on water committee although there is no water committee in the area and majority are not connected to the public water providers and in case of water scarcity, women suffer more where they have to walk for a long distance to get water since they cannot afford to buy from a tanker. Yet, an officer from DAWASA reported that:

"Kimara zone office has emergency services where the numbers are available for people to call whenever they face water problems and they also announce if there will be a shortage of water supply on a given period" (said by CSO on 6/8/2019 at Kimara zone office).

However, it was noted that the service is only available for people connected to public water. Moreover, responses from the FGDs showed that most of the time, there is even no one to receive their calls in case they call for water issues. For those who obtained water from private suppliers, they had to just hold them accountable and it seemed even easier than facing DAWASA offices as one participant stated:

"It is easy to face informal water supplier than DAWASA, I can go as my neighbor who provides water in case there is water problem such as scarcity or when water is dirty which sometime occurs and get an answer but it is not easy to go to DAWASA" (FMHH, 24/08/2019 Kimara ward).

Private water suppliers also had the same answers with slate different where for them water shortage occurs when there are power cut and the day of cleaning water tanks. Tank cleaning was mentioned by water providers as among the process of keeping clean and safe water where family members always do the cleaning and on a few occasions water providers hire other people to help them

with cleaning. Informal water providers clean their tank after every three months as it was reported by (WWS1 14/08/2019 in Kwabeka sub ward) but the time frame also differ among different actors, According to WWS1,

"I do clean my tanks once after three months and this has been done by family members, me my husband and our elder children, during this time I have to tell all my customer two days before so that they can reserve enough water"(WWS1 14/08/2019 in Kwabeka sub ward)

The individual suppliers are close to the household, so it is to be answerable when the problem occurs based on their relation and closeness compared to the public water service providers.

The discussion above indicates that – at least in Kimara ward - women do not participate in most meaningful ways in decision-making when it comes to water management. This is despite NWP emphasizing women's participation as key water users in local households. Their power to question when it comes to water quality and quantity seem to be low due to different circumstances such as culture and norms but also lack of social accountability, which acts together to bring changes in Kimara ward where based on the findings of this study, access to water can be a very individual struggle for many women.

In this sub-section, the discussion was focused on social accountability about water supply and access in Kimara, as per sub-question 4: "What clout, if any, do poor women have to hold some or all of these service providers to account?" Social accountability was earlier defined as, "the extent and capability of citizens to hold the state accountable and make it responsive to their needs" (World Bank in Batley and Wales, 2015:1). However, in this area accountability has been individualized, which makes it very difficult, especially for poor women to reach out to formal water providers as their cost-oriented outlook often seems to reduce the relevance of their social accountability, which has to some extent been neglected.

Based on Batley and Wales, social accountability is a more practical form of accountability which can make providers more accountable to users. As they explain, "performance in service delivery depends not only on resources and the capacity of service providers but also on their relationships with users (i.e. citizens) and different levels of government, what demands providers face and how they are monitored and supported" (2015:1). In this study, it can be assumed that there is no or little social accountability for water supply, especially towards the poorest women, given the economic differences between households. This means that poor women struggle even more than others, for reliable access to safe and clean water, and often have to make these efforts on their own.

5.4 Conclusion

This chapter discussed the third and fourth sub-questions, where the main point which can be taken out of this discussion based on the findings and related literature, is that women in peri-urban areas need to be empowered economically so as they can afford water as they mentioned that accessibility depends on affordability, also there is a need to improve women participation in water supply

and management and create awareness among them on their power to hold leaders, especially local government leaders, accountable.

Chapter 6: Conclusions & Recommendations

6.0 Introduction

This chapter provides the summary of the research alongside the conclusions that can be derived from the findings of the study. Also, the chapter summarizes the imitations experienced during the research as well as the recommendations for future research in the same area of study.

6.1 Conclusion

The main goal of this paper was to get knowledge on women and water supply, access, and accountability in Kimara ward, based on this research there is an increase in water supply in Kimara ward as indicated in the findings where people do not depend on formal water supply only but also other supplier which give chance for poor women to get more option/negotiate when it comes to water access, where the finding indicates they can access water to meet their needs on a reasonable prices and short distance by choosing appropriate water providers for them.

Also the findings indicated the presence of different water providers, dived in formal and informal providers where the formal providers seems like the main provider only because majority use water from formal provider for drink hence despite the negotiation on water access, poor women still face challenges in accessing drinking water in Kimara as the finding shows that most of the informal providers do not have safe water enough for them to drink unless for those who provide water from formal connection. This also relates to other research conducted by Juma et al (2018) in Kigamboni peri-urban setting in Dar es salaam. What makes this different from them is that in Kimara ward Mosques are among the water providers which was mentioned as a reliable source and affordable source.

