GORVERNANCE OF WATER SERVICE DELIVERY AMONG LOW INCOME EARNERS IN MVOMERO DISTRICT COUNCIL

GORVERNANCE OF WATER SERVICE DELIVERY AMONG LOW INCOME EARNERS IN MVOMERO DISTRICT COUNCIL

By

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CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled; **Governance of water service delivery among the low income earners in Mvomero District council,** in partial /fulfillment of the requirements for award of the degree of Masters of Public Administration of Mzumbe University.

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Major Supervisor

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Internal Examiner

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I, **Danford Lyimo,** declare that this thesis is my own original work and that has not been presented and will not be presented to any other university for a similar or any other degree award.

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DEDICATION

I dedicate this work to my wife Gloria and my late father Michael Lyimo and son Albright

ABBREVIATIONS AND ACRONYMS

COWSO	-	Community-Owned Water Supply Organization
GWP	-	Global Water Partnership
IWRM	-	Integrated Water Resources Management
LGA	-	Local Government Authority
MBK	-	Maji Bora Kibera
MDG	-	Millennium Development Goals
MSPs	-	Multi-Stakeholder Platforms
NAWAPO	-	National Water Policy
NGO	-	Non Governmental Organization
NWC	-	Nairobi Water Company
PPP	-	Public Private Partnership
PWV	-	Private Water Vendors
SNV	-	The Netherlands Development Organization
SAKOVICHA	-	Sangasanga,Konga,Vikenge and Changarawe
UN	-	United Nations
UNDP	-	United Nation Development Programme
UNICEF	-	United Nation of Culture and Education Funds
WUAs	-	Water Users Association

ABSTRACT

Water is an essential hub in poverty reduction and for attaining sustainable goals in developing countries. The study assesses governance of water service delivery among low income earners in Mvomero District. The objectives of the study were, assess transparency, accountability, and rule of law in governance of water in Mvomero District; explore the existence of access and citizen satisfaction of water service delivery in Mvomero District; and lastly, examine the effects of governance of water on water service delivery in Mvomero District.

A case study designed was employed to entail four administrative villages of Mlali, Kipera, Changarawe and Vikenge, which increases the researcher's knowledge through the study of many different aspects and detailed observation of various phenomena. Also 100 respondents were chosen as sample size, which include 88 household water customers, 8 village water committees and 4 Village Executive Officers. The researcher used both non probability and probability sampling techniques, whereby purposive sampling was used to 8 water customers in Focus Group Discussion and 4 Village Executive Officers in personal interview, whilst systematic sampling was used 80 water customer households in household questionnaires and lastly stratified sampling was used to select 8 village water committees in household questionnaires and the 4 villages of the study. A data analysis technique used both qualitative and quantitative approaches. Microsoft excel was used as an analysis technique to summarize and present data in charts and graphic forms. Variables were analyzed through frequencies and percentages.

The findings illustrate the increased level of transparency and accountability by 95% and 75% respectively. Equality before the law was growing by 93% due to the new registration constitution of water users called SAKOVICHA. The study revealed 26% of respondents at Kipera-Mkuyuni walked a distance of more than 400m in turn on water taps. The study concluded that there is potential improvement in transparency and accountability levels, also in-house connection cost is reasonable to the customers. The study recommends installing water meters to every water customers whereas it increases water revenues to the community water organization.

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CHAPTER ONE

THE GENERAL CONTEXT OF THE STUDY

1.1 Introduction

This chapter covered eleven sections, section one is about Background of the Study, section two was Background information of the Mvomero district, third was statement of the problem, section four was objectives of the study, section five covered research questions, section six was significance of the study, section seven was scope/delimitations is the limitation of the study, section eight was limitations of the study, definitions of the key terms and concepts, organization of the study and lastly summary of the chapter.

1.2 Background of the Study

Water plays a key role in sustainable development, including poverty reduction. Over the past decades, water consumptions and misuse of the resource have been intensified severely which led to water shortages, water quality degradation and aquatic ecosystem destruction, hence affecting projection for economic and social development, political stability and ecosystem integrity (UNDP, 2007a). Given the importance of water to poverty alleviation, human and ecosystem health, the management of the water resources becomes of central importance (Hope, 2007). Currently, over 1 billion people lack access to water and over 2.4 billion lack access to basic sanitation. Access to clean water is lowest in Africa, while Asia has the largest number of people with no access to basic sanitation. This water crisis is largely our own making through reflective failures in water governance rather than the natural limitations of the water supply or lack of financing and appropriate technologies (UNDP, 2007b).

The government of Tanzania passed several water reforms includes the National Water Sector Development Strategy (NWSDS) to implement the National Water Policy (NAWAPO) of 2002.The emphasis is on IWRM, which is also replicated in the Water

Sector Development Programme (WSDP) 2006-2025.The strategic background for the implementations of plans and interventions for the achievement of national goals were supported by WSDP through involving development stakeholders in actively participating and support the water policy. The NAWAPO highlight the water resources in Tanzania should be structured in participatory and representative forums from the National level to the basin management levels include National, basin, catchment, district and community or water association level (IUCN Eastern Africa Programme, 2003). The NAWAPO remind us that communities are responsible for full cost recovery in the process of the water installation schemes, as well as covering costs for daily operation and maintenance. Furthermore, water service sustainability is not only designed technology, but also the ongoing availability of clean, affordable and accessible potable water. Mvomero district community has anxious that cost recovery can be met with major reform in water governance. By improving water governance, whereby the investment environment also will improve as transparency, accountability, participation and inclusiveness will be efficiently affected and addressed through rule of law (Sigareti, 2009).

Water resource is one of the basic priorities for sustainable development among the low income earners in Mvomero district council. The status of most water supply projects in rural areas is poor. Most villages have non-operational water systems and therefore rely on open traditional sources, such as hand dug ponds or seasonal rivers (with water delivery via pumps or gravity); boreholes and shallow wells fitted with hand pumps. Many projects were constructed as long ago as the 1950s. Some have outlived their design life and are in bad condition or not working at all due to mismanagement coupled with inadequate government funding. Less than a quarter of the population in the 5 Districts in Morogoro region includes Mvomero district has access to drinking water. For instance, in Mlali ward and Mzumbe ward, the number of functional water points is 29, and 26 not functional out of 55 water points in Mlali ward, while in Mzumbe ward functional water points are 11, and 15 not functional out of 36 recognized water points respectively. Therefore the percentage of full coverage met by functional (WPT) in

Mlali and Mzumbe wards is approximately 37.44% and 16.72 %, respectively (Netherlands Development Organization [SNV], 2007). Inadequate water supply in rural communities affects livelihood security, such as low labor productivity and continuous school absenteeism, which arising from the poor health of villagers who do not have access to safe water. There are frequent ethnically based water use conflicts livelihood based conflicts, such as farmers and pastoralists living in the same area (Ngana, Mahay and Cross, 2010). Furthermore, SNV deal with problems of water point functionality by focusing on supporting communities to own and operate their own water supplies and facilitate accountability in rural water services (SNV, 2012).

Within the previous ten years ago, the Tanzania government had been involved in the provision and maintenance of water points in the rural areas without any financial contribution of the capital cost from water customers, in which customers contributed their manual work and available local material for project construction. In respect of dysfunctional water points in Mvomero District Council (MDC).The baseline was conducted in four administrative sample villages of Vikenge,Melela,Doma and Hembeti in MDC focusing on effectiveness and efficiency of water facilities, accountability and transparency of water points management community participation and responsiveness, equity over rule of law and inclusiveness in the whole process. The overview results from that study revealed poor planning and management at all levels (Users, Enabler and Provider) was primary correlate of non-functionality. Also the challenges from the study were; water service financing has been related to supply side investment for years, which is no longer sufficient in community water scheme demand management. It's clearly stated that, communities are responsible for operation and maintenance, but insufficient dissemination of cost sharing modalities has contributed into poor management schemes. The communities faced insufficient financial management skills to support them in planning for water service rate collection system, managing operations and maintenance and auditing; and implementation of the NAWAPO, which explains the management modalities of community owned schemes, is not clear at user level where the community could easily account for inclusiveness, accountability,

transparency and rule of law of the existing structures, system and operation to affect the efficiency of the proposed management; and lastly, there is weak collaboration between the district and a number of local civil society organization to deal with governance issues such as community mobilization, facilitation, awareness rising of community schemes (Sigareti, 2009). The major problems affecting the provision of water services in Tanzania to mention few include inadequate funding for construction of new infrastructure and maintenance of existing water schemes, destruction of water source catchment areas due to deforestation, poor water quality and sanitation services, socio-cultural values and lack of appropriate working tools (Madulu, 2005). Therefore, in this regard, the position of the water policy reforms which puts the ownership of rural water facilities and resources at the lowest level possible with the communities and the clear dysfunctional of water points are provoking a road map in assessing the accountability, transparency and rule of law in water service delivery among the low income earners in Mvomero District.

1.3 Statement of the Problem

According to Kothari (2004), described the research problem as the difficulty which the researcher meets during the study in both theoretical and practical perspectives so as to seek for a sustainable way out similar. The following problem is discussed here under;

The Government of Tanzania has aligned its policy framework with the international processes as described in section 2.1. The National Water Policy of 2002, the National Water Sector Development Strategy for 2006-2015, and the Water and Sanitation Act of 2009 all put in place a decentralization of rural water points. The Act of 2009 puts the ownership of rural water facilities and resources at the lowest level possible; with the communities. The entity responsible for management is a Community-Owned Water Supply Organization (COWSO). These COWSOs are to be registered with the District Council; in the Water Act the District has been given a regulatory role. The District is supposedly responsible for large capital investments – while the COWSOs are responsible for small investments, repairs and maintenance costs. Thus, creating the

need to collect money for water services provided. In line with global trends, water becomes an economic good that users have to pay for (the implementation of WPF-IF, 2012).

Despite efforts taken as highlighted above, one of the major challenges facing the water sector is the sustainability of Rural Water Service delivery. The Water Point Mapping exercise conducted in 2012 by the Government of Tanzania, international organizations, including The Netherlands Development Organization – SNV, Water Aid, UNICEF and others; revealed that with an estimated 65,000 rural water point's national wide, 30,000 are non-functional (46%). These could be able to serve about 7.5 million rural Tanzanians if all these non-functional water points are brought back to functionality. By becoming functional they would increase to clean and safe water sufficient to meet the Millennium Development Targets for Rural Water Supply.

In-district studies confirm that there is limited correlation between the Local Government Authority (LGA) planning/ implementation and the actual situation with regard to water point functionality, leading to inefficient and ineffective planning and implementation and inefficient utilization of major capital investment. This results in limited access to water in many villages. Water point mapping commissioned by SNV in Mvomero District in 2007 has shown a 42% dysfunctionality of water points with the distribution of water points unequally spread over the district. Some wards have as little as one functional water point (Meelker, 2011). Based on the latter discussions; the study is focused to assess governance issues encountered during the provision of water service delivery among the low income earners in Mvomero district.

1.4 Research Objectives

Kombo and Tromp (2006) argued that objective is a specific statement relating to the defined aim of the study. The study was guided by the following general and specific objectives.

1.4.1 General Objective

The general objective of the study was to assess the governance issues in provision of water service delivery among the low income earners in Mvomero District.

1.4.2 Specific objectives

According to Kombo, and Tromp (2006) defined specific objectives as the goals of the study, which are measurable and achieved throughout the study.

Specifically, this study is designed to;

i. Assess transparency, accountability and rule of law in governance of water in Mvomero District.

ii. Explore the existence of access and citizen satisfaction of water service delivery in Mvomero District.

iii. Examine the effects of governance of water on water service delivery in Mvomero District.

1.5 Research Questions

According to the study of Msabila and Nalaila (2013) generally, research question refers to align with specific objectives which guide data collection.

The following research questions were used as a road map for this study;

i. How underpinning concepts of transparency, accountability and rule of law operate in the governance of water in Mvomero District Council?

ii. How do the access and citizen satisfaction instrument in water service delivery satisfy the low income earners?

iii. What are the effects of governance of water effects on water service delivery in Mvomero District Council?

1.6 The Scope, Limitation and Delimitation of the Study

This part discussed the scope; delimitation and limitation of the study as follows;

1.6.1 Scope and delimitation of the study

Msabila and Nalaila (2013) defined scope as the margin of the study in which a researcher is bounded in terms of subjects and area in which a research is focused.

The scope of the study was conducted at Mvomero District in the selected villages of Vikenge, Changarawe, Kipera, and Mlali with selected 100 population samples. These villages were within the Mlali Division, as one of the four notably divisions in Mvomero. The study includes Ward Executive Officers; Village Executive Officers; Village administrative water committees and consumers. It is focused on governance of water service delivery among common member households. The study was activated by the continuing ACE (Africa, China and Europe Intensive Summer Programme) (see appendix i and ii) which initiated by Professor Kamuzora in 2014, whereby the program focused on governance, researches and technology. The researcher participated in ACE program and interested in water governance as the study theme. The study does not associate with other villages in Mvomero district, which were not initiated decentralized water systems under water governance. The study employed household survey, interviews and focused group discussion. Likewise, in selecting a small sample size of 100 populations of the mentioned villages in the field conserve time schedule and diminish unnecessary costs during research processes. Thus, the researcher collects reliable and valid data as scheduled in the time frame.

1.6.2 Limitations of the study

According to the study done by Simon and Goes (2013) defined limitations as issues which interfered the study without the plan of the researcher and if we're not controlled, sometimes affect the drawn conclusion.

The limitations of this study include; financial constraints stand as one of the reasons in covering the study and surveying to the selected samples in the field. The fund was used for food throughout the field visit, stationary and transport. The researcher is self sponsored, and hence seek financial assistance from siblings and other family members to cover the cost of field research. Similar to that, the researcher was supported by the ACE program approximately Tshs 150,000 which was used for preparing questionnaires and interview forms.

Lastly, data inaccessibility; Most of the respondents hides necessary information's especially from the village officials due to existed bureaucracy in Local Government Authority. Therefore, the researcher minimized the rate of data inaccessibility through the following procedures in attempting permission letter to conduct research in Mvomero District Council, which gives the researcher ample time to fulfill the planned schedule in research procedures. The official permission letter simplified the easiest way of collecting data throughout the field.

1.7 Significance of the Study

This part is projected to describe the significances of the study at the knowledge level, as follows;

i. To knowledge level; this study is expected to motivate other researchers to increase knowledge and provide a-up-to-date information on urban and rural water supply system and its adverse impacts on lower income earners. Also provide as a motivation material for working paper to policy makers in the water sector and the Non Governmental Organizations. The study serves as benchmark data for any further investigation and also as a useful material for academic purposes.

1.8 Definitions of Key Terms

In this study, the researcher utilized a number of concepts such as; governance, Low income earners, water governance and water service delivery.

Governance; Governance ‘in its general sense refers to the processes and systems through which a society operates. It relates to a broader social system of governing, which includes, but is not restricted to, the narrow perspective of government as the main decision-making political entity (Hoekstra, 2011). It is a complex process that considers multi-level participation beyond the state, where decision making includes not only public institutions, but also the private sector, civil society and society in general.

Low income earners; is termed as a large percentage of the population who live on under $1 or $2 per day in third world countries. Low income earners are of two categories, specifically, the low income earners who have no gainful employment and the low income earners who are employed junior workers in government and others in private sectors. They can also be self employed in which spend a large proportion of their incomes on food, may lack access to basic infrastructure and owned few productive assets (Banerjee & Duflo, 2007; Omwenga, 2013).

Water Governance; Is an interchangeable participation between various institutions, political, economic and social processes through which governments, private sector utilities and civil society make decisions about how best to use, allocate, develop and manage water resources (United Nations Development Programme [UNDP] (2014).In a more clarification as Roy (2011) defined water governance as refers to formal and informal processes that allow for the determination and negotiation of objectives, setting of standards, and resolution of disputes among disparate voices in order to address challenges and meet objectives at local, sub-national, and national levels.

Water Service Delivery; is the provision of access to water in a way that meets a set of key indicators (or norms). Taken together these key indicators define the service. Moriarty (2010) defined water service as a focal point on the delivery of water service to

people. A theoretical difference is made between the service itself, heavily defined as the quantity of water of a given quality, accessible by users, and the system (hardware and software) used to deliver it. In practice, the two are often closely related. Most known water service delivery are borehole and hand-pump operated at the rural community level and professionally managed network of household taps.

1.9 Organization of the study

The dictionary defines the organization as something that has been organized or made into structured entire (American Heritage Dictionary of the English Language, 2000).

The study is organized into three chapters. Chapter one is an introductory part of this proposal, which introduces and familiarizes the research problem by giving the background of the study, the statement of the problem, research questions, scope and justification of the study.

Chapter two holds explanations about two parties to literature review made in this proposal, the first part of the review is theoretical literature and the second part is the empirical literature review from which the researcher establishes a gap that which was filled by the finding of this study. Lastly the part ends with Synthesis of the study; Identified literature review gaps; and conceptual framework.

Chapter three — methodology, this chapter explains the design of the study and the techniques applied in selecting study area, sample and sample size (population), data collecting, data analysis, validity, reliability and ethical issues.

Chapter four present Discussion and Presentation of findings, therefore it explains respondent's portfolio of the water customers and the water staffs, results and analysis in assess accountability, transparency and rule of law; explore the existence of access and satisfaction of water service delivery; and the effects of governance of water service delivery in MDC.

Chapter five highlights Summary of the findings, Conclusions and Recommendations. The chapter starts with a summary of the findings in the assess transparency, accountability and rule of law; the existence of access and satisfaction of water service delivery; and the effects of governance of water on water service delivery in MDC. Conclusions, part previews the general purpose of the study with the existing policies. Lastly, recommendations sub parts of the study which links opinions of the researcher from the specific objectives for further study.

1.10 Summary of the Chapter

This chapter has introduced the study that sought to assess the governance of water service delivery among the low income earners in Mvomero District Council. Specific issues that have been explored in this chapter include; Background of the study; Statement of the problem; Research Objectives; Research Questions; Scope/Delimitation and Limitations of the Study; Significance of the Study; Definition of Key Terms; Organization of the Study and lastly Summary of the Chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature review entails what other people have done or conceptualize on the same topic. The major areas covered include Theoretical, Empirical, Conceptual framework and hypotheses. The theoretical part of the literature review covers the general information collected from different sources on the same topic.

According to the study done by Creswell (2012) defined Literature Review as a written summary of journal articles, books, and other documents that describes the past and current state of information on the topic of the research study.

Why is this review compulsory? Many reasons are considered including these; Conducting a literature review strengthen research skills of using the library and being an investigator who follow leads in the literature, all useful experiences to have as a researcher; Reading the literature helps the researcher to learn how other educators compose their research studies which are useful examples to follow steps and models in the literature; and additional, by conducting a literature search using computer databases, the researcher will develop skills in locating needed materials in a schedule time framework (Creswell, 2012).

In this chapter the specific issues to be covered include; Theoretical Literature Review guided by reviewing the incomplete contract theory which suggests that inefficient outcomes in water supply can be understood as a function of incomplete contracts; and Transaction theory suggests that the complete specification of water rights and contract enforcement is problematic; property right which is the rights to use in resource. Empirical literature summarizes information cited from different authors who studied similar topic in the governance of water service in the global view, Africa and Tanzania.

2.2 Theoretical Literature Review

Theory can be described in many ways. Mautner (1996) defines theory as 'a set of propositions which provides principles of analysis or explanation of a subject matter. Even a single suggestion can be called a theory. 'Theories preview the indicators and examples of what is included in the framework (Kombo and Tromp, 2006).

