

Addis Ababa  
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## **Governance and Public Service Delivery: The Case of Water Supply in Akaki Kaliti Sub-City**

**A Thesis Submitted to the School of Graduate Studies of Addis Ababa University in Partial  
Fulfillment of the Requirements for the Masters of Art in Public Management and Policy  
Specialization Area in Development Management**

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# Declaration

I, MINTESNOTE BEYENE, declare that this thesis entitled “GOVERNANCE AND PUBLIC SERVICE DELIVERY: THE CASE OF WATER SUPPLY AKAKI KALITY SUB-CITY” is my original work under the guidance and suggestion of the Research Advisor .its offered for the partial fulfillment of the degree of Masters of Public Administration And Development Management Specialization in Development Management. This project has not been done for before and all source of material used for the study have been appropriately acknowledged.

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**Addis Ababa University**

**College of Business and Economics**

**Department of Public Administration and Development  
Management**

**Governance and Public Service Delivery:**

**The Case of Water Supply in Akaki Kaliti Sub-City**

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## **Acronyms**

<b>AACG</b>	Addis Ababa city government
<b>AAWSA</b>	Addis Ababa water and sewerage authority
<b>BPR</b>	Business process reengineering
<b>CAR</b>	Capability, accountability and responsiveness
<b>CBO's</b>	Community based organizations
<b>CGA</b>	Counter governance assessment
<b>CMP</b>	Community managed Project
<b>CSA</b>	Central statistical agency
<b>CO WaSH</b>	Community lead accelerated water and sanitation Hygiene
<b>CO Water</b>	Community led accelerated water
<b>DFID's</b>	Department for international development
<b>E.C</b>	Ethiopian calendar
<b>ECA</b>	Economic commission for Africa
<b>GWP</b>	Global water partnership
<b>MDG's</b>	Millennium development goals
<b>MOE</b>	Ministry of education
<b>MOFED</b>	Ministry of finance and economic development
<b>MoWE</b>	Ministry of water and energy
<b>NGO's</b>	Non- governmental organizations

<b>OECD</b>	Office of economic cooperation and development
<b>PPP's</b>	Public private partnership
<b>RIPPLE</b>	Research inspired policy and practice learning in Ethiopia
<b>SIWI</b>	Stockholm international water institute
<b>SPSS</b>	Statistical package for social science
<b>TGE</b>	Transitional government of Ethiopia
<b>UAP</b>	Universal access plan
<b>UN</b>	United Nations
<b>UNDP</b>	United nation development program
<b>UNICEF</b>	United Nations children's fund
<b>UNSECO</b>	United Nations educational, scientific and cultural Organization
<b>WaSH</b>	Water and sanitation hygiene
<b>WIF</b>	Water and sanitation hygiene Implementation Framework
<b>WSSD</b>	World summit on sustainable development

## **Abstract**

*This study examines governance and public service delivery of water supply in Akaki-kality sub-city. The key objectives of the study are: assess the effectiveness of the government system in water supply service delivery with respect to CAR frame work, assess the satisfaction of clients in water service delivery in Akaki-kality sub-city and to show the major obstacles of water service. Qualitative and semi-quantitative methods with stratified sampling are used in the study. Beside that key-informant interview also apply in the study. The study covers availability and accesses of water to observe the satisfaction of the clients more than 50% of the respondent are not satisfied with water service supply in Akaki-kality sub-city. With regard to effectiveness of government system most of the respondents disagree about effectiveness of the system. Findings show that lack of transparency, accountability and responsiveness are obvious in water service supply, restriction of private sector in the supply of potable drinking water with pipe line, the community forums role is insignificant in decision making of water service and NGO's play great role in providing drinking water for Akaki-kality clients.*

**Keywords;** *Governance, Public service delivery, Customer satisfaction, Accountability, Capability, Responsiveness.*

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Fenta (2007) suggested that the traditional approaches to public administration assumed public service production and delivery to be the sole responsibility of the state. Ministries, parastatals, and other government departments were considered the only available agencies to produce and provide urban public services as well as implement other development goals. Such approach, however, proved failure in many countries in general and in Africa countries in particular where states had limited capacity. Governments have been unable to provide, operate and maintain public services in line with rapid urbanization, resource deficiencies, poor urban management and population growth. By early 1980 s, many African states were found to have been over extended and literally unable to produce and provide basic services.