Also the study findings indicate that there is legal and policy framework governing these actors in water provision where both formal and informal water providers are under Water Supply and Sanitation Act, where formal water provider operates under Dar es salaam Water Supply and sewerage Authority and Energy and Water Regulatory Authority while informal providers are works with the Ministry of Irrigation and Water for registration and permission to dig a well and borehole for individual or group . Legal and policy framework also adopted different international principles (Dublin) on the recognition and involvement of women in water services as the acknowledgment of women's role in water provision in the household. However, the findings indicate that some women/communities are not aware of water policies and how they work.

On the other hand, findings indicate that poor women strategies in water access in Kimara area rely on affordability, these areas have different water providers and poor women especial those who cannot afford the connection fetch water from different providers, the main factor mentioned being affordability. So, women's strategy is to get more water for household use from informal providers

which seem to be cheap and found nearby and buy drinking water from formal water providers.

This study observed that women are weak when it comes to water matters as they lack the clout to hold formal water providers into account when there is a problem in water services, the main reason was lack of awareness among poor women on the laws and policies governing them.

Along with the findings of this research, it is worth pointing out that several limitations befell the research process in different magnitude although not at a level that would influence the reliability and validity of the findings. First there were delays in obtaining the consents from the DAWASA officials which compelled me to go the main office in Kinondoni district to seek the consent to interview them. Another limitation was the availability of the officials as per the scheduled time for the interview. Most of them were absent from their offices due to a forthcoming election. Nonetheless, I would still schedule another time when they would be available. Finally, there was a challenge in transcribing the interviews to English language. Tanzanians speak Swahili as their official language and therefore, all the participants answered their questions in Swahili. Thus, to ensure accuracy in the transcription, I had another proofreader proficient in bilingualism (could speak fluent Swahili and English).

6.2 Recommendations

To meet these challenges policymakers should do a proper study in peri-urban areas and incorporate these areas in urban or recognize these areas, provide data on the water coverage to understand the magnitude of the problem and include them in planning

The in-depth survey should be conducted in peri-urban areas to get the proper figure on water supply in urban areas or should put the peri-urban data separate as it does in rural areas to understand the magnitude of the problem and find the proper solution.

Local government should prepare awareness program which will reach out all women in peri-urban areas on the laws and policies in a simple language for them to understand and start to participate in water management which will also involve the formation of water committees

Formal water providers should provide a clear and easy way of communication between them and water users in case of water scarcity or problem without facing any cost to improve accountability in the areas.

Connection cost should be reconsidered to allow poor women in peri-urban areas to afford and get connection informal water providers or the formal water provider should establish water kiosk/centre near Bunyokwa, Kwakichwa and Kwabeka ward as it was found out that there are no kiosk/water centers for DAWASA water other than the informal supplier

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Appendices

Codding Respondents			
Respondents	code	Household size	status
FGD1- women caretaker	FGD1-WC	3	Married
FGD1-housewife	FGD1-HW1	8	married
FGD1-Primary Teacher	FGD1-WPR	2	single
FGD1- House wife	FGD1-HW2	6	Married
FGD1-Women Head of house	FGD1-WHH	3	single
FGD1-housewife	FGD1-HW3	5	married
Focus Group Discussion 2 - 23/07/2019			
FGD2 - women entrepreneur	FGD2-WI	5	Married
FGD2- House wife	FGD2-HW1	4	married
FGD2 - House wife	FGD2 - HW2	8	married
FGD2 - Men Teacher	FGD2 -MT	4	married
FGD2 - Women Teacher	FGD2- WT	5	single
FGD2- House wife	FGD2-HW3	5	married
FGD2- Business women	FGD-BW	2	
FGD2 - Business men	FGD2 -BM	6	married
Interviews 24/08/2019			
female head of the house	FMHH	5	Widow
Former Ward Representative	FWR	5	married
women water user	WWU	7	Divorce
DAWASA supply officer in Kimara zone Interviews			

Customer service officer	CSO	Date	6/8/2018
supply Officer	SO	Date	6/8/2018
Private Provider			
Mosque Male service provider	MSP		31/07/2019
Mosque Male service provider	MSP 2		7/8/2019
mosque Women service provider	WSP		7/8/2019
Individual supplier			
women water supplier	WWS 1		14/08/2019
women water supplier	WWS2		16/08/2019
male water supplier	MWS		21/08/2019