2.2.1 Theoretical Framework Guiding the Study

The study is guided by the theory of incomplete contract and property right theory as follows;

Incomplete Contract Theory

The theory of (incomplete) contracts was developed by Hart and Moore (2006) who states on the idea that a contract is a reference point for parties' feelings of entitlement, and that feelings of entitlement affect contractual performance. Henceforth, Araral and Yu (2010) summarized the theory of incomplete contracts applied to water governance, which suggest that; inefficient outcomes in water supply can be understood as a function of incomplete contracts; that contracts cannot be fully specified (i.e. obligations of both parties are not fully specified for all contingencies and is informationally incomplete or fails to describe an efficient set of obligations in each possible state of the world); and if a contract can be renegotiated, it can be made more complete in the future. Similarly, the theory of transaction cost – or the cost of an exchange - applied to water governance, suggests that the complete specification of water rights and contract enforcement is problematic; opportunism by contracting parties is inherent; and that there is no optimal water governance structure (markets, hierarchies, franchises, cooperatives, etc) but instead parties should settle for a remediable solution i.e. second best solution with net benefits.

The incomplete theory was selected by researcher to the study because it detected various issues, the resolution of a variety of important water governance and also helps

to explain the failure of privatization of water utilities. This led to the decentralization of the water service to the community level. Furthermore, the theory help to explain why most water utilities remain controlled by governments despite their inefficiencies and dysfunctional of the water points especially in Mvomero District (Araral, 2009).

Property right Theory

The theory was proposed by Coase in several years from 1937, 1959 and 1960. He states that governance structure matter for efficiency outcomes, according to transaction cost theory and legal rules matter for efficiency outcomes according to property right theory.

The assumptions of property right are the rights to use in involving the community role with water services and distribution, to earn income from the established private, government and civil society's utilities, and to transfer or exchange the assets and resources for better allocation and execution of water policies (Libecap, 1989). The theory has multiple dimensions to economic importance suggestions of various people being held detachment to particular facets of a single resource including water service in which there is shared ownership (Kim &Mahoney, 2005). According to this theory, legal rules matter for efficiency in water outcome because every individual has rights in sharing the single resource.

The Property rights theory was applied by a researcher in the study in Mvomero District due to the following reasons; water sources like streams run off, gravity springs and rain water is open access or available to anyone in the society with respect to usage and maintenance of the asset. Similar to that, the installation of water infrastructure in Mvomero District led to a village community water committee to have a right to exclude non-members and define the rules of appropriation. Nonmembers have a duty to abide by the rules. Individual members of the management group have both rights and duties with respect to usage and maintenance of the property and thus hold rights to manage the resource.

Furthermore, Individuals own the resources, especially the protected boreholes or water pumps, and water taps have the rights to exclude others and transfer rights. They have a duty to refrain from socially unacceptable uses. Others (non-owners) have a duty to respect decisions by the owners and expect that only socially acceptable uses will occur through contributing costs for the service. Lastly, Water is vested in the state acting for citizens-individuals have a duty to observe use and access rules determined by the controlling agency of the state (Rogers and Hall, 2003). The researcher portrayed how the rule of law operated at the functionally water point as one of the key variables of the study.

2.2.2 Conceptualization of Terms; Governance of Water Service Delivery

The concept of governance had been defined by various scholars and institutions' including the following, governance is the exercise of economic, political and administrative authority to manage a country's affairs at all levels, it comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences. (United Nations Development Programme [UNDP] (2001). The idea of Governance relates to the extensive social system of governing, which includes decision-making of government perspective. There is no single definition of governance and different approaches may be followed. Some may see governance as essentially preoccupied with questions of financial accountability and administrative efficiency. Others may focus on broader political concerns related to democracy, human rights and participatory processes. There are also those who look at governance with a focus on the match and mismatch between the politico-administrative system and the ecological system or in terms of operation and management of services. Governance is in use experienced in all countries and intends to make it more effective. To achieve more effective water governance it is necessary to create an attractive environment, which facilitates efficient private and public sector initiatives and stakeholder involvement in articulating needs (Rogers & Hall, 2003).

Governance as an enforcement mechanism, the structured rules should be emphasized from the early stage of government projects in order to protect its existence in the located area of jurisdiction. The presence of property right theory gives people to hold right of ownership in any singled resource hence gives them to misuse it. Therefore, the coproduction idea should build a strong foundation between the government officials and the citizen in managing, protecting and monitoring of a resource so as to allow longevity of its existence. The citizens can measure the performance of the utility prior to the process of delivery of goods and services, because the elected government is accountable to the ruled class (Rogers& Hall, 2003). In responding to that one of the input elements of governance is to create a framework (institutional and administrative) within which strangers or community with different interests can peacefully discuss and agree to cooperate and coordinate their actions.

Models of Governance

There are three general models of governance as contributed by Iza and Stein (2009) defined as;

Authoritative governance; A system with (*de facto*) one party within which decision making takes place under specific rules and coordination with elected officials.

Liberal or representative democracy; A system of rules embracing elected 'officers' who undertake to 'represent' the interests or views of citizens within the framework of 'rule of law' and whereby implementation is done through partnerships.

Direct or participatory democracy; A system of decision making about public affairs in which citizens are directly involved and actively engaged in policy formulation and implementation.

This study included Good governance in order to relate its effectiveness; Good governance has its focus on doing particular things; effective governance has its focus on achieving the best outcomes for all overtime (Perry, 2013). Governance has a great

outcome in economic, social and environmental perspectives. To mention few necessary conditions for good governance include inclusiveness, accountability, participation, transparency, predictability and responsiveness. Poor governance is the result of the central system does not operate well as required. Hence the outcome is the increased political and social risk, institutional failure and rigidity and weakening in the capacity to cope with shared problems (Kaufmann, Kraay & Zoido-Lobaton, 1999).

Additional to that, the concept of governance as applied to water refers to the capability of social system to mobilize energies in a rational manner, for the sustainable development of water resources. The concept includes the ability to design public policies which are socially accepted, which have as their goal the sustainable development and use of water resources, and to make their implementation effective by different actors/stakeholders involved in the process. In order to be effective, governance must be transparent, open, accountable, participatory, communicative, incentive-based, sustainable, equitable, coherent, efficient, integrated and ethical (Rogers, 2002).

Governance of Water

As Global Water Partnership [GWP] (2002) and UNDP (2014) concluded on a brief definition of Water governance as the political, social, economic and administrative systems that are in place, and which directly or indirectly affect the use, development and management of water resources and the delivery of water service delivery at different levels of society. Water governance also refers to the processes through which government and non-government actors and citizens interact to produce rules, practices and behaviors through which water is managed and outcomes are achieved (see for example, Russell & Frame, 2011). Water governance addresses among other things:

i. Principles such as equity and efficiency in water resource and services allocation and distribution, water administration based on catchments, the need for integrated water management approaches and the need to balance water use between socioeconomic activities and ecosystems.

ii. The formulation, establishment and implementation of water policies, legislation and institutions.

iii. Clarification of the roles of government, civil society and the private sector and their responsibilities regarding ownership, management and administration of water resources and services, for example: Inter-sectoral dialogue and co-ordination; Stakeholder participation and conflict resolution; Water rights and permits; The role of women in water management; Water quantity and quality standards; Bureaucratic obstacles and corruption; Price regulation and subsidies and Tax incentives and credits.

The most commonly used definition of water governance which developed by Rogers and Hall (2003) refers to a **"**range of political, social, economic and administrative systems that are in place to develop and manage water resources and the delivery of water services, at different levels of society". Essentially, governance systems determine who gets what water, when and how, and who has the right to water and related services and their benefits (Allan, 2001).

Overviews from the latter definitions they slightly differ from each other as it depends on the macro (global level) as well as micro (personal level) perspectives. For instance UNDP and GWP these global institutions applied the term "system'' while personal views of Rogers and Hall employs "capability of social system to mobilize energies in a coherent manner''. But recent study of Russell and Frame, they use the term processes through which government and non-government actors and citizens interact to produce rules, practices and behaviors through which water is managed and outcomes are achieved. Therefore regardless of the emerged terms within the definitions of water governance, the researcher will also generally applied throughout the study both important terms, and are deep rooted in this chapter for assess the governance of water services delivery in Mvomero district.

2.2.3 Assess transparency, accountability and rule of law in governance of water.

Rogers and Hall (2003) in their study urged that there is more than one model for effective water governance; indeed to be effective governance systems must fit the social, economic and cultural particularities of each country; Perry (2013) added that effective governance has its focus on achieving the best outcomes for all over time. Also Foerster (2011) asserted that effective and sustainable water governance needs to be purposeful and adaptive if it is to achieve the outcome of sustainable practices in the use of fresh water and its conservation for ensuing generations. The researcher discussed transparency; accountability and rule of law as follows;

Transparency

According to Bakker (2003) defines transparency as the policy decisions which are transparent so that both insiders and outsiders can easily follow the steps taken in the policy formulation. Decision makers need good information in order to provide sound, accountable governance, while those who are governed need it to hold decision makers accountable. Also United Nation Development Programme [UNDP] (2013) defines transparency as the level of openness of governance processes and access to information. In other words, it involves public decision-making processes through which outcomes are open to scrutiny by citizens, the media, and others.

Transparency refers to openness of governance processes and free access to official information. Transparency is a precondition for improving accountability and lowering levels of corruption, but it is dependent on access to official information, and free and wide circulation of print and broadcast media to disseminate information. Measuring transparency is related to assessing the openness of various governance processes and the level of access to information related to those processes. For instance, measuring transparency could include evaluating: the availability of information about who, how and what decisions are made at the local, sub national, and national level related to water allocation and the management of the water sector (such as licensing and tariff-setting);

information about access to water and sanitation; availability of information on the quality of water; how much revenue is generated against the volume of water provided; and information about repairs and new constructions/investment in water sector (UNDP, 2012).

United Nation-Habitat (2003) concluded that improvement in water and sanitation provision, for example, requires good information about the quality and extent of provision. That is why Bakker (2003) supported the argument that the successful of transparency is achieved through free flow of information.

Accountability

UNDP (2012) defines accountability as it refers to a set of controls, counterweights and supervision modes that make officials and institutions in the public and private sector answerable for their actions. It also sanctions against poor performance, illegal acts and abuses of power. Therefore, the concept of accountability involves two distinct stages: *answerability* and *enforcement*. Answerability refers to the obligation of the government, its agencies and public officials to provide information about their decisions and actions and to justify them to the public and those institutions of accountability tasked with providing oversight. Enforcement suggests that the public or the institution responsible for accountability can sanction the offending party or remedy the contravening behavior. As such, different institutions of accountability might be responsible for either or both of these stages (World Bank, 2004). Government decision-makers, the private sector and civil society organizations are accountable to the public, as well as to institutional stakeholders. This accountability differs depending on the organization and whether the decision is internal or external to an organization (Rogers and Hall, 2003).

Types of Accountability

Types of accountability are classified by the World Bank (2004) and UNDP (2012) in terms of exercised or the person, group or institutions the public officials are responsible as follows;

Horizontal and Vertical Accountability

Horizontal accountability is the capacity of state institutions to check abuses by other public agencies and branches of government, or the requirement for agencies to report sideways or checks and balances within an institution (internal control) or oversight and checks and balances of public institutions. While vertical accountability is the means through which citizens, mass media and civil society seek to enforce standards of good performance on officials. Parliament is a key institution to be operated in horizontal accountability and in vertical accountability. Citizens and civil society groups can seek the support of elected representatives to redress grievances and intervene in the case of inappropriate or inadequate action by government. In addition, through the use of public hearings, committee investigations and public petitioning, parliament can provide a vehicle for public voice and a means through which citizens and civic groups can question government and seek parliamentary sanctioning where appropriate.

Internal control (institution) mechanisms include monitoring and evaluation of services provided, and rules and regulations related to fiscal management. Standard and norms are the result of an established independent body of a state institution which purposely exists to oversee internal control and provide support. The state oversight institutions have the legitimacy and power to demand accountability on both fiscal management and performance of the sector related to equitable provision of water and sanitation services, quality of services, and opportunities for participation. Measuring horizontal accountability involves looking at how these oversight institutions establish laws, rules and regulations that govern the accountability relationship between oversight institutions and sector institutions. Assessing accountability relations helps in assessing the

independence of oversight institutions, and the institutional/administrative (UNDP, 2012).

The significance of Accountability in service delivery

Accountability is used to evaluating the ongoing effectiveness of public officials or public bodies ensures that they are performing to their full potential, providing value for money in the provision of public services, instilling confidence in the government and being responsive to the community they are meant to be serving (Stapenhurst & O'Brien,2006).

Rule of Law

Kleinfeld (2005) defines rule of law as those emphasize the ends that the rule of law is intended to serve within society such as upholding law and order, or providing predictable and efficient judgment. Domingo (2009) added that rule of law refers to the policing and security capacity of the state, and the degree to which it is aligned with the principles of due process and do not harm.

Apart from the definition above, Kleinfeld (2005) proved that even modern scholars define rule of law as a state contains three foundations institution as follows; Laws themselves, which are publicly known and relatively settled; A judiciary schooled in legal reasoning, knowledgeable about the law, reasonably efficient, and independent of political manipulation and corruption; and A force able to enforce laws, execute judgments and maintain public peace and safety usually police and other law enforcement bodies.

An Integrated Approach to Rule of Law

These approaches have been divided into three parts as summarized by Domingo (2009) as follows;

The rule of Law is concerned about the presence of political will and institutional capacity to ensure the government is accountable. This relates to the extent to which

those in power are constrained effectively by a pre established and widely accepted set of rules of political engagement. This can adopt a constitution form or it can due to the outcome of traditional built up over time include some form of common or community law. The point to consider is that these are rules to which power holders argue to abide.

Also, Rule of Law is about the capacity of the state to protect and deliver the rights of citizens, but all these are attached in the international human rights commitments and reflecting an inclusive social contract. States presence becomes embedded in society through the realization of citizenship rights. Through the rights citizens become empowered to shape political and development outcomes. The rule of Law is termed as the legal protection of human rights and it gives citizens, political and legal voice, and quality of access to justice, due process and minimum levels of effectiveness, equal and predictable application of law.

Furthermore, Rule of Law is reflecting state's ability to enforce the law and protect its citizens through the provision of security against different forms of threats. The main matter constructing rule of law is a confused business. This is how political power is exercised, how resources are distributed and about human rights.

The rule of law function well if there is equality before the law ensures that all citizens despite of their well connected to the system, rich, or powerful are judged for their actions by the same laws with equal applied. Equality before the law is one of the core ways in which citizens can ensure that government officials, the rich, the powerful, and the well connected do not become a social group apart (Kleinfeld, 2005).The case study which done by Sigareti (2009) pinpoint the indicators when there is an inadequate rule of law include, the existence village water committees have no legal status as stipulated in the National Water Policy; and nothing is implemented without the existence of law. The reason behind is that, there is inadequate dissemination and flow of information at all levels and lastly, water bylaws and regulations are not clear and law enforcement is poor.

2.2.4 Explore the existence of Access and Citizen Satisfaction of Water Service Delivery

This part addressed the access and citizen satisfaction that have been put forth in the water service delivery as follows;

2.2.4.1 Access of water service delivery

Under this heading, service coverage; Time cost; and the chance for the poorest accessing water will be discussed as follows;

Distance or Service Coverage; the service coverage through the proportion of households used improved sources of water in centralized community water points. Distance is a cofactor of access, security, transport, competition, and ultimately time cost. The outcomes of these interactions and the physical realities of water (very heavy, difficult to move, etc.), distance is very essential factor in determining what types of water are used about 37%, what percentage of household income is spent on water, and how much water is used in a household. Distance determines the costs to those who must collect water. The "reasonable access" as defined by MDGs to a water source is referred to "availability of at least 20 liters per person per day from a source within one kilometer of the user's dwelling" (Graham, 2005). Within urban areas, the distances from households to water sources tend to be much less in the order of 100 m. In Onitsha, Nigeria a majority of households are within 50 m of small retail water vendors (Whittington, Lauria &Mu, 1989). In two communities on the outskirts of Dar es Salaam, Tanzania, 70% of those interviewed were within 200 m of a water source (Kyessi, 2005). Njiru, Smout and Sansom (2001) they give us evidence for the importance of distance in Durban, South Africa that almost 40% of respondents rate the proximity of their water source as its most likeable quality. This does not necessarily mean that the water sources are in the best location or that they are accessible by everyone. Distance is the most important issue the people to consider and not the

physical infrastructure. But a more elaborate pedestrian distance that takes into account often complex built form in urban areas and the paths people make through those spaces.

Ndokosho, Hoko and Makurira (2007) argued that water coverage of Harare water utility ranges from 18% to 100% the same as those within the developing and medium income countries. This coverage, lower than Namibia's which was found to be 98% from 2001-2005. Water coverage is calculated from the following formula as proposed by Hove and Tirimboi (2011);

$$\text{Coverage} = \frac{\text{Population with tap water}}{\text{Total population}} \times 100$$

Average Time taken to walk to a water point; According to Graham (2005) emphasizes that, time to consumers accumulate for any effort required to access water such efforts as turning on a tap within a household or accessing water stored immediately within a household. That is, any time required to get water other than that of accessing water directly at hand represents a cost to the consumer and to the household. Such costs are real, and they present effective hindrances to the collection of water. World Health Organization and United Nation International Child and Education Fund (2004) asserted that the Joint Monitoring Program (JMP), which oversees the MDGs, has found that in rural areas, any trip to collect water that requires more than 30 minutes results in reduced water usage. The first feature of time costs is that they are scaled according to the time utility of the person designated for collecting water. For example, an adult's time may be considered more valuable than a child's, and all other things being equal in the short-term, it is economically rational to send a child to fetch water instead of his mother or father, even though the child's maximum carrying capacity may be smaller.

There is no equivalent to households that purchase water from vendors and the households paying the time costs directly. This is a poor household, which may not have the financial resources to lower their time costs or average time even if the opportunity

is available. The time required to fetch water in two communities outside of Dar Es Salaam, Tanzania, the average time to collect water was 15 minutes, with an average time at the source of only 3 minutes. These times compare favorably to other communities in the Dar es Salaam area, in which the times depend upon available services. In the settlement of Buguruni the average time to retrieve water from a standpipe was 30 minutes. It's approximately half of the population in Buguruni uses one or more hours every day for collecting water (Kessy, 2005).

Poorest Accessing Water; Several studies on services that are being provided noted bias which occurs within poor countries, a bias that delivers good quality services to the rich, middle class or politically connected groups, and delivers poor or nonexistent services to the lower income groups. Kelman calls attention to policies in Brazil that actively subsidizes the rich and evaluates a new program that is designed to counter these subsidies with result-based contracting (Kelman, 2004). The rich-poor bias, however, is not the only concern; it has been reported that such infrastructure disparities also occur within poor areas of developing countries (Chenge &Agha, 1999). Indeed, some argue that rather than thinking of poor infrastructure as resulting from a poor community unable to pay for upgrades, it may be more appropriate to think of poverty as partially a consequence of poor infrastructure (Zawdie & Langford, 2002). For a pro-poor water management tool, it is recommended to maintain one nationwide formal water rights system in order to avoid a legal dichotomy. There needs to consider linkages between water rights and obligations (payment and registration). Allocation of rights should start by not only recognizing the legitimacy, but also legally protecting poor rural people's water use for productive uses to satisfy basic income needs (Koppen et al, 2004).