According to RIPPLE (2008) as with governance itself “water governance „“issubject to Arrange at subtly different definition, the most commonly cited definition in sector literature is that at the global water partnership.” Water governance refers to the range at political, socio economic and the delivery of water services, at different levels at society, more recently, the term distributed governance has been proposed by the Global Water Partnership to describe the combination at formal and informal institutions typically found in water governance in practice.

On final report of CO- water international (2008) in Africa, leading to increased costs of users for water supply and sanitation service provision. The water sector is vulnerable to corruption for several reasons. the existence of numerous agencies, actors and government institutions in a single sector blurs lines of accountability and reduce transparency; the water sector involves the procurement of significant qualities of goods with large volumes of public money; informal service providers less subject to official oversight mechanisms play a key role in service delivery and the widespread presence of monopolies promotes unfair or discretionary business practices. Finally, informal providers, often vulnerable to corruption, also play a key role in service delivery. Others add that the sector is characterized by wide spread financial disorder, few service providers are accountable to their customers and financial management is not transparent.

Rahamato (1999) identified that Ethiopia has been trying to supply potable water to its population, without great success, for more than a century, while water for agricultural use has attracted high levels of investment, water resource management for domestic supply has been relatively neglected, especially before the post imperial period, even today, rural water supply programs, which affect the majority of the country's population have not been given sufficient attention.

RIPPLE(2008) concluded that Ethiopia is committed through its universal access plan (UAP) to reaching full covering in WASH service by 2012. This will be achieved in parallel with and based up on a process decentralization of a range of state provided services, a decentralization process based in part up on its federal nature, and in part a desire to make service delivery more equitable, efficient and effective. The twin pressure of decentralization and the ambitious targets at UAP are resulting in an arrangement of pressing challenge for stakeholders at all levels and scale-form the region down to the local level.

Modern water development schemes are relatively recent phenomenon in Ethiopia. The imperial government took the first initiatives in water resource development in the second half of the 1950. Large scale water projects for agriculture purpose and power generation constructed in the *Awash* valley as part of the agro industrial enterprises that were expanding in that area. These developments subsequently spread to the rift valley and the *Wabe Shebelle* basin.

AAWSA (2014) recommend that, It was since 1893 E.C (1900) that piped water service started in Addis Ababa, in the beginning the provision of potable water was delegated to the then ministry of works and following the defeat of fascist Italian invaders in 1934 E.C, this responsibility is transferred to the newly established city administration.

The Addis Ababa water and sewerage service authority was set up as per proclamation NO.68/1963 E.C (1971), and in 1987 E.C (1995) additional powers were invested on the authority, while being reestablished with a slightly different name, that is, Addis Ababa water and sewerage authority (AAWSA). The water supply coverage of Addis Ababa stood at not more than 50% of the demand at the turn of the Ethiopian millennium. This has investigated the city administration to undertake urgent steps toward boosting water production in line with the city's socio-economic development.

AACG (2012) conclude that, in the city water consumed by household and industry it's provided by Addis Ababa water and sewerage authority. In 2001 the authority has an average capacity of accessing 92 million cubic meters of water to the city and this capacity has been increasing over the last five years. AAWSA (2015) proved that currently, the authority supplies 350,000 cubic meters of water per day (127,750,000 cubic meters per year). Hence, massive ground water exploitation projects have been underway. So far 81 medium and deep wells have been drilled and the water has been injected in to the system, as a result, the gap between the city's water demand and supply has been significantly reduced.