Graham (2005) added that, surveys of poor households in many cases have shown paying more per liter of water than the middle class and the rich, who have access to cheaper water sources and who can take advantage of volume discounts. While "free water" or lifeline rates are policy choices that cities and countries may pursue, ultimately

someone must pay for the delivery of water. The poor can pay for water through high tariffs, through their time and effort in collecting, and through the numerous secondary costs that come with the inability to access enough good quality water.

Plumb (2009) added that a utility's financial capability plays a key role not only in its ability to provide quality services in general, but in its ability to extend quality services to poor people, particularly if cross subsidies or considerable capital costs are deemed to be required to enable service extension. The World Bank and Sanitation Program (WSP) (2008) argue that the goal of utility reform "should be financial capable while not excluding poorer sections of society". This requires sustainable revenue strategies which include "appropriate tariff structures that are simple, equitable, affordable, financially sustainable, and transparent for all, taking into account poor and marginalized consumers", as well as applying "appropriate subsidy mechanisms to ensure affordability for the poor."

2.2.4.2 Citizen Satisfaction with Water Service

This part addresses the satisfaction with the quality of water; satisfaction with the regularity of supply; and satisfaction with water tariffs as follows;

Satisfaction with the quality of water; Graham (2005) asserted that the quality of water may affect its price as well as its usage, and good quality water is more expensive in some cases, expensive bottled water is not just a rich country trend. Different delivery methodologies may provide water of different quality. Another way to construct the argument is that different delivery types may present different opportunities for contamination. Dar es Salaam as a case, unlike prices associated with various well schemes and the quality of water preoccupied from each; the driving factor in that price scheme is water quality. According to the study done by Chenge and Agha (1999) who surveyed individuals' perceptions of the quality of water in an effort to relate perceived quality to waterborne health problems. They found that overall, 50% of respondents considered piped water to be of "good quality" while only 44% said the same about the

public standpipes. People generally perceived their own water to be of good quality, with 81% saying so. In turn, very few (7%) said that their water was of "poor" or "very poor" quality. Also in the study of Buor (2004) showed that respondents in Kumasi, Ghana had distinctly different rates of disease based upon the sources of their water particularly during dry periods, when water was scarcest.

Satisfaction with Regularity/Reliability of supply; Water sources and water delivery points have problems of reliability and regularity of delivery. These problems mentioned as internalized to inherent risk to the consumer, have the potential to occur with most types of water service delivery. Their study found rated distance and, also found that almost a third of people within their sample considered that consistent reliability of their water sources as an important quality (Njiru et al, 2001). Problems of reliability or regularity range from water cuts on the piped network (i.e., water flows from the tap only at certain hours of the day) to questions of when a vendor will visit a household to when the rain will fall next. Irregularity of secondary sources (rainwater in some cases) may not be a serious concern, but irregular primary sources can drive consumers to other, more expensive sources, to sources of poorer quality, or to reduced usage. Reliability or regularity issues may be seasonal (wells going dry just before the monsoon) or they may be related to political or fiscal issues. When other water supplies are available, such irregularity will drive up the cost of water from these other sources. Another issue that can cause problems of irregularity is the use of informal or illegal sources of water. Because these sources are not officially sanctioned, households have no legal right to them, and as such they have no option when the sources disappear or when collectors are caught using them illegally. Ahmed (2003) reports on access to water in the slums in Dhaka, Bangladesh, due to the absence of any piped access, the poor have to seek water at illegal and possibly dangerous sources such as from a chemical wastewater pond. Clearly the conditions of access to such sources could change quickly, leaving the slum residents with an acute water shortage.

Satisfaction with Water Tariffs;

Tariffs are defined as the prices charged per volume for water service. Tariffs may also be charged on a flat time-based tariff (fee per month), or a block tariff by volume (rising or falling). Tariffs can be paid at the time of delivery (water kiosks) or on a regular time basis (a monthly bill from the water company) (Graham, 2005).

Types Volumetric Tariffs

Graham (2005) describes the volume tariffs into two broad categories include those that charge flat tariffs (i.e., a constant fee per volume for all quantities) and those that charge block tariffs (i.e., the rate changes depending upon the quantity consumed). These two fee structures have very different impacts on water markets, personal incentives, and household behavior.

Flat Volumetric Tariffs; Flat volumetric tariffs refer to a constant price per volume charge for piped connections and vendors charging per jerry can. The marginal cost of water is constant and so the disincentive for using water rises linearly with the volume used. This fact can be convenient for connections that serve many people – such as a household that wishes to resell water to its neighbors. It's the fact that, consuming more water simply means the users must pay the additional cost of that water which is calculated at the same rate as the original user's water.

Block Tariffs; Block tariffs are per volume charges that change with total volume of water used. These occur in two kinds, rising block tariffs and falling block tariffs. Rising block tariffs increase the marginal cost of water as the total volume of water from each connection increases. Kyessi (2005) provides us with various tariff measures in two outskirt communities of Dar es Salaam in terms of standard quality and low quality, where the water is sold by the carrying container size – in this case a standard 20 L bucket or jerry can. These tariffs depend on the rate of perceived (and actual) quality of the water being collected. For example, water from deep water well is priced at Tshs. 20 (US$ 0.02) per bucket, while water from a shallow, covered well costs Tshs. 10 (US$

0.01) per bucket. The cheapest water comes from shallow, uncovered wells and costs Tshs. 5 (US$ 0.005) per bucket.

2.2.5 Examine the effects of governance of water on water service delivery

This subpart examined various effects of governance of water on water service delivery includes; Accountability, transparency and rule of law. Recently, there is prevailing wind of many countries, reforms their governments to a more pluralistic way of governance that take place at multiple levels and involve a diverse set of stakeholders. As reforms change how decisions are made over water, many additional facets of governance comes into greater focus, such as negotiation, dialogue, partnership, network governance, and power diffusion among different government, private and social stakeholders. Also, water was recognized as a human right (UNDP, 2013). Therefore there are various effects of governance of water on water service delivery as follows;

Effects of accountability

Accountability is about being answerable for what is done and requires the ability of citizens and the private sector to scrutinize public water utility, and government officials hold them to account.

Lack of accountability in most low income countries, service provision responsibilities in rural areas have been delegated to lower levels of government like District councils. Mostly in local community areas elections are done for electing village representatives who involved in the water institution service and not the district government officials, who are responsible for the provision of service. Therefore, this became a difficult process in making follow up and monitoring of the initiated projects by governments within their localities. This affects the strength of the voice of citizens towards the state institutions. This is also demonstrated by the low level of accountability generally shown by these institutions towards rural citizen (Jimenez, Kjellen, and Deunff Le, 2015).

The exercise of all these functions means that there are multiple accountabilities that the utility has to various stakeholders. Service provider accountability to all these stakeholders could be strengthened through the performance standards that the provider has to meet. One way could be to have the Board or an independent regulator regularly monitor the standards. Another way could be to have the service operator report regularly and consistently on specific standards. The areas of performance monitoring include service quality and operational efficiency indicators such as water losses, energy cost, revenue collection, water production, drinking water quality, customer service, financial performance, new connections, and so on (Agrawal, 2009).

Arguably water users in low income areas collect their water at the water sources or selling water points, hence affect the market processes. Water management from the sources to the end users, involved number of actors includes; water kiosks, ranging from private utility companies, sinking wells or redistributing water from the piped distribution network. In areas with poorly developed distribution systems households with connections are commonly engaged in water re-sale to the community. Water vendors may also distribute water by the container or by tanker trucks. The official tariffs in water charges are much lower cost compared to the price charged by water vendors (Jimenez et al, 2015).

Besley and Ghatak (2007) remind us about the mutual interaction between the transparencies; responsiveness and accountability with the water service delivery dialogue. Transparency and accountability are at the core of governance processes as citizens have the right to know all smooth information what actions have been taken on their behalf, and they should have the means to force corrective actions when government acts in an illegal, immoral, or unjust manner. Third world countries should improve accountability, which would help to enhance the efficiency and effectiveness of their public services. Public services include water is delivered in relation with beneficiaries, politicians and service providers who interact for effective outcomes.

Effects of transparency

The aspect of governance might be concerned with legislation, policy toward the media and establishing and enforcing the right to information. In the delivery of basic services, including water, it means improving access to reliable information, presenting information in forms that are understandable to citizens (including budget formats, spending and outcomes), information and transparency on rights to water, existing access, planning, budgeting and expenditures on basic services (Plumner & Slaymaker, 2007).

Jimenez et al (2015) asserted that corruption flourishes when there is a monopoly and discretion without transparency. In the water sector, observer's estimate that 20 to 70% of resources could be saved if transparency were optimized and corruption eliminated. With more check and balances in place, the costs of unethical behavior get higher.

In summary, transparency can facilitate participation and collective action by stakeholders and is at the heart of water governance, air allocation to users and sound incentives for efficient water use. It is also essential for an effective public participation as only as a well informed public can effectively take part and actively contribute to public decision making (Mitchell, 2011).

Effects of rule of law

Plumner and Slaymaker (2007) articulated the dimension of governance is critical to creating the environment for enforcement of rules in any function or sector and set the scene for sector level behavior; equitable property rights, addressing property rights that affect the delivery of basic services; promoting justice and complaints redressed systems in villages and low income communities.

Additionally, discovered the community participation in planning, designing, managing, delivering, monitoring, and evaluating services has been deemed a critical component for local development. It is becoming increasingly common to observe community

organizations managing and delivering water services to their communities, particularly in rural areas where public and private utilities have failed to provide drinking water. Water clients in a community-managed system plays a major role in water supplies, provide voluntary inputs for system operation, infrastructure maintenance and involved of committee members in collecting water fees. The biggest challenge in the governance of rural water supply is to ensure that the village level and communities fully participate (Bovaird, 2007; Kabudi, 2005).

2.3 Empirical Literature Review

This section gives a brief overview Governance of Water Service delivery among low income earners in other developing countries, with a view to provide some empirical evidence of the issues encountered in the service delivered of this nature. The examples are taken from a global view of governance of water; governance of water in Africa perspectives; and governance of water in Tanzania. The researcher conceptualized a number of studies related to the literature in order to identify features on the utilities, which primarily pilot portrays on the service process so as to improve the affordability to the access of water service.

2.3.1 International perspectives on Governance of water Service Delivery

Different studies associated with governance of water service delivery in international level have been conducted by a number of researchers as follows;

The study conducted in Asia by Araral and Yu (2010) found that there is a need for a second-generation research agenda on water governance that is theoretically logical, analytically robust, empirically grounded and policy relevant. Also, they found that statistically both developed and developing economies have significant variations in their water governance provision in relation to equivalent of a water Kuznets curve. Also, they found a disappoint findings, which indicates that the top countries with the highest governance scores differ significantly from the bottom ones in terms of legal

accountability of water sector officials, pricing policy, the linkage between water law and water policy, financing of water investments, functional capacity and balance, and accountability and regulatory mechanisms. Furthermore, researchers suggested that, water governance reforms in developing countries are an evolutionary rather than a mechanical process of borrowing best practices from developing ones. The researchers suggested that, government effectiveness, regulatory, quality, rule of law, control of corruption and political stability are highly interrelated with the indicators of water governance. Also in their findings suggested that water governance reforms, especially in low-income countries should stick to accountability and regulatory supervision in the water sector. Therefore, their gradual development of middle income countries, the emphasis should focus towards improving the capacity of the water bureaucracy, having clear and enforceable water rights and mobilization of financial resources for water investments.

The researcher's applied a survey methodology of sample size of 100 water professionals from 20 countries in Asia Pacific. The survey questionnaire concern water governance in terms of water law, policy and administration. Expanding the delivery of water services, conserving water and fostering participation, it has only made modest progress in terms of fostering the integrated management of water resources and promoting regional cooperation. Progress in promoting a national focus on water sector reform has also been limited.

In summary, also the study done by the Water Integrity Network and Transparency International (2008) found that a lack of transparency and participation also leads to widespread corruption across the water sector, including in water management, drinking water and sanitation service provision, irrigation, and hydropower development. This corruption is severely in water sector due to the complex system of agencies responsible for its management and delivery; the growing presence of private actors and informal providers that operate in legal grey zones (where the actors are the de facto water service providers allowed to operate by governments but who may not have official license);

and the large sums of money required for infrastructure investments. The researchers also found that the poor and most vulnerable are the most likely victims because they are more exposed to the informal sector (where corruption is more rampant) and have limited resources and avenues to voice their concerns. The corruption issue extended to the consumers and they have no power to restate accountability.

2.3.2 Studies done in Selected African Countries

The study, which conducted in Kibera, Kenya by Birongo and Le (2005), found inadequate clean water through using interviews with various stakeholders and shareholders includes; Organizing Secretary of MBK, other small water vendors and water consumers respectively. The researchers argued that the water sold by MBK, lone-rangers, as well as water from boreholes are quite contaminated, which cause severe water born diseases to unplanned settlement of Kibera. The researchers applied methods of data collection focus on the qualitative analysis of one aspect, the Public-Private Partnership (PPP) between the Nairobi Water Company (NWC) and Maji Bora Kibera (MBK) for in-depth understanding. The researchers found a rampart corruption as there is no water patrol team. According to Birongo and Le, the current burning situation is illegal water connection; and Water charges, fines, subsidies and taxes: the water charges currently differs too much between NWC and PWVs because the former fails to control the water charges set by PWVs while the latter do not care about the extremely high prices they're imposing on the innocent Kibera residents.

2.3.3 Studies done in Tanzania

Currently in Tanzania, a number of studies in governance of water services have been done and reveal the indicators and research gap as follows;

The study, which conducted by SNV (2012) "titled…*Achieving Sustainability of Rural Water Supply Service through application of Water point Functionality Intervention Framework...*'' The study focuses on water point functionality and water management of

rural water facilities. The researchers applied qualitative methodology study, using participatory and positive inquiry. The study was applied in mapping all water points in 10 different districts, determining functional status, distribution spread, and equality water services.

The study found rural water supply development projects are still top down/supply driven with little or no consultation or involvement of the water users in the planning, design and implementation phases; There is no sense of ownership amongst the community the service provided do not reflect what people want or are willing to pay for; Majority of the community is not aware of the policy, water supply and sanitation Acts with changing role of government, water users and other key stakeholders; and water services are still largely treated as a public good with no economic value, the accountability system, to function effectively, hence citizens are not able to track funding allocated by central government, its utilization of local government and/or the funding contributed by water users. The study recommendations suggest training on the role of councilors; empowering communities; process facilitation; and popularizing water point mapping results and the national water sector policy. Finally the critique of the study is a sustainability challenges facing rural water supply.

It is interesting to note that, Iza and Stein (2009) found a community-managed water supply system in the Kitunda Settlement of Dar es Salaam's Ilala District, in Tanzania. The researchers observed that the project was more socioeconomic advantages to the community include dramatic improvement in hygiene which eliminated waterborne diseases. The researchers argued before the project's implementation that, the people of Kitunda had to buy water from mostly shallow, privately owned boreholes and from private vendors, which was of poor quality and a high price for instance TSh500 or US$0.40 cents for 20 liters'. Recently, after the implementation of the project, prices go down and the community can enjoy the portable water with reasonable price only Tsh20 or about US$0.02 cents for 20 liters of water. JUWABERI is the name given to the community manages the water supply project on behalf of the state-owned water utility,

the Dar es Salaam Water and Sewage Authority (DAWASA). The association, which boasts 340 members, employs 20 people who manage the revenues and administer the public standpipes. The project is taken as most successful community managing its own water provision and ensuing income. Members of the community contributed TSh2.5 million (about US$2,000), about 5 percent of the total cost of the project.

2.4 Synthesis in the Literature Review

Several studies conducted by other researchers have been reviewed above paying attention to a few aspects of government of water service. The researchers did not engage in the policy formulation and empirical grounded that is why there is a need for a second generation research agenda. Despite of the reforming of The National Water Policy of 2002, the National Water Sector Development Strategy for 2006-2015, and the Water and Sanitation Act of 2009 which both put in place a decentralization of rural water points. The Act of 2009 puts the ownership of rural water facilities and resources at the lowest level possible; with the communities. But still rural water supply development projects are still top down/supply driven with little or no consultation or involvement of the water users in the planning, design and implementation phases; there is no sense of ownership amongst the community service provided do not reflect what people want or are willing to pay for (SNV, 2012). Even Birongo and Le (2005) their study, which conducted in Kibera slum in Kenya, found a rampart corruption, illegal water connection; and Water charges, fines, subsidies and taxes: the water charges currently differ too much in the water service. Iza and Stein (2009) conducted their study in Kitunda, Dar es Salaam to assess the community management in the water supply. They found that citizen participation in the water resource management can bring a positive result in the provision of the service and they can be substituted with public utilities.

2.5 Identified Literature Review Gaps

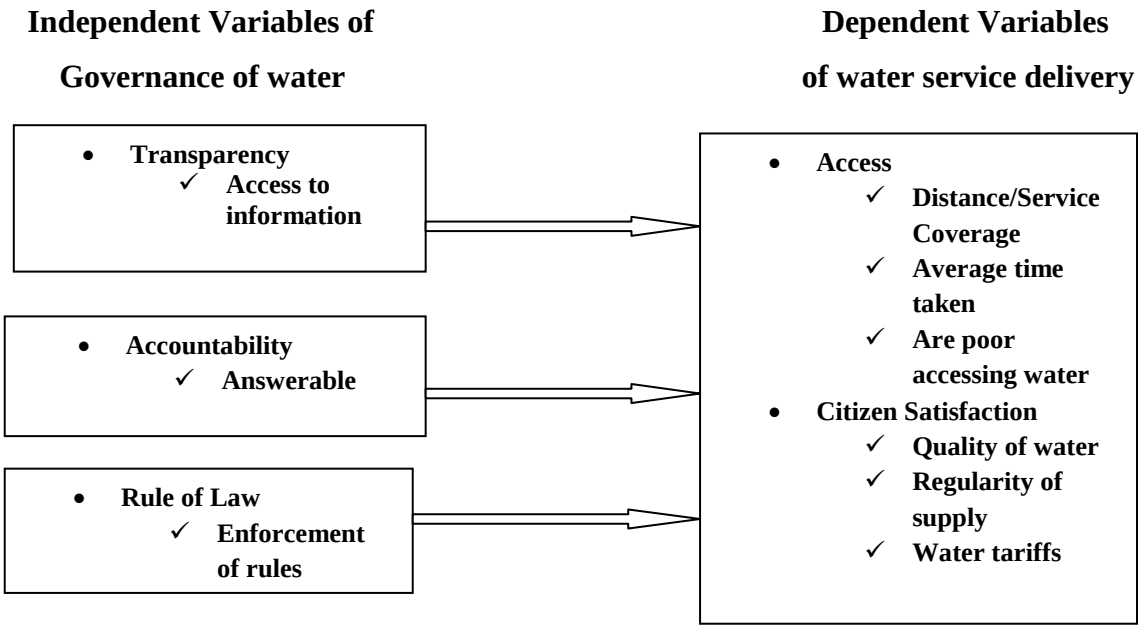
Related studies includes, international perspectives done in Asia by Araral and Yu(2010) they study on second generation research agenda on water governance in policy relevance; The Water Integrity Network and Transparency International (2008) found wide spread of corruption in water management, drinking water and sanitation; Birongo and Le (2005) examine inadequate clean water; whilst SNV (2012) were based on water point functionality and water management of rural water facilities; and lastly, Iza and Stein (2009) their study based on community managed water supply system. Therefore based on the empirical studies in governance of water reforms in low income countries, the researcher intends to bring gaps which was not covered in latter studies include, rule of law, accountability, transparency, access and satisfaction of water service delivery in low income earners especially in Mvomero District Council.

2.6 The Conceptual Framework

The conceptual framework is built through the application of property right theory in governance of water service delivery as every individual has the right of resource ownership which guided by water rights or legal rules. In order for a utility either controlled by public or community to perform better, must furnish on the accountability and transparency mechanisms among the government officials and to external stakeholders who play an important role in its planning and operations in administrative boundaries. The staffs are held accountable for what they did in delivering services and the performance culture which transforms to improved sustainable change. Therefore, through transparency, the flow of information from the utility to other stakeholder had been simplified. Rule of law which gives the community legal status to implementing their projects, these legal status was used to protect the human rights in the service provision. The water leaders acted upon the stipulated rules and regulations to the targeted service delivery. Among all, the project is being successively if the local citizens were involved from the single stage of implementing a sustainable project.

Henceforth, in figure 2.1 shows the conceptual framework which reflects to assessing the governance of water service delivery among the low income earners, as the focus of Tanzania is on the Vision 25 and Millennium Development Goals (MDG) through the water sector policy reforms, then government should ensure the access and citizen satisfaction with water service delivery.

Figure 2.1: Conceptual framework



Source: Researcher own designed from literature review, 2015

2.7 Summary of the Study

This chapter reviewed the governance of water service delivery among the low income earners into the following major themes; theories which guiding the study include property right; the identified independent variables of the governance of water from theoretical and empirical literature such as; transparency; Accountability; and Rule of law. Another coin of the dependent variables of water service includes, access and citizen satisfaction with water service. This part ends with emphasis sub part of synthesis, research gaps and conceptual framework of the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter described the basis for selection of the study areas and the characteristics of the areas and their water service delivery. Based on the literature reviewed, the chapter describes the proposed type of study and the way it carried out. It also describes the data collection procedure, population, sample and sampling procedures, and the data analysis methods, the validity of data, reliability of data and ethical issues. Research Methodology as defined by Myers (2009) refers to a strategy of inquiry, which moves from the underlying assumptions to research design, and data collection.

3.2 Research Design

As according to Simon (1998) defines design as the process by which our '[devise] courses of action aimed at changing existing situations into preferred ones.' In this study, a design is used to arrange and to show how all of the major parts of the research project work together to try to address the central research questions (Kombo & Tromp, 2006). In respect of this, the researcher will use the case study approach as the recommended research design for this study, which is a descriptive and interpretive case study that is analyzed largely through qualitative methods with small quantitative gears.

A case study, according to Gillham (2000) refers to an investigation to answer specific research questions which seek a range of different evidences from the case settings. Whilst Yin (2003) argued that a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly defined.

The researcher administered single case (embedded) which entail four administrative villages of Mlali, Kipera, Changarawe, and Vikenge to study on governance of water in

water service delivery among the low income earners in Mvomero District. This approach increased the researcher's knowledge base through study many different aspects and detailed observation of various phenomena includes, the performance of the water utility, and the management of catchment areas for water sources.

3.3 Area of the Study

Area of the study refers to a study of a political, administrative or spatial distribution which includes historical background, geographical location and ethnography phenomena.

The study was conducted in Mvomero district (please refers appendix iii and iv). The district is located at latitude 06˚26' South and longitude 37˚32' East. Mvomero District is about 7,325 square kilometers with a population of 312,109 people (2012 census). The study was conducted within the selected administrative villages of Vikenge, Changarawe, Kipera, and Mlali with 100 sample size. These villages were within the Mlali Division, as one of the four notably divisions in Mvomero. The respondents included member of households, water committees, and village leaders. The district is characterized by high rainfall range between 600mm and 2000mm annually. This gives a credit to agriculture activities predominant in the area, followed with animal husbandry, bee keeping and tourism. Mvomero District was essential for the study, because in 2004 was formed and registered as a newly Local Government. Several villages, especially Mlali and Kipera were funded by the World Bank to improve the water supply projects. For instance, in Kipera, the World Bank project was initiated in 2003 whilst procedure on the water tank started in 2005 and completed in 8 years later on. In 2009 also World Bank renovation water projects which were under government in Mzumbe ward from Tangeni River. Therefore in 2010, SNV advice government of Tanzania on decentralized water projects to Water Users Association in Mvomero District. Henceforth, the researcher being a member of ACE program was interested in the study of governance of water service delivery among the low income earners in Mvomero District.

3.4 Sampling Technique, Procedures and Sample

3.4.1 Sampling Technique and Design

Orodho and Kombo (2002) define Sampling as it refers the procedure a researcher uses to gather people, places or things to study. Also refers to a process of selecting a number of individuals or objects from a population, such that the selected group contains elements representative of the characteristics found in the entire group. While sampling design refers to the part of the research plan that indicates how cases are to be selected for observation (Kombo & Tromp, 2006). This study employed stratified random sampling, systematic sampling, and purposive sampling methods respectively;

Stratified random sampling

The researcher divided the population into four sub-populations that are individually more homogeneous than the total population. Mlali Division was selected randomly in order to select items from each stratum constitute a sample as computed in the following calculations;

That is, if P_i represents the proportion to population included in stratum *i*

n represents the total sample size, the number of elements selected from strum

i is *n*

To illustrate it, the researcher wants a sample size n=2 wards, to be drawn from a sample size N=4 wards which divided into two strata's of size N_1=2, N_2=2

The sample size is obtained into different strata's. For strata with N_1=4, we have P_1=2/4

And hence n_1=*n.* P_1=2(2/4) =1

n_2=*n.* P_2=2(2/4) = 1, therefore the sample size from 2 strata's was 2 wards of Mlali and Mzumbe.

To illustrate sample size n=4 villages to be drawn from a population of N=28 villages in Mlali Division which divided into four strata's size N_1 =12, N_2=8, N_3=5, and N_4=3

And hence $n_1 = n.\ P_1 = 4(12/28) = 1.7$

$n_2 = n.\ P_2 = 4(8/28) = 1.1$

$n_3 = n.\ P_3 = 4(5/28) = 0.7$ and

$n_4 = n.\ P4 = 4(3/28) = 0.4$, Therefore the sample size from 4 strata's was 4 villages of Mlali, Kipera, Changarawe and Vikenge. The results from stratified sampling were more reliable and detailed information (Kothari, 2004).

Also 8 village water committees were obtained in the following computation; sample size n=8 of village water committees to be drawn from a population of N=40 of the village water committees in four villages, which divided into four strata's size N_1=12, N_2=10, N_3=8, and N_4=10

And hence $n_1 = n.\ P_1 = 8(12/40) = 2.4$

$n_2 = n.\ P_2 = 8(10/40) = 2$

$n_3 = n.\ P_3 = 8(8/40) = 1.6$ and

$n_4 = n.\ P4 = 8(10/40) = 2$, Therefore the sample size from four strata's of 2.4, 2, 1.6, and 2=8 sample size of village water committees.

Systematic sampling

Systematic random sampling is the process of selecting subjects at a fixed interval (Msabila & Nalaila, 2013). The 80 water customer households were selected from every 2^{th} house on one side of the road and the other side, and also for those who dwelling in the congested settlements, the same design was applied to the sample. Therefore, 20 households obtained in Mlali, 20 households in Kipera, 20 households were in

Changarawe and lastly other 20 households were obtained in Vikenge villages respectively. The first house was selected randomly in every village with which to start data collection until the desired number was secured. Systematic was an easier and less costly method of sampling and can be conveniently used even in the case of large populations.

Purposive sampling

Fridah (2002) defines purposive sampling as the process of selected information, rich cases for in-depth study and target a group of people in terms of size and specific cases depend on the study purpose. The researcher selected 8 water customers in regard with gender balance to include them in the Focus Group Discussion, as far as 4 Village Executive Officers for a personal interview.

3.4.2 Sample

According to Wester (1985) defines a sample as is a finite part of a statistical population whose properties are studied to gain information about the whole. When dealing with people, it can be defined as a set of respondents (people) selected from a larger population for the purpose of a survey. Or sample refers to the selected elements (people or objects) chosen for participation in a study.

In table 3.1 below shows a summary of a sample size of 100 populations was employed in this study, for instance 88 water customer's households, 4 Village Executive Officers, and 8 Village Water committees. This is because, the selection of a sample often provides many advantages compared with a complete coverage of the population. For example, reduced costs associated with gathering and analyzing the data, reduced requirements for training personnel to conduct the fieldwork, improved speed in most aspects of data summarization and reporting, and greater accuracy due to the possibility of more intense supervision of fieldwork and data preparation operations.

Table 3.1: Sample size

S/N	Sampling frame	No. of Respondents	Sample design	Data collection methods
1.	Water customers, households	80 8	Systematic random sampling Purposive sampling	Household questionnaires Focus Group Discussion
2.	Village Executive Officers	4	Purposive sampling	Personal interview
3.	Village Water Committees	8	Stratified random Sampling	Household questionnaires
TOTAL	**Sample size**	**100**		

Source: Field findings, 2015

3.5 Data Collection Methods

Data refers to any information obtained from primary or secondary sources which the researcher voluntarily collects during the study.

Data collection refers to gathering specific information aimed at proving or refuting some facts. During data collection, the researcher must have a clear schematic view of the instruments to be used, even the respondents and the selected area (Kombo & Tromp, 2006).

There are two types of data collection procedures include, primary data collection and secondary data which all guided by the research question and the choice of design. Primary data is information gathered directly from respondents. This is through questionnaires, interviews, focused group discussions, observation and experimental studies. While, Secondary data involve gathering data that already has been collected by someone else. Furthermore, the choice of data collection methods is also subject to constraints in time, financial resources, and access. The researcher completed an intensive course on research methodology and field work (see appendix vii) offered by the education, collaboration between Mzumbe University and University of Bonn. Then, with that experience, the researcher used the following data collection instruments;

3.5.1 Interviews

Kothari (2004) defines interview method (see appendix vi) as the process of collecting data which involves the presentation of oral-verbal stimuli and reply in terms of oral-verbal responses. While, Kemper, Stringfield and Teddlie (2003) argued that, the interview is a technique used to collect qualitative data by setting up a situation that allows a respondent the time and scope to talk about their opinions on a particular subject.

The researcher administered semi-structured interviews and prepared a written list of questions to 4 Village Executive Officers, in which open and closed-ended questions employed in data collection. This was conducted within their offices after being invited on hand with a letter of permission which was authorized by District Executive Director in Mvomero District. It was difficult to interview these officers and access data from their offices without that official permit. This was due to presence of bureaucracy in Local Government authorities as the system adopted by central government.

3.5.2 Questionnaires

Kothari (2004) defines questionnaire (see appendix vii &ix) as a number of questions printed or typed in a definite order on a form or set of forms. Kemper et al (2003) suggests questionnaire as a list of written questions that can be completed in one of two basic ways. Firstly, respondents could be asked to complete the questionnaires with the researcher not present. This is a postal questionnaire and (loosely) refers to any question that a respondent completes without the aid of the researcher. Secondly, respondents could be asked to complete the questionnaire by verbally responding to questions in the presence of the researcher. Sometimes, this variation is called a structured interview.

Furthermore the researcher administered household questionnaires to 80 water customers' households and 8 Village Water Committees whereby the respondents completed the questions with the presence of the researcher. Respondents have adequate

time to give well thought out answers; and respondents, who are not easily approachable, can also be reached conveniently, when there was ample time to continue with our planned procedure. Similar to that, most of the respondents depend on agricultural activities, in which it consumes time in turning around to their fields. So, by using this approach the researcher conducted data collection during noon and early evening in which respondents were available within their household's yards from *"shambas"* or fields.

3.5.3 Focus Groups Discussion

Hancock et al (2009) defines Focus Group Discussion (FGDs) as a ways in which the participants interact with each other and influence each other's expressed idea, which obviously cannot happen with one-to-one interview material. While, Kemper et al (2003) asserted that, FGD (see appendix viii) is a method of group interviewing in which the interaction between the moderator and the group, as well as the interaction between group members in response to carefully designed questions.

The researcher was invited by village water committees to their monthly meeting which conducted at Vikenge primary school during evening. Fortunately, a representative sample was drawn from the villagers who attended the meeting, under this aspect 8 respondents include 4 males and 4 women, were selected for the study. Maugham (2003) asserted that membership of an ideal Focus Group range from six to twelve subjects. The researcher balanced discussion, though takes the equal chance to both genders in presenting their views; hence the researcher takes notes on what was discussed at the forum. The discussion took 1 hour and respondents registered in an attendance form. Lastly, the researcher acknowledges the respondents for their presence and participation to the wonderful discussion on governance of water. Thus, the method led to gain credibility as an accurate and useful source of information collected from other sources.

3.6 Data Processing and Analysis Methods

The researcher attempt to derive data from direct interaction by using major research methods approaches include qualitative and quantitative.

3.6.1 Data Processing;

Data processing is simply the conversion of raw data into meaningful information through the process. Data is manipulated to produce results that led to a resolution of a problem or improvement of an existing situation. Similar to a production process, it follows a cycle where inputs, raw data are fed into a process of computer system to produce output that is information and insights (Rudo, 2013). The researcher employs Microsoft Excel software to carry out a series of operations on the data in order to present, interpret the information. Furthermore, the process aligned with data entry, summary, calculations and storage in the following procedures;

Collection; The quality of data collected from Focus Group Discussion (FGD), interview, and household questionnaires are defined and accurate, so that subsequent decisions based on the findings are valid for the sample population.

Preparation; The raw data were checked for accuracy and constructing a database from the household questionnaires to be used for further exploration and processing. Also a direct quotation from the respondents in FGD and interview was recorded to verify the validity of data.

Input; The verified, data are coded or converted into Microsoft Excel Software readable form so that it can be processed through the computer to the charts frames and graphs. Data entry is done through the use of a keyboard. Data were also organized and grouped for similar details of individual responses.

Output and interpretation; The processed information was conveyed ready to be manipulated in form of printed dissertation report and audio CD, which provides meaningful information for future decisions on partial fulfillment of Masters Degree.

3.6.2 Data Analysis;

Strauss and Corbin (1990) define Data analysis or "open coding" as a process sometimes referred to as, is commonly employed whereby the researcher identifies and tentatively names the conceptual categories into which the phenomena observed would be grouped. The researcher used mixed methods approach by taking advantage of the differences between quantitative and qualitative methods, and combines these two methods for use in a single research study as follows;

Qualitative research method; The researcher administered qualitative by formulating open ended and less structured sampling. This was due to the collection of data through the inclusion of various respondents, gaining feedback on the data, interpretation of data and conclusions made from the findings. This was the naturalistic approach whereby the study conducted within the social context which allows interaction with the respondents, hence research findings match reality.

Quantitative Research Method; The data were converted to numerical forms and subject them to statistical analyses by summarize a sample study of 100 populations in data tabulation (frequency distributions and percent distributions). Also reliability of the data was used to the extent that measurements are repeatable to measure the other researcher work with alternative instruments which measure the same thing.

3.7 Validity of data

Bollen (1989) defines validity as it concerned with the meaningfulness of research components. This is when researchers measure the intended behaviors as to come up with reasonable data. The question of participation is very crucial in any development setting. The researcher kept the internal validity of the study by sticking on the data analysis procedures so as to avoid bias.

3.8 Reliability

Rosenthal and Rosnow (1991) defines reliability, as the extent to which measurements are repeatable when different persons perform the measurements, on different occasions, under different conditions, with supposedly alternative instruments which measure the same thing. In sum, reliability is the consistency of measurement or stability of measurement over a variety of conditions in which basically the same results should be obtained (Nunnally, 1978). Therefore, the researcher repeated measuring variables from other studies which shown in the empirical literature in order to test the reliability of the variables, including level of accountability, transparency, rule of law and access and citizen satisfaction of water service delivery etc. Also the researcher repeated the same research methods, techniques like an interview, Focus Group Discussion and questionnaires in the study.

3.9 Ethical Considerations

Ethics is rooted in the ancient Greek philosophical inquiry of moral life. It refers to a system of principles which can critically change previous considerations about choices and actions (Fouk & Mantzorou, 2011). Naturally, the study is a qualitative where by the researcher interact deeply with the participants and my supervisor. In the process of collecting data, the researcher in one way or another enters the personal domains of values, weaknesses, and individual learning disabilities. The researcher conducted the study in actual area, whereby the privacy spaces of the participants were considered. Thus, the researcher has committed to respect the rights, needs, values and ethical guidelines for example requesting the letter of permission from District Executive Director of Mvomero District, in order to conduct study within their area of jurisdiction for the purpose of uphold participants' privacy, confidentiality, dignity, and anonymity (Creswell, 2003).

3.10 Summary of the Study

This chapter closed with a schematic representation of the main research design facets and their subparts as initiated by; Introductory part; Research design; Area of the Study; Sample, Sampling Technique and Procedures; Data Collection Methods; Data Analysis Methods; Validity of data; Reliability; Ethical Consideration and Summary of the Study.

CHAPTER FOUR

DISCUSSION AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter unveils the analysis and interpretation of data collected through the study area, water customers and other shareholders of the water service. The study conducted at the Mvomero District Council on assessing the governance of water service delivery among the low income earners. Two wards of Mlali and Mzumbe with their four administrative villages of Mlali, Kipera, Changarawe and Vikenge were selected respectively for study. These wards belong to Mlali Division. The data collected from the 8 village water administration staffs and 4 Village Executive Officers (VEO), was analyzed separately from those of water customers due to different questions used in each unit of study. The sample size covered by this study was 100 populations with 42 questions were administered in Mvomero District. Data collection methods involved household questionnaires, Focus Group Discussion (FGD) and interview. The resourceful data presented in this chapter serve as brainstorming for discussion and interpretation of the findings.

4.2 Respondents Portfolio

This portfolio includes the presentation of the key findings of study which provides the information associated with assessing the governance of water service delivery among the low income earners in Mvomero District. The researcher utilized the demographic characteristics information of the respondents such as Sex, Age, Education level, household size and their main activities. Therefore, these characteristics were discussed below, due to their vital in bringing validity on data collection processes.

4.2.1 Demographic characteristics of the respondent's sex and age group

The demographic distribution of the respondents who involved in a structured interview as portrayed in table 4.1 below indicated 22 respondents (25%) were aged between 18-

25 years, followed by 18 respondents (20%) were between the ages 26-35 years, the 29 respondents (33%) were aged between 36-45 years, whilst 19 respondents (22%) were above 46 years. In summary, the field findings discovered the predominant age and sex was 29 respondents (33%) were between the ages 36- 45years. This is caused by involvement in marital relationships and hence spends more time in their households nurturing their families. The researcher uses, potential attributes of 59 respondents (67%) in the study from teenager to adult respondents who are mature enough to tackle and mastering households questionnaires and Focus Group Discussion (FGD). The ages mentioned above comprised sexes of men and females.

Table 4.1: Sex and Age distribution of respondents

Sex	**Age of the respondents**							
	18-25	**%**	**26-35**	**%**	**36-45**	**%**	**Above 46**	**%**
Male	12	14%	8	9%	9	10%	16	18.1 %
Female	10	11%	10	11%	20	33%	3	3.4 %
Total N=88	**22**	**25%**	**18**	**20%**	**29**	**33%**	**19**	**22 %**

Source: Field data, 2015

4.2.2 Education level of respondents

The study paying attention to the knowledge in water management and service delivery to the whole community who are benefited with the active role of the water administration committees and the end user of water. This was supported by the study done by Egyin (2011) that, the majority of the respondents (91.7%) have had forms of education which facilitated their understanding of the questions upon which they were able to make informed contributions.''