## **1.2 Problem Statement**

According to OECD (2008) in most developing countries, there is growing dissatisfaction with the delivery of public services. Deficiencies in the coverage, access and quality of basic services such as water supply service delivery UNDP (2006), for example, indicated that there are around 1.2 billion people in the world who lack access to sufficient quantities of safe water. Like most countries in the developing world, African countries have major difficulty in providing effective and equitable public services. Fenta et al suggested that (2012) Like many developing countries, public service delivery in Ethiopia suffers from weak capacity of public agencies and lack of effective transparency, responsive and accountability system. Transparency and accountability are at the center of governance processes in water service delivery is very low

Currently, the AAWSA (2014) report contends that supplies 350,000 cubic meters of water per day. By contrast, the city's daily water demand is about 670,000 cubic meters per day and the supply coverage is, at this point in time, no more than 56% over and above this, there is about 37% non-revenue water, which includes commercial loss as well as physical leaks, attributable to careless and awkward moves during infrastructure development works. These and the frequent electric power interruptions have stood as serious obstacles against the city's water distribution.

According to AAWSA (2014) as the capital of Ethiopia and location of African Union Headquarter, Addis Ababa has suffered from serious problem of water shortage; urban area covered with regular water supply, approximately 1 million people cannot enjoy safe and healthy drinking water. Intermittent water supply, rotational batch water supply or central water supply is adopted in many areas to alleviate water supply difficulties. Meanwhile, urban infrastructure and sustainable development have been severely con-strained by water shortage.

Getachew (2002) concluded that the problem in water supply provision in Addis Ababa city is associated partly with unfavorable topography, seasonal fluctuation at the water reservoirs, low capital investment and lack of efficient water governance among concerned authorities. However, there is a general agreement that governance is one of the most crucial determinants of success or failure of water supply service. Quite frequently Ethiopian planners emphasize the agronomic, engineering or technical aspect at water projects, while giving less attention to governance and participation at stakeholders.

Samuel (2014) indicated that although, water supply service has a long history in Addis Ababa, going through an entire week or even a month without water has become common in many areas of the city. A close investigation of the issue, however, reveals that close to 37 percent of the water produced and distributed currently is lost before reaching residents. In Addis Ababa city in general and *Akaki Kaliti* sub city in particular there is a shortage of drinking water supply to the community characterized by intermittent water supply and rotational batch water supply service delivery this is mainly due to the weakness of multiple actors like NGO's and different community forums mobilize to fill the gap, to curb shortage of drinking water service delivery that arise in *Akaki Kaliti* sub-city different developmental actors are participated NGO's and community forum are the major actor beside AAWSA.

In Addis Ababa city in general and *Akaki kaliti* sub city particular there is a shortage of drinking water supply to the community characterized by intermittent water supply and rotational batch water supply service delivery this mainly related to public governance, the weakness of multiple actors like NGO's and different community forms mobilize to fill the gap shortage of drinking water service delivery that arise in *Akaki kaliti* sub cities different developmental actors are participated NGO's and community forum are the major actor beside AAWSA.

Like many developing countries, developing countries, public service delivery in Ethiopia suffers from weak capacity of public agencies and lack of effective transparency, responsiveness and accountability systems. Transparency and accountability are at the center of governance process in water service delivery is low. Direct accountability of service providers to citizens is at the infant stage while the long route is characterized by top down and slow bureaucratic



process that effective transparency, responsiveness and accountability. Nor are there sufficient exit mechanisms for citizens, since public service deliveries are under the monopoly of public agencies.

In recent years there has been an increased demand of drinking water in *AKAKI KALITY* Sub-City. Although, the above studies and many other studies conducted the study on the governance and public service delivery, most of the lessons focused on various governance issues such as: social, economic and political but they gave little emphasis on water supply service delivery, besides the Addis Ababa Water and Sewerage Authority improved its service from time to time, still the city water service delivery has encountered so many problems due to urbanization, population pressure and the expansion of giant industries. Therefore, studies conducted on water service delivery in *Akaki-kality* sub-city are very crucial. This study contributes a lot in this line. Finally, this study differs from others; it will focus on governance and service delivery in *Akaki-kality* sub-city water supply after the transitional government of Ethiopia (TGE), 1991.

In line with the above problems, the following are research questions addressed in this study.