Therefore the results from the field findings as shown in table 4.2 revealed that, 2 respondents (2%) had informal education, 55 respondents (63%) had a primary or basic

level education, and 23 respondents (26%) have had at least secondary level education whilst 8 respondents (9%) had a university level education. The researcher utilized 86 respondents (98%) who had formal education to understand better the household questionnaires and Focus Group Discussion in data collections processes.

Table 4.2: Education levels of the respondents

Education Level	**Frequency**	**Percentage**
Informal education	2	2%
Basic/Primary	55	63%
Secondary/Technical	23	26%
University	8	9%
Total	**88**	**100%**

Source: Field data, 2015

4.2.3 Respondents household size

In order to know the daily water consumption, the researcher preferred to understand the reality of the number of people living in a house to approve their usage. This was revealed in a field study as shown in table 4.3 prescribed that the leading household was 4 to 6 with 50 respondents (57%), followed by 7 to 9 with 15 respondents (17%), 1 to 3 gives 14 respondents (16%) and followed by 10 to 12 with 9 respondents (10%). The 50 respondents (57%) were between 4 to 6 households which support the Tanzanian campaign on family planning policy in controlling population growth.

Table 4.3: Household size

Household size	Frequency	Percentage
1-3	14	16%
4-6	50	57%
7-9	15	17%
10-12	9	10%
Total	**88**	**100%**

Source: Field data, 2015

4.2.4 Respondents main activity

The study also focused on the main economic activities of the respondents. This can approve whether the economic activities boost their living standards to middle income earners or the majority are still among the low income earners due to their subsistence economy. The researcher was interested to conduct study among the low income earners. The study revealed that, the low incomes are those who were employed in government institutions, private sectors and they were faced with inadequacy water infrastructures like improved water pipelines. The results from the field in table 4.4 shows that dominant economic activity was subsistence agriculture as 50 respondents (57%), while 15 respondents (17%) were entrepreneurs, 16 respondents (18%) were waging employees, 5 respondents (6%) was unemployed, and other 2 respondents (2%) were involved in welding, and plaiting hair respectively.

Table 4.4: Main economic activities

Main activity	Frequency	Percentage
Agriculture	50	57%
Entrepreneurs	15	17%
Unemployed	5	6%
Wage employees	16	18%
Others	2	2%
Total	**88**	**100%**

Source: Field data, 2015

4.3 Mvomero water staff responses, analyses

This part analyses Mvomero water staffs as the service providers in the community water organization.

4.3.1 Demographic characteristics of the respondent's sex and age group

About 8 water staffs were involved in a household questionnaire. Table 4.5 shows that 1respondent (12.5%) was a male between the ages 26-35 years, followed by 1 respondents (12.5%) who was a male between the ages 36-45 years, and 3 respondents (37.5%) were males aged above 45 years. In summary, 1respondent (12.5%) was a female between 36-45 years while 2 respondents (25%) were females aged above 45 years.

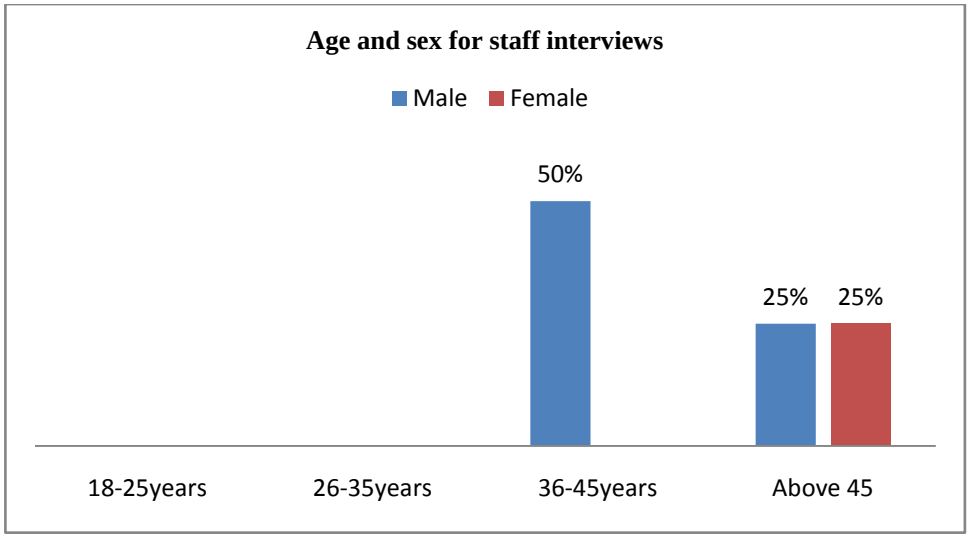
Table 4.5: Sex and age distribution of water staffs for household questionnaire

Sex	Age of the respondents							
	18-25	**%**	**26-35**	**%**	**36-45**	**%**	**Above 46**	**%**
Male	-	-	1	12.5%	1	12.5%	3	37.5 %
Female	-	-	-		1	12.5%	2	25%
Total N=8	**-**	**-**	**1**	**12.5 %**	**2**	**25%**	**5**	**62.5 %**

Source: Field data, 2015

In figure 4.1 shows the Village Executive Officers who were interviewed, 2 respondents (50%) were male ages between 36-45 years while 2 respondents (50%) were male and female aged above 45 years respectively.

Figure 4.1: Sex and age distribution of water staffs for interviews



Source: Field data, 2015

4.3.2 Education Background

Table 4.6 shows that all water staffs that responds to questionnaires and interviewed had maximum certificate level of education and the rest 5 water staffs (42%) and 6 water staffs (50%) were primary and secondary level respectively.

Table 4.6: Education levels of the water staffs

Education Level	**Frequency**	**Percentage**
Informal education	-	-
Basic/Primary	5	42%
Secondary	6	50%
Certificate College level	1	8%
Total N=12	**12**	**100%**

Source: Field data, 2015

4.4 Results and analysis

This chapter also discusses the research findings relied on the first hand information from the respondents in discussion of the findings and interpretation of data with the supportive secondary data sources. These sources were discussed from the latter chapters of this study. The related information interacted with the ongoing discussion of assessing the governance of water service delivery among the low income earners in Mvomero District Council.

4.4.1 Assess transparency, accountability and rule of law in governance of water in Mvomero District

This specific object was asked differently to low income earners to capture the aspect of transparency, accountability and rule of law to offer criteria for a successful roadmap to water service delivery as follows;

4.4.1.1 Transparency

According to UNDP (2012) stated that, transparency is the openness of governance processes and free access to official information. Transparency is a precondition for improving accountability and lowering levels of corruption, but it is dependent on access to official information, and free and wide circulation of print and broadcast media to disseminate information. Weiss and Steiner (2006) added to transparency as a particularly important for individual citizens to have rights of access to documents of the institution in achieving information about access to water and sanitation; availability of information on the quality of water; how much revenue is generated against the volume of water provided; and information about repairs and new constructions/investment in the water sector.

Respondents in the field were asked to identify ways of receives information from the established community water based. Findings in Table 4.7 portrayed the dominant group with 76 respondents (95%) obtained information from the Water Users Association; whilst 3 respondents (4%) received information from village leaders and the rest 1respondent (1%) didn't replied. The findings from the field portrayed the evidence of frequent conducting of village meetings which facilitate easy access of information from the leaders to water customers when needed to do so. The village water committees are responsible in provision of water service in maintenance and operation activities of the project. The rest 3 respondents (4%) failed to differentiate the delegated power among the local leaders in the village council. So their responses reflect direct to the Village Executives and Village Chairman as top leaders and forget their subordinates that are water committees. The researcher observed both sex's and discover that females have good attendance in village meeting than men due to be vulnerable and often affected by the lack of water services. Therefore, this trend was contributed by a frequency village meeting, which prevailed in Mlali and Mzumbe wards for every three months per year, and facilitates provision of information about repairs, saving and expenditure in water service.

Table 4.7: The ways of receiving information

Ways	Frequency	Percentage
Media	0	0%
Water committees	76	95%
Village leaders	3	4%
None of the above	1	1%
Total	**80**	**100%**

Source: Field data, 2015

However the same question was administer to water customers through Focus Group Discussion (FGD). The total number of 8 respondents was involved in the conversation panel. The findings from the study revealed that 4 respondents (50%) said they receive information from village water committees while 3respondents (37.5%) argued that village leaders helped them to access information and 1 respondent (12.5%) not understood about the distribution of power between village leaders.

This study was supported by the study done by Parigi, Geeta and Kailasam (2004) who asserted that transparency helps to convince citizens that the public agencies are interested in listening to their views and responding to their priorities and concerns.

4.4.1.2 Accountability

Accountability is a set of controls, counterweights and supervision modes that make officials and institutions in the public and private sector answerable for their actions. It also sanctions against poor performance, illegal acts and abuses of power (UNDP, 2012). The question was asked "what measures are taken when one of the village water committees misuse the resources fund".

Table 4.8 shows that, 60 respondents (75%) recommended terminating the leader's authority whereby in Vikenge village three leaders were terminated from the Water Users Association due to misuse of the water funds while 3 respondents (4%)

acknowledge having no power to do for them. In sorrowful way, 9 respondents (11%) said they left the issue until the end of their term, this was caused by not involved in the village meeting to enable them to access information from water leaders, and also it was due to immigrate to Mvomero District from other parts of Tanzania and the administered household questionnaire to 8 respondents (10%) they suggested warning to the leaders. The reason for giving warning to the leaders is because the water leaders volunteered to the utility for the provision water service delivery.

Table 4.8: Measures taken to village water committees who misuse resource funds

Measures taken to leaders	**Frequency**	**Percentage**
Terminating his/her authority	60	75%
Giving warning	8	10%
Left the issue until the end of their term	9	11%
No power to do for them	3	4%
TOTAL	**80**	**100%**

Source: Field data, 2015

Also FGD was administering to 8 respondents. The findings from the field shows that, 5 respondents (50%) agreed to terminate the leaders authority, 2 respondents (25%) said that they give warning to the leaders once they abuse their authority while 1 respondent (12.5%) said to left the issue until the end of the term. A point to note, 1 respondents (12.5%), was different from others and said, "*the appointed water leaders should be accountable to the public and institutional or Chombo cha Watumia Maji which they belong to. But when they were suspected abuse of their powers, strong measures will be framed to them, including suspension and repaid the defiled resource".* The study confirmed that village water committees are voluntarily selected in service provision and other responsibility, but they are accountable to their actions.

The respondents between ages 36-45 years and above 46 years have being attempted well in answering this question; this is due to experience and expertise in utility

organization within their local areas. But those under the ages 35-18 years are most youth who shift frequently from rural to urban areas to seek green pasture and vise verse. This led them to have no exact information on the operated community water utility.

World Bank (2004) proved that, accountability involves two distinct stages: *answerability* and *enforcement*. Answerability refers to the obligation of the government, its agencies and public officials to provide information about their decisions and actions and to justify them to the public and those institutions of accountability tasked with providing oversight. Enforcement suggests that the public or the institution responsible for accountability can sanction the offending party or remedy the contravening behavior. As such, different institutions of accountability might be responsible for either or both of these stages. The study was also supported by Stapenhurst and O'Brien (2006) who urged that accountability evaluating the ongoing effectiveness of public officials or public bodies ensures that they are performing to their full potential, providing value for money in the provision of public services, instilling confidence in the government and being responsive to the community they are meant to be serving.

4.4.1.3 The rule of law

Kleinfeld (2005) argued that the rule of law emphasizes the ends that are intended to serve within society such as upholding law and order, or providing predictable and efficient judgment. Domingo (2009) added that rule of law refers to the policing and security capacity of the state, and the degree to which it is aligned with the principles of due process and do not harm.

The researcher was interested to know whether there is equality before the law in both citizens and village water committees. As shown in table 4.9 the questions asked in open ended form, 74 respondents (93%) agreed that there is equality before the law, 4 respondents (5%) said that there is no equality before the law to both citizens and village

water committees whilst 2respondents (2%) not responded. The finding articulated from the field asserted that equality before the law had increased accountability to the decentralized water institution. The elected village water committees function well under the newly initiated Water Users Constitution called SAKOVICHA with registration number MG/MVDC/026 which operated within Sangasanga, Konga,Vikenge and Changarawe villages. The Water Users Constitution articulates the rights of the member in access water service and suspended detected members who destruct willingly water infrastructure or any equipment related to water project and environmental management.

Table 4.9: Equality before the law

	Equality before the law	
Respondents attribute	**Frequency**	**Percentage**
Yes	74	93%
No	4	5%
Not responded	2	2%
Total	**80**	**100%**

Source: Field data, 2015

The same question administered to water customers through FGD to 8 respondents and one of the respondents added that "*water taps of the consumers should be functioning properly in terms of turning on and off, if not the service will be cut off".* The researcher identified in the field that those who are responsible in service provider with secondary education level like water committee's members have retrieved well from their experience in performance. Therefore, this applauded the existing enforcement of rules which function in the community water utility.

The findings above were supported by the study done by Kleinfeld (2005) that equality before the law ensures that all citizens despite of their well connected to the system, rich, or powerful are judged for their actions by the same laws with equal applied. Equality before the law is one of the core ways in which citizens can ensure that government

officials, the rich, the powerful, and the well connected do not become a social group apart. Domingo (2009) proved that equality before the law relates to the extent to which those in power are constrained effectively by a pre established and widely accepted set of rules of political engagement. This can adopt a constitution form or it can due to the outcome of traditional built up over time include some form of common or community law. The point to consider is that these are rules to which power holders argue to abide.

4.4.2 Explore the existence of access and satisfaction of water service delivery in Mvomero District

The second objective was focused to explore the existence of access and satisfaction of water service delivery. The respondents in the field accept the existence of access and satisfaction through their dependable potable water sources, distance to water taps, average time taken by consumers to collect water, recognition of the vulnerable group and satisfaction with the quality of watercolor.

4.4.2.1 Access of water service delivery

Water catchment areas are the hub for helping poor communities' access potable water fairly and sustainably. The water consumers of Mvomero District were asked the question "What is your current resident's household's main source of potable water?"The study revealed that Tangeni catchment area, Mongwe River and Kiyovi protected ground water are resourceful to administrative areas of Mzumbe and Mlali wards respectively. The researcher was admired to know the resident's household's main source of potable water. In Mlali village 20 respondents (25%) declared to get reticulated/water tap. In Kipera village 12 respondents (15%) said that they utilize potable water from protected bore holes due to unexpected water cuts which could go for one to three months. Also 8 respondents (10%) declared to get potable water from reticulated/tap water of Mongwe river catchment area. The World Bank sponsored Mlali ward water project but it was not yet function properly since it was completed in 2013

due to inadequate budget to cover the final stage of the project in building large tanks and laying water pipes.

In Changarawe village, 19 respondents (24%) said they use reticulated water whilst 1 respondent (1%) acknowledge using protected water pump. In Vikenge village 20 respondents (25%) confessed to using reticulated potable water from Tangeni catchment area as shown in table 4.10 below.

Table 4.10: Residents household's main source of potable water

	Wards							
Water sources	**Mlali**		**Kipera**		**Changarawe**		**Vikenge**	
	F	%	F	%	F	%	F	%
Rain water	-	-	-	-	-	-	-	-
Ground run-off	-	-	-	-	-	-	-	-
Reticulated potable water	20	25%	8	10%	19	24%	20	25%
Protected boreholes	-	-	12	15%	1	1.2%	-	-
Total N=80	**20**	**25%**	**20**	**25%**	**20**	**25%**	**20**	**25%**

Source: Field data, 2015

The same question was administered to water customer households through FGD. The total numbers of 8 respondents were involved. The findings shows that 6 respondents (75%) said to receive source of potable water from reticulated potable water whilst 2 respondents (25%) argued their source of potable water from protected boreholes. Both males and females understand better the source of potable water within their localities. Therefore the researcher concluded the general understanding of the piped water as responded by water users, that it, preview the bench mark in studying the water service delivery.

According to World Health Organization (2011) provided us with global water statistics on piped water as a fundamental positive, optimal service level supply which brought

impacts on health and hygiene since 2008 with 57% population which access piped connection in their household location. The trend of access, piped drinking water in the third world countries had been growing in rural areas to urban areas with total increased from 21% to 31% and from 71% to 73% respectively.

This study was supported by the Citizen Reporter on Water, in comparison with two urban; the 2012 National Demographic and Household Survey indicate that 78.1% of the population in Kilimanjaro region has piped water, far from the 51.8% of the people in Dar es Salaam. This was due to water authorities in the region are taking full advantage of the streams of water from Mount Kilimanjaro (Qorro, 2015).

4.4.2.2 The distance from the households to water taps

This part wanted to assess the distance between households and water taps. The respondents were asked question "What is the distance from your households to water sources?"

Graham (2005) asserted that, distance is a combination of many factors such as security, access, transport, competition, and ultimately time cost. The results of the factor interactions brought the physical realities of water (very heavy, difficult to move, etc) therefore, the distance is very essential factor in determining what types of water use about 37%, what percentage of household income are spent on water, and how much water is used in a household. Distance determines the costs to those who must collect water. The "reasonable access" as defined by MDGs to a water source is referred to "availability of at least 20 liters per person per day from a source within one kilometer of the user's dwelling."

On the question of the distance from the households to water taps, the study revealed that the majority of respondents were above the recommended standard in Tanzania, as the acceptable walking distance to the water source is about 400m (Water Aid, 2002).This is caused by low cost of water connection from the main line about Tshs 30,000 which is reasonable for them to pay for the service. Table 4.11 shows that 22

respondents (28%) said walking less than <49m, 13 respondents (16%) walked between (50-100m), 17 respondents (21%) were walking a distance rated between (150-200m) while 5 respondents (6%) agreed to walk distance between (250-300m), other categories of distance between (350-400m) were used by 2 respondents (3%) whilst 21 respondents (26%) said were walked greater than >400m, because the service was not reliable due to unexpected water cuts which could go for more than one month, but the service turn back when there is official visits of the President of the United Republic of Tanzania or the concerned constituency elected Member of Parliament. Also the study reveals that, most of the respondents from Kipera-Mkuyuni choose alternative service to the four water pumps or to buy water from local vendors for about Tshs 500 per jerry can at Changarawe village.

Table 4.11: Distance from the households to water taps

Wards	Distance to water taps													
	<49m		50-100m		150-200m		250-300m		350-400m		>400m		Total	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Mlali	5	25%	5	25%	5	25%	3	15%	1	5%	1	5%	20	25%
Kipera	-	-	-	-	-	-	-	-	-	-	20	100%	20	25%
Changarawe	8	40%	5	25%	4	20%	2	10%	1	5%	-	-	20	25%
Vikenge	9	45%	3	15%	8	40%	-	-	-	-	-	-	20	25%
Total	**22**	**28%**	**13**	**16%**	**17**	**21%**	**5**	**6%**	**2**	**3%**	**21**	**26%**	**80**	**100%**

Source: Field data, 2015

The same question was administered to water customers through FGD. The total numbers involved in the conversation were 8. The findings from the study reveal that 4 respondents (50%) argued to walk a distance between 50-100m while 4 respondents (50%) said that the distance range between 150-200m. Therefore, those with distance between 50-100m have private in house connection of the gravity pipeline from the main distribution tank and those with a distance between 150-200m were not installed

pipelines and buy water from their neighbors' with water connections. The researcher concluded that the distance is reasonable because it's below 400m the recommended distance as stipulated in Tanzania National Water Policy of 2002.

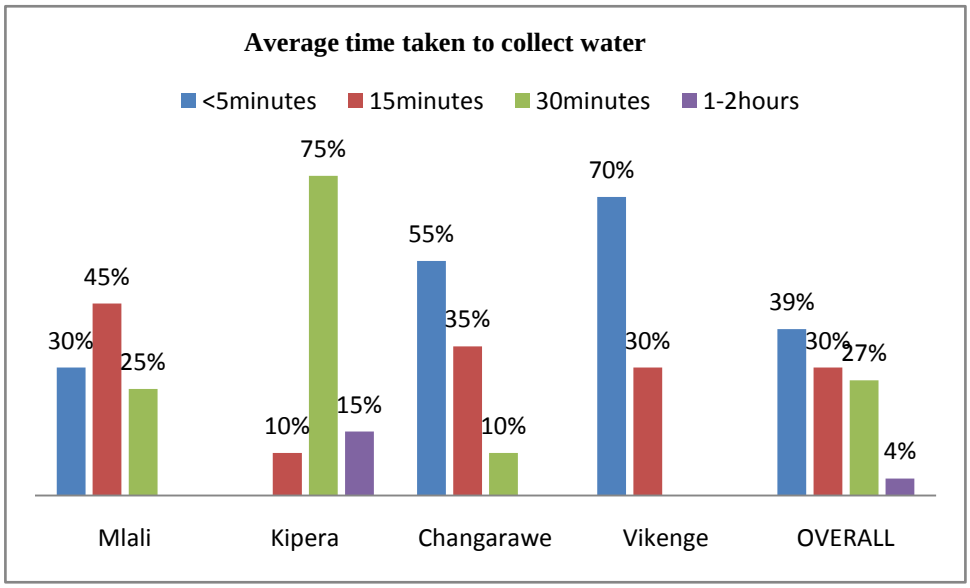
Also the study above was supported by Whittington, Lauria and Mu (1989) that, in areas within urban, the distances from households to water sources tend to be much less in the order of 100 m. In Onitsha, Nigeria a majority of households are within 50 m of small retail water vendors. While in two communities on the outskirts of Dar es Salaam, Tanzania, 70% of those interviewed were within 200 m of a water source (Kyessi, 2005). The availability of water resource in the best location does not necessarily mean accessible by everyone. Distance is the most important issue the people to consider and not the physical infrastructure.

4.4.2.3 The average time taken by consumers to collect water within the household water points

World Health Organization and United Nation International Child and Education Fund (2004) asserted that the Joint Monitoring Program (JMP), which oversees the MDGs, has found that in rural areas, any trip to collect water that requires more than 30 minutes results in reduced water usage. The first feature of time costs is that they are scaled according to the time utility of the person designated for collecting water. For example, an adult's time may be considered more valuable than a child's, and all other things being equal in the short-term, it is economically rational to send a child to fetch water instead of his mother or father, even though the child's maximum carrying capacity may be smaller. According to Graham (2005) emphasizes that, time to consumers accumulate for any effort required to access water, such efforts as turning on a tap within a household or accessing water stored immediately within a household. That is, any time required to get water other than that of accessing water directly at hand represents a cost to the consumer and to the household. Such costs are real, and they present effective hindrances to the collection of water.

By using household questionnaires the respondents in the field were asked to mention the average time taken to collect water within the household water points. The findings were categorized into four average times from < 5 minutes, 15 minutes, and 30 minutes whilst exceeding time was 1 to 2 hours. Figure 4.2 shows that 31 respondents (39%) said that, they spent less than 5 minutes to collect water within the household water points, 24 respondents (30%) declared to get water within 15 minutes whilst 22 respondents (27%) and 3 respondents (4%) spent 30 minutes and above one hour respectively for collecting water from the household water points.

Figure 4.2: Time taken by consumers to collect water



Source: Field data, 2015

The same question was administered to water customers through FGD. The total number involved in the discussion was 8 respondents. The findings from the study show that 8 respondents (100%) urged to take less than 5 minutes to collect water due to in house connection to their premises. The study confirmed that those who spend less than five minutes were installed water taps within their household premises or yards, which simplified collection round trip. Others in Kipera-Mkuyuni village have been connected

with dry pipe water due to outlived infrastructure since Ujamaa era. Therefore the villagers buy water from mobile vendors from Changarawe Village include, pushcart vendors, *Bajaji* or tri –motorcycle vendors and bicycle vendors with a total cost of Tshs 500 per jerry can. This causes them to spend more than 30 minutes per water collection round trip. This was also revealed from the study that the majority of the females and children's at Kipera-Mkuyuni spent one to two hours to turn around from improved water pumps, rather than depend water, which transported by a gravity pipeline from Mongwe river due to the unfinished extended water project.

The study findings were supported by Kessy (2005) who described the time required to fetch water in two communities outside of Dar Es Salaam, Tanzania, the average time to collect water was 15 minutes, with an average time at the source of only 3 minutes. These times compare favorably to other communities in the Dar es Salaam area, in which the times depend upon available services. In the settlement of Buguruni the average time to retrieve water from a standpipe was 30 minutes. It's approximately half of the population in Buguruni uses one or more hours every day for collecting water.

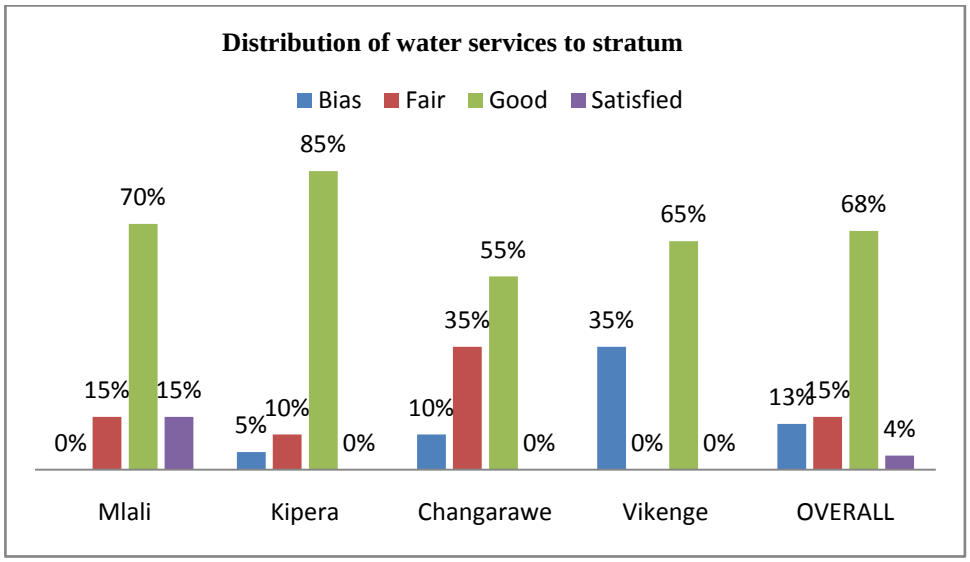
4.4.2.4 Equal access of quality water to poor people

Water Partnership Program (2008) provides a meaningful description starting with the MDG's aim to the poor; they are greater in number and most deprived of service. They are least served by formal and regulated service providers in water utilities. It's not possible for the poor to have house connections premises, perhaps due to high connection charges. They commonly pay much more per liter than those that enjoy piped water. The poor have a number of problems with services including intermittent, lack of influence, voice and channels to complain to the regulator, if regulation exist at all. Therefore, this is regarded as a governance issue for the water sector.

Respondents in the field were asked about how the quality water distributed equally to all social stratums includes the rich, middle class or political connected groups compared to the poor people. The study revealed the equal distribution of quality potable water to

all stratums in the area due to the presence of free public standpipes for the poor to collect water, also the cost of in house connection with the service is reasonable for them to afford about Tshs.30, 000 and the amount paid per month for water bill is about Tshs 500 to 1000. The findings in figure 4.3 show that, 55 respondents (68%) admitted that there is a good distribution of water service to all people in the society, including the poor,12 respondents (15%) said that there was a fair distribution of water service, whilst 10 respondents (13%) and 3 respondents (4%) argued that there is bias and satisfied distribution respectively. The perception of most farmers who said the existed bias was contributed by the hostels owner's in Vikenge and Changarawe villages, in which water is transported by a water pump pressures towards their hostels which led to water cut off to other customers with no water machine pumps.

Figure 4.3: Quality of water service distributed to the whole stratums



Source: Field data, 2015

In the field, both sex's males and females have the same approach on the considering of vulnerable groups in access the quality potable water. This is because the poor people were within the society and were identified due to their susceptibility ill being of the social status. The researcher identified ill being of the people in the field who failed to afford the cost of connection from the main water network despite exposed to the

system. Hence the village council was responsive in decision making to the provision of water service to the poor people who were discriminated from the service by promoting *Ujamaa* public stand pipes. The vulnerable groups include the poor were allowed freely to take more water collection round trips from the *Ujamaa* public standpipes.

The study was supported by Plumb (2009) who signified the utility's financial capability plays a key role not only in its ability to provide quality services in general, but in its ability to extend quality services to poor people, particularly if cross subsidies or considerable capital costs are deemed to be required to enable service extension. The World Bank and Sanitation Program (WSP) (2008) argue that the goal of utility reform "should be financial capable while not excluding poorer sections of society". This requires sustainable revenue strategies which include "appropriate tariff structures that are simple, equitable, affordable, financially sustainable, and transparent for all, taking into account poor and marginalized consumers", as well as applying "appropriate subsidy mechanisms to ensure affordability for the poor."The findings from the field prove the equal distribution of water quality to the whole society regardless of their status.

4.4.2.5 Hindrances to access potable water collection

The question was asked to the 12 Water Users Association and about 8 respondents were asked through household questionnaire to list on the factors which hinder effective collection of potable water in their local area, while 4 were interviewed. Their analyses were as follows;

Frequent water shortage

The prolonged drought condition led to frequent water shortage and more seriously during dry season from December to March, where the water demand increases the vendor's price to Tshs 500 per jerry can. Water competition with farmers who irrigate their small scale farms in the streams around catchment areas reduces the water volume which could be used for domestic purposes, 6 respondents (75%) said that water

competition and prolonged dry season reduces the effective performance of the utility to deliver water service to the community. Whilst 2 respondents (25%) decided differently from the others, that frequent water shortage is due to poor infrastructure and sand refilling in the outlet chamber of water tank distribution. The researcher noted that frequent water shortage is a chronic issue which existed in dry and wet season due to poor water infrastructure.

Unfinished construction water projects funded by World Bank

In Mlali ward were water project was funded by World Bank in 2005 was not completed hitherto, due to unpaid of the project contractor to implement the remains tasks in building supply tanks despite of the huge money paid in that contract, 7 respondents (88%) recommend that unfinished construction of the water users group hinder the availability enough water for the Mlali and Kipera villages, while 1 respondent (12%) said that might be the supplied funds from donors were misused by those who intentionally supervised the project, therefore this led to delaying of the water supply.

The unfulfilled long term promises on the rehabilitation of large supply tank

There was an unfulfilled long term promise on the rehabilitation of water tank about 27 million from District Executive Director in Mvomero District, with capacity of 50,000 liters. The mode of the tank would be stand tanks which allows high pressure in water distribution in Mzumbe ward that is why 8 respondents (100%) out of 8 said that the delaying of the project rehabilitation reduces water volume which could satisfy the water customers in Changarawe village. The attaining of the Local government promises in rehabilitation reduces water rationing in which water distribution is opened at 2:00am, midnights and the existed intermittent flow in the mentioned village.

The 4 Village Executive Officers were interviewed with the same question. One of the prominent figures said, "*The Community Water Organization in Mzumbe ward had faced with a number of challenges, including the water users were not paid their water bills on time, despite of the cheapest price of the product,"* the rest 3 respondents (75%)

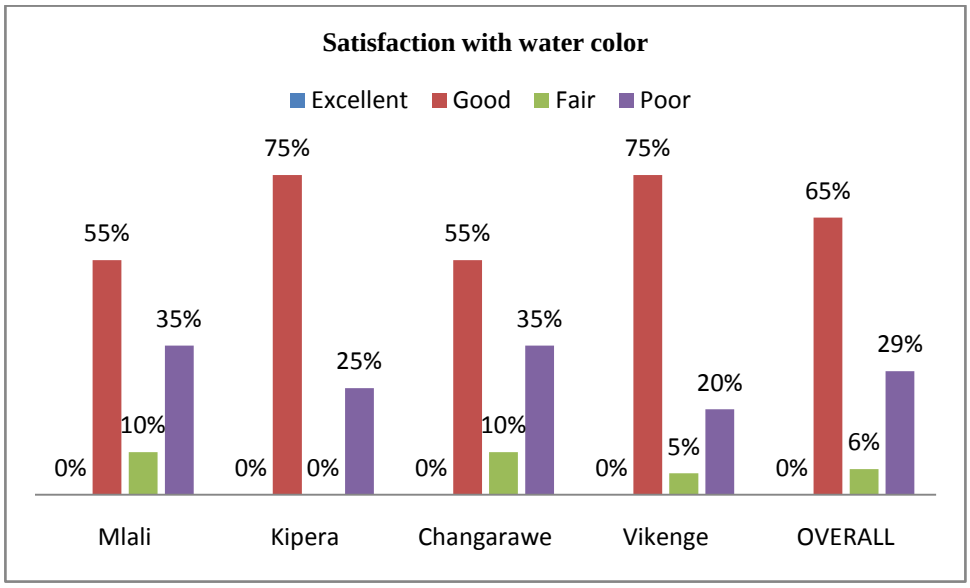
argued that unpaid water bills are a problem in sustainable development of the delivery of water service. The researcher identified that water bills was paid at the end of the month and those who failed to pay on time, the service is cut off and were charged Tshs 6000 as fine to reinstall the service.

4.4.2.6 Citizen satisfaction with quality of water color

Some substances in water have no direct health effect; however water that has high turbidity and is highly colored or has an objectionable taste or odor may be regarded by consumers as unsafe and may be rejected for use (Gulyani, 2001). The quality and coverage of services for most urban water utilities south of the Sahara remain poor and the situation is becoming worse with high urban population growth rate of 2-6% per year (Njiru & Sansom, 2003). The respondents were asked "What is your impression about the physical water color?" The items were arranged into four categories of Excellent, Good, Fair and Poor. The findings revealed that there is installation of basic water systems through spring catchments of Tangeni and Mongwe rivers, gravity fed systems and with low cost technologies such as hand pumps. The consciousness on the quality of water color was good during dry seasons, but in the wet season, rain water is contaminated by runoff streams which caused by silt and fossil particles which affect quality of potable water. Also the water was not treated at all, because the water is taken directly from the river source through the in late channel. Also, there is no protection of the distribution tanks, whereby those with bad impression can put harmful materials in water tanks to affect water users.

Figure 4.4 shows that 52 respondents (65%) were impressed with good water color, 5 respondents (6%) had a different impression and rated it as fair whilst 23 respondents (29%) graded as poor water color.

Figure 4.4: Satisfaction with the quality of water color



Source: Field data, 2015

The same question was administered to water customers through FGD. The total number of respondents involved in the discussion was 8. The findings from the study show that 6 respondents (75%) argued that water color is of good impression whilst 2 respondents (25%) said the water is of poor quality.

The female perception on water color was different from men responded to this question. Most females who interviewed reacted negatively to the color of the water, which was of poor impression due to contaminated with water borne diseases and silt eroded materials. Men responded positively to the color of the water that was of good impression. The researcher evaluated both responses and discovered that, females are the one who carried the burden in seeking for water in turnaround to water taps with multiple usage of the resource in washing, cooking, bathing and flashing in toilets. So this trend credited them to detect the impression of the water color while the men's were not involved in fetching water and the whole burden is left to the females to satisfy their daily family usage.

The findings above were supported by the study done by Kimey, Hoko and Mashauri (2008) that the majority of consumers in Muheza town were not satisfied with water quality compared to those in Korogwe town. This could be due to the fact that in Korogwe town most of the water sources are ground sources, hence less polluted compared to Muheza town which has only one stream as a source. The stream is exposed to pollution, especially during the rainy season. Therefore, the perception of quality of water color in Mvomero District it depends with the season. In raining periods there is contamination with ground streams run off and water became of poor quality due to gravity fed systems.

4.4.3 Examine the effects of governance of water on water service delivery in Mvomero District Council

This subpart sought to examine the various effects of governance of water on water service. The respondents were asked “To list effects of transparency, accountability and rule of law on water service delivery in MDC.” The following are some scrutiny of their responses in table 4.12,13 and 14 respectively.

Table 4.12: Effects of transparency in water service delivery

Effects of transparency	Water Service Delivery		
	Access	**F**	**%**
	(a) Service coverage -Availability of water service at least 20liters per person per day due to the flow of information. -It reduces the rate of corruption. -There is presence of receipts for water customers. -No meter installation on household water taps premises	25 2 12 3	31 3 15 4
	(b) Average time taken to walk to a water point -Those with no water connections paying much more in time spent and costs of purchasing water from local vendors.	8	10
	(c) Are the poorest accessing water? -There is a list for those with vulnerable groups to collect water from the separated Ujamaa public stand pipes. -No fee is charged on the separated public pipes	2 1	3 1
	Citizen satisfaction		
	(a) Satisfaction with quality of water -The existence of water borne diseases for instance, diarrhea, typhoid fever and bilharzias. -There are reported cases of unknown people who mixed kerosene with water in Mongwe river outlet water tank. -Water is not treated for better usage.	12 1 6	15 1 8
	(b) Satisfaction with the regularity/Reliability of supply -There prolonged water cuts without clear information from the utility	3	3
	(c) Satisfaction with water tariffs -There are complaints from the water customers against the water owner's connections who resell the service to them for Tshs 1000 per month.	5	6
Total		**80**	**100%**

Source: Field data, 2015

Increases access to information led to the availability of water

Mobilize public opinion through access to information reduces water pollution and improved water quality (Krchnak, 2005). In transparency the access of information from recognized water community led to the availability of water service, 25 respondents

(31%) agreed the flow of information from the service providers that is Village Water Committees through personal contacts and oral traditional method of dissemination of information, increases the presence of service at least 20 liters per person per day due to leaders influence the making decision on water utility performance. The leaders mobilized water customers to participate in any emergency occurrence like pipe leakages and filter cleansed through contributing their manual efforts or support Tshs 5000 in order to hire cheap labor to replace their schedule tasks. Therefore easy mode of access to information through personal contacts and village announcement drum to the water customers facilitates awareness in water storage to various containers like buckets, tanks and jabas for further use.

The study revealed the water service provider, including village water committees is involved in the daily activities includes management of sustainable water sources and operation of the physical infrastructure in a nonprofit context includes, water bills follow up, preventive maintenance and record keeping in saving and expenditure.

It led to the prevalence of waterborne diseases due to lack of information

Other effects were threatened and prevalence of the existence of waterborne diseases like typhoid's and snail fever in the community, 12 respondents (15%) said it was a problem due to lack of information on whether the domestic water usage is treated or untreated. Also the service providers failed to impart knowledge on how making use of untreated water. The researcher discovers that water taps are not treated which led to increased risk of unhygienic to the water customers. There is a need for experimental research on the prevalence of typhoid's fever in the nearby dispensaries of Mzumbe and Mlali to examine the number of cases reported in those health centers.

The same question was administered to water customers through FGD. The total number of respondents involved in the discussion was 8. One of the respondents state that "*quality of water color is of poor impressions due to frequent cases of health impact and water related diseases such as diarrhea, typhoid fever and bilharzias or snail fever*

*reported in Changarawe village."*The findings from the study show that 7 respondents (88%) said that lack of information on untreated water in guiding water customers on domestically uses led to the prevalence of water borne diseases.

As listed in table 4.13 shows the effects of accountability on the decision making and charged measures for the alleged person due to infrastructure distortion.