- Is the governance system effective in place for the water supply delivery in Addis Ababa *Akaki kality* sub-city branch office?
- What are the means by which public (the client) participate, to control the AAWSA government officials in *akaki-kality* sub city branch office accountable and transparent in the water supply service delivery?
- What are the basic factors that affect the people's satisfaction in water supply service delivery in *Akaki-Kality* sub city branch office?
- What are the main obstacles in the water supply service delivery in *Akaki-Kality* sub-city?

### 1.3 Objective

The general objective of this study is to assess governance and public service delivery in Addis Ababa: In the case of water supply in AkakiKality sub-city by using CAR Framework.

#### 1.3.1 Specific objectives

- To assesses effectiveness of the government system in water supply service delivery in AkakiKality sub-city.
- To examine the transparency and accountability of the officials of AAWSA in AkakiKality sub-city.
- To assess factors that affect people's satisfaction in the supply of water in the Akaki-Kality sub- city.
- To identify major obstacles in the water supply service delivery at AkakiKality branch office.

### 1.4 Scope of the Study

This study confined itself only on governance and public service delivery in drinking water supply service delivery in the Addis Ababa city after the transitional government of Ethiopia (TGE), 1991, other issues like water sewerage disposal, water quality, socio-economic problem and office mal-administration not assessed in this paper, in addition to this, high water projects like water dam construction used to electric power generation. And also big packed water producer factories are not assessed; because of they are not the good representative of the lower income group of the societies.

### 1.5 Significance of the Study

These studies give enormous connotation in different aspect. Predominantly, the study indicated alternative policy recommendation to the governance on water service supply delivery in Addis Ababa AkakiKality sub-city .Subsequently, by creating awareness toward the public (customers) it would help to control accountability and transparency of government officials in

the service delivery. The study assessed the role of AAWSA in AkakyKality sub-city how provide sufficient water supply for the city dwellers, lastly, these study can important as reference to interested parties such as NGOs , scholars, researcher and policy makers who engaged in the same study.

### **1.6 limitation of the Study**

The lack of cooperation of the respondents and their commitment to complete filing the questionnaires, to devote their time to provide the researcher with relevant information was the major obstacle. In addition to this the inaccessibility of different officials was the other obstacle. Besides, the distance of the study area from the researcher standing point is very far this was the other hassle to use time effectively.

### **1.7 Definition of terms**

1. **Governance** -DFID (2010) asserted that, the term governance is now widely by aid agencies but it has been defined in a variety of different ways it originally served to connect debates on politics and administrative which equated governances with government, but the focus has subsequently been broadened beyond government to encompass relationships between a range of state and non state institutions. As such the term now refers to broadly to power and authority and how country manages affairs and it encompasses all the mechanisms, process, relationships and institutions though, which citizens and groups articulate their interests and exercise their rights and obligations.
2. **Public service delivery**-Briner (2010) defined that:-public service delivery refers to the production and delivery of public service through the involvement of multiple governance that include; public agencies, private enterprise, NGOs, CBOs, and communities at large.
3. **Accountability**- DFID's (2010) refers to accountability the ability of citizen to hold leaders, governments and public organizations to account.
4. **Capability**- DFID's (2010) refers capability the ability and authority of leaders, governments and public organization to get things done.
5. **Responsiveness**- DFID's (2010) refers to responsiveness how leader's governments and public organizations actually behave in responding to the needs and rights of citizens.

## **1.8 Organization of the Paper**

Generally the paper is organized into five chapters, the first chapter consists of background of the study, problem statement, research objectives, scope of the study, and significance of the study, limitation of the study, definition of terms and organization of the paper. The second chapter is looking related theoretical and empirical related literature reviews and presented the theoretical frame work r. The third chapter shows the methodological section. The fourth chapter deals with analysis and interpretation of the data collected through questionnaires, document review and key informant interview. Finally the fifth chapter presented the conclusion, summary of major findings and the recommendation section.

## **CHAPTER TWO**

### **REVIEW OF THE RELATED LECTRATUE**

#### **Introduction**

Problems in providing satisfactory water supply to the rapidly growing population especially that of the developing countries is increasing from time to time. Water supply systems in urban areas are often unable to meet existing demands and are not available to everyone rather some consumers take disproportionate amounts of water and the poor is the first victim to the problem. The developing cities have great difficulty both financial and technical to develop and expand water supply projects and one of the difficulties among the other is governance and delivery of distribution system.