Table 4.13: Effects of accountability in water service delivery

Effects of Accountability	**Water Service Delivery**		
	Access	**F**	**%**
	(a) Service coverage -The alleged person who distorts the water connection was charged to pay fine. -It allows the extension of the service networks from the main water system. -It improved the better performance of the community water organization.	10 12 6	12.5 15 7.5
	(b) Average time taken to walk to a water point -It harmonized the installation of Ujamaa public standpipes to all communities, especially in Mlali village.	8	10
	(c) Are the poorest accessing water? -They received decision making made by Village Water Committees on fiscal management in serving and expenditure. -It facilitates central government responsiveness in water service delivery of Local Government.	16 4	20 5
	Citizen satisfaction		
	(a) Satisfaction with quality of water -Village water officials were not answerable to the poor perception of water color. -There is no treatment cleansing devise plant for water usage.	4 6	5 7.5
	(b) Satisfaction with the regularity/Reliability of supply -There are no measures taken to water service providers for water rationing and irregularity, even for 1 to 3 days. -No equal time schedule for water distribution in all Mitaa.	5 6	6 7.5
	(c) Satisfaction with water tariffs -The water customers can pay for the service without consistency water flowing.	3	4
Total		**80**	**100**

Source: Field data, 2015

Water Users Association were answerable to the poor in decision making

The poor received decision making from village water committees on fiscal management in saving and expenditure of the resource, 16 respondents (20%) said that leaders are accountable to the poor in decisions making about utility performance. They provide information on the whole society to participate in regulating water service in operating and maintenance of the project. The vulnerable groups were taking into consideration in service delivery through registering those with low income earners to receive equal access to potable water from the public stand points, in which they fetch free of charge. Therefore their decision making can affect the provision of the service if the stakeholders were not involved in planning and monitoring of the project. Also World Bank (2003) asserted that having information about performance led to obtained relevant information so as to evaluating performance against expectations and formal or informal norms.

It led to alleged person charged and paid fine

The decentralization of water service in Mlali and Mzumbe wards was facilitated by the efforts of World Bank and other Nongovernmental Organization like SNV. The SNV empowering Water Users Association in supervising, control and designing their projects. The lack of accountability when the water utility was under government control led to frequent water leakage. Therefore 10 respondents (13%) said that when a person alleged to distort water leakages are charged to pay fine. The study reveal a case of a suspected person in Mzumbe ward who devastate the pipe infrastructure for irrigation purpose and was caught to primary court charged to pay fine and replaced the distorted pipe with new installation. This indicates the imposed authorize to water committees in supervising and control of the project in order to provide appropriate utility performance.

The same question was administered to water customers through FGD. The total number of respondents involved in the discussion was 8. The finding shows that 8 respondents

(100%) said that every individual is accountable to the village water project in protecting and conserving the sustainable resource.

As in table 4.14 indicate the rights of every individual in access to potable water and the formulation of SAKOVICHA constitution.

Table 4.14: Effects of rule of law in water service delivery

Effects of Rule of law	**Water Service Delivery**		
	Access	**F**	**%**
	(a) Service coverage -Every individual has rights in accessing the water resource. -It promotes distribution of the water service under the influence of political will.	20 12	25 15
	(b) Average time taken to walk to a water point -It facilitates availability of water service infrastructure installed within household's settlements to allow every individual to access quality potable water.	6	7.5
	(c) Are the poorest accessing water? -There is considering of the poor in accessing quality water through registering and formulated checklists for the vulnerable groups in public stand pipes.	14	17.5
	Citizen satisfaction		
	(a) Satisfaction with quality of water -It gives legal protection of the human rights in demanding quality water and safe from harmful effects. -Promotes distribution of piped water for the betterment attain quality water.	4 5	5 6
	(b) Satisfaction with the regularity/Reliability of supply -They facilitate water stand points to be distributed in all mitaa. -It led to the formulation of SAKOVICHA constitution which allows operation of water resource management.	7 9	9 11
	(c) Satisfaction with water tariffs -It promotes equal legal rights and regulation in water bills, connections, and fine charges to all villages.	3	4
Total		**80**	**100**

Source: Field data, 2015

It promotes rights to every individual in accessing quality water

In 2010 UN General Assembly adopted a resolution which recognized access to clean water and sanitation as a human right essential for the full enjoyment of life and all human rights (Stockholm International Water Institute [SIWI], 2010). Water resource is considered as human rights due to its appropriate tasks performed daily in households, including bringing hygienic to families, as 20 respondents (25%) agreed that every person in the community has rights in access to potable water through common property whereby the Community Water Organization members in Mlali and Mzumbe wards has defined the rules of appropriation, on members have a duty to abide by the rules and pay for the service. The study reveals the distribution of 4functional water points in Mlali, Kipera, Changarawe and Vikenge villages, while others were dysfunctional from the time researcher visited the study area apart from the private connection. Therefore in house connection and ujamaa stand pipes facilitate the protection of human rights in terms of rights in water access to the marginalized people.

The study was supported by the Water Supply and Sanitation Act, 2009 which stipulated on Sect 32 (a-h), described the powers and functions of community owned water supply organizations includes limiting the access of any persons from the water source, public taps or from supplies from the waterworks who are not complying with rules, regulations or the constitutions of the community organizations

It led to the formulation of SAKOVICHA constitution

In 2013 SAKOVICHA was legally registered by the Mvomero District with registration number MG/MVDC/026 operating to the Water Users Association in Changarawe, Vikenge, Konga and Sangasanga villages. They were bounded by their own constitution, which was stipulated in the Water Resources Management Act (WRMA) No.11 of 2009. Also the National Water Policy (NAWAPO) of 2002 is legally backed with WRMA to insist participation of Users Associations in supervising water resource and environmental protection from the Tangeni catchment area; as, 9 respondents (11%) said

that the presence of legal laws reduces the rate of environmental degradation around the water sources due to abide in by laws of their villages. The researcher read a copy of SAKOVICHA constitution and discovers the rights of water users with access to water resource and the measures against those who will perform differently to the rules. This is because SAKOVICHA play a major role in the water sector because they are the primary users, watchdogs and managers of water resource in their administrative area.

The same question was administered to water customers through FGD. The total number of those who involved in discussion was 8. The findings show that 3 respondents (37.5%) said that it facilitate the formation of village by laws, 4 respondents (50%) argued that it led to the protection of human rights due to equal distribution of potable water while 1respondent (12.5%) said that there is formulation of water constitution which emphasis legal rights in water provision.

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter is schematic arranged into four sections. The first part provides with a summary of the study findings; Second part concluded the overwhelming findings of the study; Third section presents the policy implication; fourthly, recommendations articulated from the study and improving the study while the last part ended with recommendations for further research. The study assess the governance of water service delivery among the low income earners in Mvomero District Council (MDC), as one of the decentralized Local Government in Tanzania which serves as an effective vehicle for service delivery to the poor communities. Specific issues that have been explored in this chapter was to assess transparency, accountability and rule of law in governance of water in MDC; To explore the existence of access and satisfaction of water service delivery in MDC and to examine the effects of governance of water on water service delivery in MDC. The researcher collected data from 100 selected respondents who are rich cases for study in depth through household questionnaires, personal interview and FGD. Variables are summarized as frequencies and percentages. Analysis of data used Microsoft Excel to summarize and present the information in tabular and graphical illustrations.

5.2 Summary of the findings

The study was set out to whether governance issues encountered during the provision of water service delivery. The following are the summary of the findings basing on each specific objective;

Assess transparency, accountability and rule of law in governance of water in MDC

The findings revealed the potential improvement in transparency among the Water Users Association due to the flow of information and rights of access to documents of the association. The village water committees play their role in the dissemination of the water sector information. The sophisticated way of retrieving first hand information was through frequent conducting village meetings or public forum, hence the dominant group with 76 respondents (95%) confessing to receive information from their Community Water Association leaders. Therefore, citizens were directly convinced to participate in decision making and policy implementation due to the community water association responsiveness to their priorities. The findings show that females have good attendance in village meetings than men due to be at risk when there is lack of water service. The water is used by females and children to perform different domestic tasks includes bathing, washing, drinking and for hygiene in sanitation applicability.

There is answerability of the water leaders when misuse the resources fund, 60 respondents (75%) recommended terminating the leader's authority. The researcher identified three former leaders in Vikenge village were suspended from the utility due to misuse of the water funds. They were charged due to unclear balance sheet of saving and expenditure of the village water account. But other 8 respondents (10%) suggested giving warning to the water leaders because they volunteer to the utility. The respondents between ages 36 to 45 years and, above 46 years who are retired officers had experience and performed better in Water Users Association respectively.

There is equality before the law in both citizens and village water users, as 74 respondents (93%) argued the equality before the law led to the formation of Water Users Constitution. The constitution articulates the rights of the member in access service and taking measures to the detected member who destruct water infrastructure.

Explore the existence of access and satisfaction of water service delivery

The distance from the households to water taps is below the recommended standard of 400 m; in the findings revealed that 22 respondents (28%) were walking less than 49 m. There is reasonable individual water connection cost about Tshs 30,000 from the main water network. Also, 21 respondents (26%) said, walking for a distance of more than 400m, due to the existence of water cuts, which could go for more than 1-3 months in Kipera-Mkuyuni village. The service is judged by political will, water service is available when there is presidential visit or the Member of Parliament for the corresponding Mvomero constituency. The villagers choose alternative service from the four water pumps or buy water from local vendors at the Changarawe village with the amount of Tshs 500 per jerry can.

Impression of the water color is of poor quality as graded poor water color. The administrative areas of Mlali and Mzumbe wards depends water from Tangeni catchment area and Mongwe River. Therefore, during wet season water is contaminated by runoff streams with eroded materials such as silt, pebbles and sand which affect the quality of water. Water is untreated because water is taken directly from the river flow to the supply tanks. Most females who interviewed reacted negatively to the color of the water due to its turbidity and poor quality which allow contamination of waterborne diseases such as diarrhea and typhoid fever as reported in Changarawe village and eroded materials.

The effects of governance of water on water service delivery in MDC

It led to an alleged person charged and paid fine

The influence of SNV in MDC had bring awareness to the people and revealed the lack of accountability when the utility was under government control which led to frequent water leakages. This was revealed by 10 respondents (13%) who said one individual was suspected to distort water pipe and recommended to pay fine. There is water competition between the Users Association and farmers for irrigation purpose. Therefore, the alleged

person was sent to primary court and found with guilty of devastate the pipe infrastructure.

Lastly, it led to the formulation of SAKOVICHA constitution

Also, in order to enforce the laws and liquefied into actions, 9 respondents (11%) respondents argued that there is formulation constitution due to decentralized power and mandate to the community utility in establishing their constitution called SAKOVICHA as Water Users Association or literally in swahili "*Chombo Cha Watumia Maji"*. The constitution was empowered by Water Resources Management Act (WRMA) No.11 of 2009. Under the Water Users Association Constitution, it operated within the area of jurisdiction in management and sustainability of the water project for future generation. The researcher read a copy of SAKOVICHA constitution and discovers the rights of water users in access to water resource and the measures against those who will perform differently to the rules. This is because SAKOVICHA play a major role in water sector because they are primary users, watchdogs and managers of water resource in their administrative area. In 2013 SAKOVICHA was legal registered by Mvomero District with registration number MG/MVDC/026 operating to the Water Users Association in Changarawe, Vikenge, Konga and Sangasanga villages. Also the National Water Policy (NAWAPO) of 2002 is legally backed with WRMA to insist participation of Users Associations in supervising water resource and environmental protection from the Tangeni catchment area.

5.3 Conclusions

The overriding purpose of this study was to assess the governance of water service delivery among low income earners in Mvomero District. The study sought to answer three of these questions:

i. How underpinning concepts of transparency, accountability and rule of law operate in the governance of water in Mvomero District Council?

ii. How do the access and citizen satisfaction instruments in water service delivery satisfy the low income earners?
iii. What are the effects of governance of water on water service delivery in Mvomero District Council?

There is potential improvement in transparency and accountability among the Water Users Association in Mvomero District. This was empowered with the rights of access to documents of the association, easy dissemination of information through frequent conducting village meetings for every three months. Therefore the citizens were directly convinced to participate in decision making and policy implementation in the launched associations in response to their priorities. The leaders were accountable to the performance of the utility whereby the former leaders in Vikenge village were suspended from the association due to misuse of the water funds. Lastly, the formation of the new constitution called SAKOVICHA facilitates the equality before the law to all members and non members of the Water Users Association (WUAs) who have rights and duties to manage the resource and also to abide to the rules respectively.

The in house water connection cost is reasonable to the individuals to afford water taps service with expenses of about Tshs.30, 000. This trend increases the number of in house connection to water taps in Vikenge and Changarawe villages. In Kipera-Mkuyuni village there is existence of water cuts which could go for more than 1-3 months due to unfinished Mlali water project from Mongwe River. These reasons facilitate the increase of local vendors who sell water for Tshs 500 per each jerry can. Impression of the water color was of poor quality due to the water sources of Tangeni catchment area and Mongwe River exposed to pollution.

One of the most noteworthy to consider is the formation of SAKOVICHA constitution for sustainable use of water sources. SAKOVICHA Water Users Association was formed with registration number MG/MVDC/026 operating on the administrative areas of Tangeni catchment area through the Sangasanga, Konga, Changarawe and Vikenge

villages. The Users Association was empowered by Water Resources Management Act No.11 of 2009, which plays a major role as primary users, watchdogs and managers of water resource in their area of jurisdiction. Also the field findings revealed issues to be considered includes; spending day hours without tap water or the water users association was failing to provide its consumers with continuous running tap water, poor water quality in terms of color, lack of water meters and lack of large installation drinking water system.

5.4 Policy implications

Water sector in Tanzania has passed several reforms to adopt the sustainable policy programs, from National Water Policy of 2002, which strengthening mechanisms for community and private sector participation in water supply, and reducing the role of central government in the implementation and management of water projects. Then, it's followed by two new water acts including; The Water Supply and Sanitation Act and Water Resource Management Act, 2009 for the purpose of decentralized rural water supply to the community level (Water and Sanitation Program, 2011).

It's evident from the findings of this study seems to support the NAWAPO, 2002 with the fact that Mvomero District has empowered rural communities, especially in a Mlali division to initiate their Constitution in Water Users Association called SAKOVICHA, formally with villages under the project including; Sangasanga, Konga,Vikenge and Changarawe. Issues to consider at community level, Community Owned Water Supply Organization (COWSOs) are responsible for the operation and maintenance of the water project. SAKOVICHA registered number is MG/MVDC/026 by District Executive Director in Mvomero District since 2012. The theoretical argument of the study recommends majority of the community are not aware of the policy, water supply and sanitation Acts with the changing role of government (SNV, 2012). In contrast, the field findings show the level of transparency has increased tremendously the active engagement of the citizens in responding to their existed priorities in the maintenance of the community water associations.

5.5 Recommendations for Research

The following recommendation is offered for related research in the field of public administration settings;

i. Basing on the results of this field finding, it's recommended the average time taken by consumers to turn around on water taps should be below 30 minutes. In contrast, 75% respondents in Kipera Mkuyuni spend more time above 30 minutes per day in fetching water or brought from local vendors in the nearby village of Changarawe, despite of water taps installation since Ujamaa era in rural area results in reduce of water usage. The water infrastructure is of the oldest model to satisfy the present population, which caused the pipe leakage and burst hence led to intermittent.

ii. To speed up the rate of imparting knowledge and registering for more entirely Community Owned Water Supply Organizations (COWSOs). This improves awareness in the society on involved in small investments repair and maintenance costs of water projects. Not only registering, but also enabled the local leaders and citizen to track on the huge funds reallocated by Central Government to see what is going on. This reduced the rate of murmur on the large funds allocated to the water projects from international institutions without completing the targeted tasks.

iii. The study recommends installing water meters to every customer who is connected to the service within their household premises. This will increase water revenue for sustainability of the project in operation and maintenance.

Recommendations for improving this study

The following recommendations are presented as possible ways to improve this study.

i. Be aware of field charges demanded by the respondents; In addition, the problem encountered during data collection was the respondents requesting of incentives from the researcher. After introduction stage and describing the purpose of the study to them is where you will notice the respondents looking one after another within need satisfying their deeds. This occurred when among the respondents who is confident enough initiated a talk, that*: "unacho kitu chochote cha kutuwezesha kama soda ili tujibu maswali yako?* Literally means *...do you have any cash to sustain us before attempt your questions?"* Then, the researcher asked those respondents why this happened? Don't you know that the researcher is a Tanzanian student from the rural areas like you? The response was shocking reality, they said that it's a common stance and there are many studies which conducted frequently within their areas by different local and international researchers who gave them *chochote* for the substitute it with data from them. On one hand it is recommended that to hold money in advance in order to tackle the problem above.

ii. The study recommended to subsequent procedures in submissions of the permission letter from your faculty with offices in the field study. This reduced the rate of petty corruption, delays and red tape from the offices of study.

5.6 Recommendations for further Research

The satisfaction of efficiency water service delivery among the poor remains a major challenge with multifaceted for most parts in Mvomero District. Although there have been water policy reforms in Tanzania since 2002-2015, but still there is need to build up achievable policy strategies in regard to governance of water service to the community intensity. The study recommended in exploring the following as areas for further research so as to attain the Millennium Goals;

i. Assessing the effectiveness of operational costs in facilitating the development of Water Users Association projects in rural area.
ii. Political ecology in water service delivery: A case of pro-poor strategies in rural Tanzania.
iii. Exploring the implementation of National Water Policy of 2002 in regards with poverty reduction strategies in Mvomero District.

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APPENDICES

APPENDIX I: ACE PROGRAMME

university of groningen

北京师范大学 BEIJING NORMAL UNIVERSITY

AFRICA, CHINA AND EUROPE INTENSIVE SUMMER PROGRAMME IN DEVELOPMENT STUDIES (ACE)

Mzumbe University, Tanzania

5-18 July 2014

CERTIFICATE

DANFORD LYIMO has successfully completed the international Intensive Programme in Development Studies ACE, jointly organized by the *Institute of Development Studies*, Mzumbe University; *Globalisation Studies Groningen*, University of Groningen; *College of Humanities and Development Studies*, China Agricultural University, and *School of Social Development and Public Policy*, Beijing Normal University. The programme provided comparative studies of development issues between Tanzania and China. Fieldwork was held in Morogoro region in Tanzania.

Signed by:

Prof. Aurelia Ngirwa Kamuzora
Director IDS, Mzumbe University

Dr. Pieter Boele van Hensbroek
Dept. Dir. GSG, University of Groningen

Date:
18 July 2014

APPENDIX II: RESEARCH METHODOLOGY AND FIELD WORK

universitätbonn
Rheinische
Friedrich-Wilhelms-
Universität Bonn

EDUCATION COOPORATION BETWEEN MZUMBE UNIVERITY AND UNIVERSITY OF BONN
(EDUCOMUBO)

Mzumbe University, Tanzania

15 – 25 AUGUST, 2014

CERTIFICATE

DANFORD LYIMO has successfully completed an intensive course on research methodology and field work offered by the Education Collaboration between Mzumbe University and University of Bonn (EDUCOMUBO). The course involved an introduction to the design of research projects and applied practical exercises during field work using methods of qualitative and quantitative social research. Participatory Rural Appraisal (PRA), household survey methods and consecutive data interpretation. The research findings were presented and assessed in a final public meeting at Mzumbe University. The objective of the course was to enable students to conduct research using a triangulation of field methods, covering various issues of rural development and climate change. EDUCOMBO is under the Institute of Development Studies of Mzumbe University, Tanzania and the Institute of Geography of the University of Bonn, German. The programme involves theoretical and practical field work in Morogoro region in Tanzania.