This section reviews the theoretical foundations of municipal (or local), private and community-based governance of water service and presents empirical evidence on the performance of water utilities administered under those approaches.

#### **2.1 Theoretical Foundations**

##### **2.1.1 Governance: Concepts and Meanings**

DFID (2007) asserted that, The term governance is now used widely by aid agencies but it has been defined in a variety of different ways it originally served to connect debates on politics and administrative which equated governance with government, but the focus has subsequently been broadened beyond government to encompass relationships between a range of state and non-state institutions. As such the term now refers broadly to power and authority and how country manages affairs and it encompasses all the mechanisms, process, relationships and institutions though ,which citizens and groups articulate their interests and exercises their rights and obligations.

The emerging governance agenda is thus a broad one which reflects its multi-dimensional nature and diverse theoretical organs in different disciplines. Key theme which are directly relevant to the governance in water service agenda include:

- Changing role of Government:-the role of the state is increasing challenged at local, national and international levels with increased involvement of non-state actors in activities which have been considered the exclusive preserve of government. It is important to note therefore that the appropriate role of government in relation to different spheres of governance including water remains subject to ongoing debate and discussion.
- Institutional Complexity: Governance concerns the functions and interplay of institutions in the broadest sense including social networks and markets as well as state institutions it is important to recognize that while institutions of governance may operate according to formal rules and procedure, outcomes are also shaped by informal norms, rules and expectations. There is general consensus the governance is about establishing.
- Effective Relationships: -stated that networks and partnerships to coordinate the activities of state, communities, private sector and civil society bodies towards collective societal goals.
- Centrality of Politics: the particular value of the term governance is that it focuses attention on the formal and informal rules under which power is exercised in society and highlights the conflicts inherent in decision making process. Current thinking suggests that governance needs to be understood as a product of social and political contestation and bargaining between multiple different actors. This has been accompanied by a growing focus on participation and empowerment of marginalized groups or individuals. In its popular usage the term governance is associated with „doing things right“ and recent years efforts have been made to define general principles „good“ governance. These have been variously combined in different governance frameworks used by bilateral and multi-lateral donors while these frameworks works which emphasize certain universal aspects of governance, provide useful diagnostic tool, they have been criticized for masking the fundamentally contested nature of governance process and the complex and dynamics forms it takes in particular contexts.

### **2.1.2 Current Work on Water Governance**

Rogers and Hall (2003) say publicly, The global water partnership (GWP) define water governance is a very broad term as the range of political, social, economic and administrative

systems that are in place to develop and manage water resource, and the delivery of water service at different levels of society many other agencies have subsequently adopt the same definition, including the world bank the emphasis on the politics is further emphasized by Stockholm international water institute (SIWI) Which emphasis on the politics is further emphasized by Stockholm international water institute (SIWI) Which simply state the water governance determines who gets what water, when and how.

### **2.1.3 Water Governance Key Approaches**

Patric et al (2008) stated that, The Millennium Development Goals (MDGs) aim to have the number of people without adequate access to water and sanitation service by 2015. Although the MDGs do not have a strong focus on water governance, or on city/local institutions and process, this goal is one of the main concerns of the water governance debate. According to the UNSECO (2006), the current problem of water service delivery has been mainly caused not by a lack of water supply or technology but rather by a failure in water governance, in the context of climate change, and the increasing burden on water resources including water pollution as a result of economic development and societal change it is becoming increasingly necessary to address the issue of the nexus between poverty reduction and water eco-system management.

Patric et al (2008) indicated that, Stakeholder and private sector participation in spite of increasing levels of stakeholder involvement in decision making, the involvement of the private sector of civil society in design, construction, operation and maintenance of water supply systems is relatively low this reflects in part, government suspicion of government actors in water service provision .