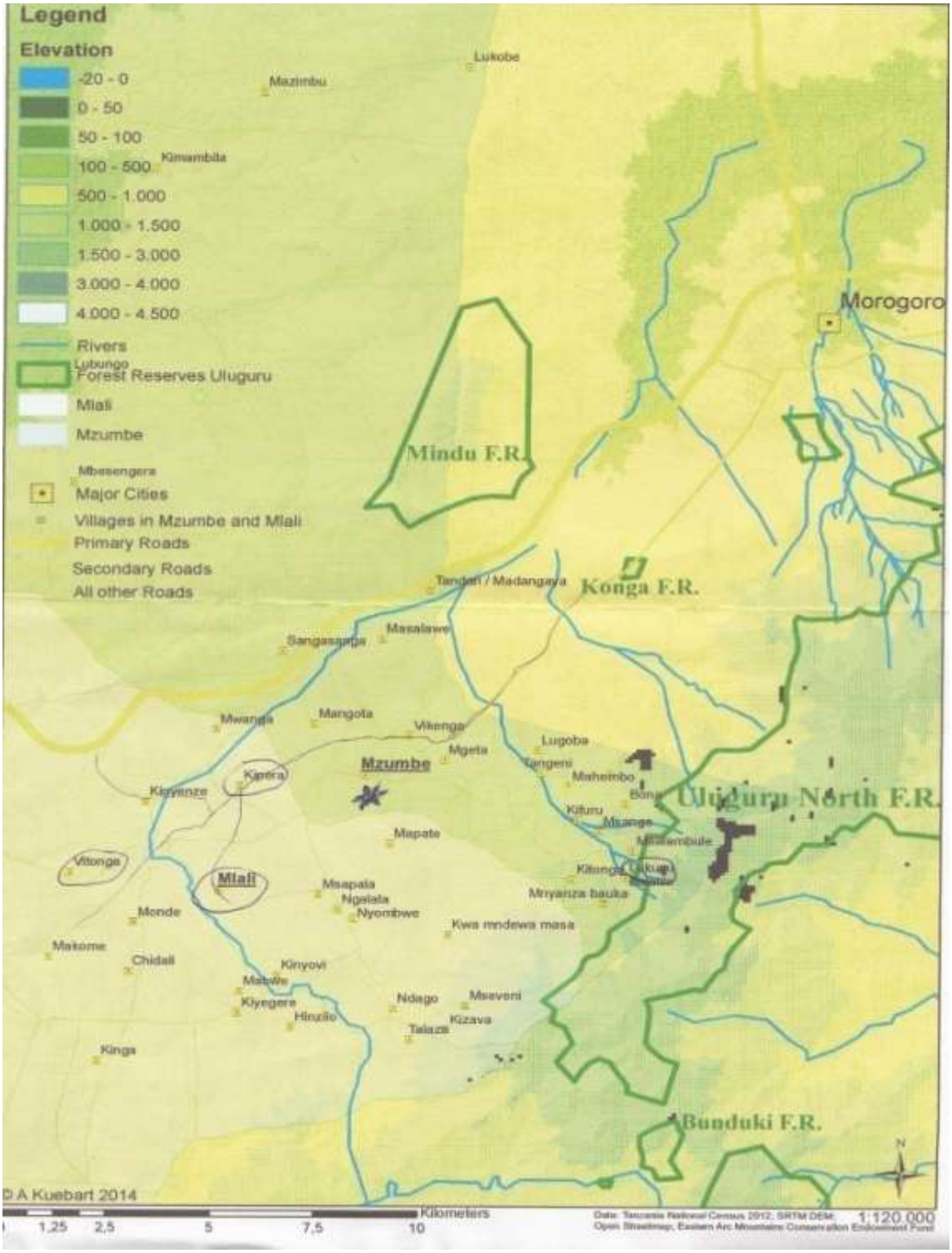
Signed by:

Prof. Dr. Aurelia Ngirwa Kamuzora
Director, Institute of Development Studies (IDS), Mzumbe University

Prof. Dr. Detlef Muller-Mahn
Chairman, Development Geography Working Group, Institute of Geography University of Bonn

Date:
25 August , 2014

APPENDIX III: STUDY AREA



APPENDIX IV: MVOMERO DISTRICT BACKGROUND INFORMATION

1.3 Background Information on Mvomero District

Kombo and Tromp (2006) added that, background refers to the scenery or the position of the study through the brief overview of the problem the researcher intending to deal with. This part tends to describe the historical information as shown below to start with;

1.3.1 Population

The approximate total population of Mvomero district is about 312,109 people; according to the de facto census of 2012 (United Republic of Tanzania, 2013).This study intended to use a sample size of 100 populations from stakeholders.

1.3.2 Administration distribution

Mvomero district among the mandated Local government authority in Tanzania has been divided into areas of administratively which composed of 4 divisions; 23 wards; 115 villages and 640 hamlets. Mvomero is the fifth district of Morogoro region with approximately **7,325** square kilometers. In 2004; the district was formed under the regulation of Government Notice Number 453. The council organization structure (see appendix VI attachment) portrays the citizens on top of the all hierarchies of performance (Mvomero District Council profile, 2006).

Table 1.1: Distribution of administrative units in Mvomero District

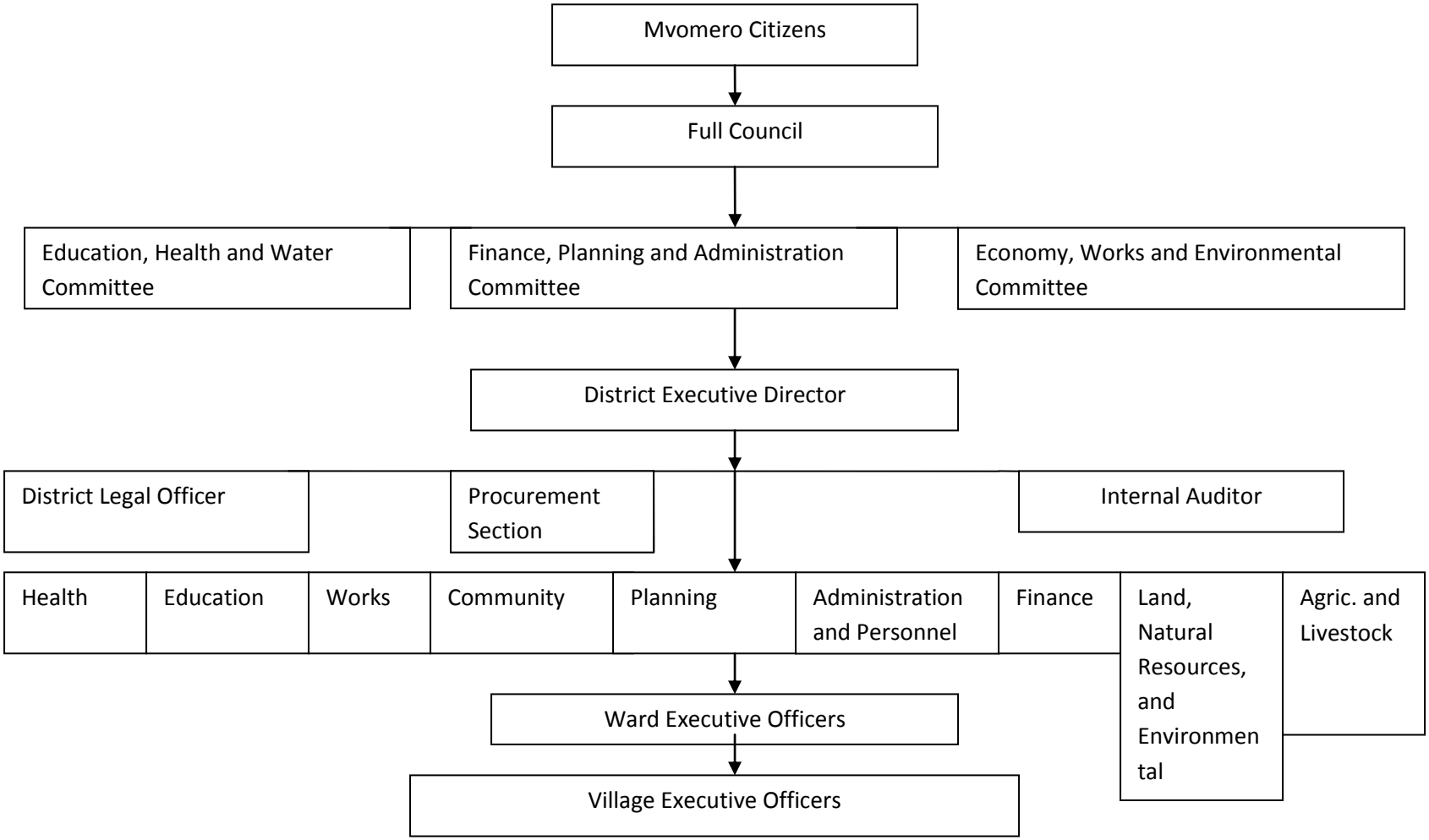
S/No	Division	Wards	Villages	Hamlets
1	Mvomero	7	32	163
2	Turian**i**	5	27	161
3	Mgeta	7	28	176
4	Mlali	4	28	140
Total		**23**	**115**	**640**

Source*:* Mvomero District Council, 2006

1.3.3 Functions of Mvomero District

Mvomero district as one of the recognized councils among the Local government in Tanzania which had many functions in delivery of various services to the people in the area of jurisdiction, as strengthened by the Local government Act No.8 of 1982 Cap.57 (2) which states that "*every urban authority shall have power to do any act or thing in relation to any service or matter which is regulated or provided for by or under any written law or laws for a minister other than the minister is responsible…"*Therefore, apart from various services offered by the district but still challenges hinder the effective access to governance of water service delivery due to presence dysfunctional of water points.

APPENDIX V: MVOMERO DISTRICT ADMINISTRATION STRUCTURE



APPENDIX VI

INTERVIEW GUIDE FOR THE WATER ADMINISTRATION STAFFS OF MLALI AND MZUMBE WARD

Respondents Name …… Respondents Code.....

Local area/Village …… Ward Name….....

Title of Respondent …….

- ✓ A short history of decentralized community water service delivery
- ✓ Accountable for water leakages, drying water pipes
- ✓ Management controlling and preserve water catchment areas
- ✓ Other sources of water through increasing efficiency in services delivery
- ✓ Considerations of the low income earners in water service consumption
- ✓ Hidden factors in implementing of decentralized community water service delivery among low income earners in Mvomero District.

APPENDIX VII:

QUESTIONNAIRE FOR VILLAGES WATER ADMINISTRATION STAFF

As part of the requirement for the Master courses, I am conducting a study into "**Governance of Water Service Delivery among low income earners in Mvomero district**". I would be very grateful if you could support this study by completing this questionnaire and your truthful response will be very much appreciated.

You are assured of the anonymity of your identity and confidentiality of your response.

Kindly circle where appropriate and write your response where applicable.

Section A: Socio-Demographic characteristics of respondents

Qn1: Sex 1. Male 2.Female

Qn2: Age (years) 1. 18-25years 2. 26-35years 3. 36-45years 4. 46 years and above

Qn3: What is your highest level of education? 1. Primary 2.Secondary/Tech.

3. University/Tertiary 4.None, (Please specify…..)

Section B: Historical background and utility performance

Qn4: Give a brief history of the community water based association.

Qn5: What are the hindrances to the collection of quality water?

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APPENDIX VIII:

QUESTIONS GUIDE FOR FGD SELECTED RESIDENTS

Respondents Name……. Respondents Code….....

Local area/village name…… Ward Name…….....

ASSESSING GOVERNANCE OF WATER SERVICE DELIVERY AMONG LOW INCOME EARNERS IN MVOMERO DISTRICT

Sex of respondents 1. Male [ ] 2.Female [ ]

- ✓ Respondent's main occupation
- ✓ The previous household's main source of potable water before community water service.
- ✓ Level of openness in accessing information from water service
- ✓ Both citizens and water committees are accountable to what they did?
- ✓ Perception of the equality before the law
- ✓ The main causes of inefficient water pipe dying off
- ✓ Bill affordability in water charges
- ✓ Consideration of water service among the vulnerable in the society
- ✓ Rule of law in the decentralized water service delivery
- ✓ Quality of potable water

APPENDIX IX:

QUESTIONNAIRE FOR RESIDENTS

Respondents Name…….. Respondents Code.....

Village/name of location……. Ward Name……

PART ''A'': RESIDENTS ASSESSING GOVERNANCE OF WATER SERVICE DELIVERY AMONG LOW INCOME EARNERS IN MVOMERO DISTRICT.

This is research is partial fulfillment of Master Dissertation. I would be very grateful if you could support this study by completing this questionnaire and your truthful response will be very much appreciated. You are assured of the anonymity of your identity and confidentiality of your response.

Kindly tick **(**√**)** where appropriate and write your response where applicable.

Section i: Socio-Demographic characteristics of respondents

Qn1: Sex of respondent 1. Male ( ) 2. Female **(**)

Qn2: Age (years) (a) 18-25 ( ) (b) 26-35 ( ) (c) 36-45 ( ) (d) 46 and above ( )

Qn3: What is your highest level of education? Basic ( ) Secondary/Tech. ( ) University/Tertiary ( ) None ( ) Please specify

Qn4: What is your household size (how many are you in your household)?

(a) 1-3 ( ) (b) 4-6 ( ) (c) 7-9 ( ) (d) 10 and above ( )

Qn5: What is your main activity? 1. Wage employee 2.Agriculture 3.Business

4. None of the above

Section ii Questions: Choose the correct answers and circle the item where necessary.

Qn6: How do you receive information from the established community water based?

1. Media 2.Water committee's 3.Village leaders 4.Non of the above

Qn7: How long you take to receive information about quality of water and revenue collection? 1. Every one month 2.After three months 3.In six months 4.None of the above

Qn8: If your answer in **Qn7** is responds to nothing is being informed (None of the above), so specify the time.

……

Qn9: Do revenue collected from water service in the village opened displayed on notice boards? 1. Yes 2.No

Qn10: If the answer in **Qn9** is **No**, so what other ways of accessing information? Mention those ways.

…….

Qn11: Are you free access official information of water sector from your village water committees? 1. Yes 2.No

Qn12: What is your household's main source of water in your local area? 1. Pipe water 2. Wells/Bore holes 3.Rain water 4.Stream run off

Qn13: Who control and supervise the effectiveness of water service in your village?

1. The whole community 2.Village leader's 3.Water committee's administrative 4.Selected experts from district council

Qn14: How do the water service in your village been controlled and supervised by what you have respond in **Qn13**? Mention at least two ways…….

Qn15: Do you able to enforce standards of good performance on water administrative officials in providing value for money? 1. Yes 2.No

Qn16: Suppose your answer is **No** from **Qn15,** so how do you do to evaluate the ongoing effectiveness village water administrative officials? Specify ways of evaluating them.

Qn17: What do you do if one of the village community water officials misuses the resource funds? 1. Terminating his/her authority 2.Giving warning 3.Left the issue until the end of their term 4. No power to do for them

Qn18: Are the village water committees providing information about their decisions, action and to justify them to the village or public meetings? 1. Yes 2.No

Qn19: Can you approve the offending party of the water administrative committees or remedy the suspected contravening behavior? 1. Yes 2.No

Qn20: What is the major water problem in your village? 1. Water shortage 2.Untreated water 3. Inadequate water supply 4. Misuse of village water funds by officials

Qn21: What are the strategies put in place political will or public capacity to ensure the village administrative water committees are accountable? List at least two strategies.

Qn22: Are the village water committees functionally under the legal status? 1. Yes 2.No

Qn23: If the answer to **Qn22** is **YES,** hence what are those legal statuses? Mention them……..

Qn24: Suppose the answer is **NO**, to **Qn22,** what procedures guiding them to implement their daily activities in managing water service delivery? 1. through village by-laws 2.Through customary laws 3.Business as usual 4.Just to receive a service

Qn25: Is there any legal protection of human rights which gives citizens legal voice in quality of access to justice in water service delivery? 1. Yes 2.No

Qn26: If the answer is **NO** to **Qn25,** so what are other legal statuses in protection of human rights to access the quality water services? Mention at least two of them…….

Qn27: Is there any equality before the law in both citizens and village water committees? 1. No to village water committees and Yes to citizens 2.No to citizens and Yes to village water committees 3.No to citizens and No to village water committees 4.Yes to village water committees and Yes to citizens.

Qn28: What is your current resident's household's main source of potable water? 1. Rain water 2. Ground run-off (river streams) 3.Reticulated /pipe water 4.Bore holes

Qn29: What is the distance from your households to water sources? 1. Hundred (100m) 2.Two hundred (200m) 3.Three hundred (300m) 4.None of the above

Qn30: If your answer in question **No29** is responds to item **4,** then specify the distance.

Qn31: Is the water available at least 20 liters per person per day from the source within on kilometer of the users dwellings? 1. Yes 2.No

Qn32: What is the average time taken by consumers to collect water within the house hold water points? 1. Fifteen minutes 2.Thirty minutes 3. One hour 4.Two hour's

Qn33: Are you able to purchase water daily from the local vendors? 1. Yes 2.No

Qn34: Is there any hindrances to collect water? Mention those hindrances at least two…….

Qn35: How do good quality water service delivery distributed to the rich, middle class or political connected groups compared to the poor people?1.Bias 2.Fair 3.Good 4.Satisfied

Qn36: Are the poor people afforded to pay high tariffs through the time spent and efforts in collecting enough quality water? 1. Yes 2.No

Qn37: Do you experience water borne diseases in water from taps? 1. Yes 2.No

Qn38: If **Yes** to **Qn37,** what are those diseases? Mention three of them…….

Qn39: What is your impression about the physical water quality - color?

1. Excellent 2. Good 3.Fair 4.Poor

Qn40: What is your impression about the physical water quality - smell?

1. Excellent 2.Good 3.Fair 4.Poor

Qn41: How does accountability helps to improve efficiency and effectiveness in water service delivery in your local area? Mention at least three reasons……

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……..

Qn42: List effects of transparency, accountability, and rule of law on water service delivery in Mvomero District.

Transparency……

……..

Accountability……

……

Rule of law……..

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I WISH YOU HAPPY EASTER

APPENDIX X

Table 1: Time Schedule

Activity	Period										
	2014						2015				
	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	June	
Preparing research Instruments											
Orientation and review of different Documents											
Design Questionnaires And prepare for interview											
Distributing Questionnaires and Conducting Interview											
Collection of Questionnaires(date collection)											
Data editing coding Analysis and Interpretation											
Report writing											
Submission of the First report draft to MU											
Final report writing											
Submission of the Final draft											
Defending of the Dissertation											

ACTIVITY BUDGET		
CORE ACTIVITY	ITEMS/PARTICIPANTS	COST INCURED (Tshs)
Consolidation of Literature	Library search Travelling expenses Tsh 10000 per day x 20 days	200,000
Designing and developing research instruments	Typing and photocopying Of research instruments	100,000
Pilot survey	Transport for researcher To and fro in Muheza Tsh 70,000x2 days	140,000
Finalizing of research Instruments(typing and photocopying)	76 questionnaires in Utility and residents Tsh 250@questionnaire	19,000
Main field data Collection(3-4 weeks)	Travel, accommodation And subsistence Researcher 1x120 days 400,000	400,000
Data processing, Analysis and report Writing.	1 researcher and one Assistant 2x60 days 150,000	150,000
Miscellaneous costs		500000
Total		1,509,000

Source: Field Study, 2015