### **2.1.4 Water Sector Policy Goals**

The universal access program for water supply and sanitation service (2012) declared that, The overall goals of the federal water resources management policy (1999) and the water sector strategy (2001) are to promote national efforts towards efficient equitable and optimum utilization of the available water resources of Ethiopia in order to achieve significant socio economic development on a sustainable basis some of the major principle of the policy are:

- a. Developing ownership to lower tires and enhancing management autonomy to the lowest possible level.
- b. Promoting involvement of all stakeholders including the private sector.
- c. Moring towards full cost recovery for urban water supply systems and recovery of operational and maintenance costs for rural schemes.
- d. Enhancing urban water supply through autonomous bodies.

## **2.1.5 Major Stakeholders and their Roles in Water Service Supply in Ethiopia**

### **1. Ministry of Water and Energy (MoWE)**

The ministry of water and energy of Ethiopia (MoWE) is a federal organization. Established to undertake the management of water and energy resource of Ethiopia. This development, planning and management of waters and energy resources, development of policies, strategies and programs, develop and implement water and energy sector laws and regulation, conduct study and research activities, provide technical support to regional water and energy bureaus and offices and sign international agreements. The role of the MoWE with regard to rule water supply is to develop policies strategies and national programs, allocate financial resources, and coordinate multi region programs at national level, provide capacity building and identify funding for rural water supply. The WSSD is the main governmental actor in rural water supply and thus very important for COWASH. The .the WSSD and COWASH all have similar objectives with regard to WASH development in Ethiopia and therefore coordination and therefore coordination and collaboration among them is necessary. COWASH also constitutes an additional resource to ministry and thus supports the sector development. The cooperation with the ministry's women, youth and children affairs directorate, procurement, finance and property administration directorate, water sector support and capacity building directorate and, research and development directorate is important for the success of COWASH in order to avoid overlapping activities and to utilize existing resources and knowledge. COWASH as part of the MoWE capacity building can in the future contribute a lot to the planning and implementing, joint monitoring programs and to the development of national strategies guidelines and training materials and report.



## **2. Ministry of Finance and Economic Development**

Responsible for signing agreements with donors: channeling from the treasury and external Assistance: monitoring and reporting utilization of finance and ensuring that all government accounts are audited (by internal as well as external auditors and responsible for purchases in all public office at *Zonal* and *woreda* level).

Ministry of finance and economic development is established to initiative policies that ensure sustainable and equitable economic development as well as macroeconomic stability in Ethiopia. Its duties include the establishment of a system for the preparation and implementation of national development plan, and the follow-up and evaluation of the performance of general, sectoral and multi-sectoral developments in accordance with the budget approved and evaluates the performance of the budget.

MoFED is playing a key role in the WaSH sector as it oversees the bi-lateral financing and budgets of other line ministries. In COWASH implementation, MoFED is the body that signs the funding agreements with the external financiers and allocates money to the regions, WaASH budgets. MoFED has also been very active in promoting the CMP approach and its benefits. The development of many future harmonizing structures introduced in the WIF, such as one WaSH budget and consolidated WASH account, need close participation of the MOFED.

## **3. Ministry of Capacity Building**

Responsible for the national capacity building program at all levels at regional and *woreda* levels, responsible for recruitment, transfer, disciplinary measures and capacity building of all public sector staff. Capacity Building provide sustainable and objectives oriented training on the relevant areas of water resource management as well as develop and implement effective means in order to efficiently utilize and sustainable retain trained man power. It device appropriate strategies for the development and construction through different incentive mechanisms. Beside that it provides the necessary capacity building, as much as conditions permit to the regions, with special emphasis to the underdeveloped regional states, for efficient and equitable water resource management.

#### **4. Ministry of Women's Affairs**

Responsible for mainstreaming gender in to all government programs at all levels, and empowering women. Women fulfill important roles as a manager of natural resource. They have the knowledge, experience and skills of fetching handling and use of water and sanitation resources. However, no matter the level of responsibility, they have no opportunity to participate fully in the development process of this important resource for variety of reasons. Thus it becomes quite a necessity to reverse this situation and bring women frequent on the scene for consultation and allow their full participation in water resource management. The women's affairs department of ministry of water resources has been exerting a lot of efforts to promote gender mainstreaming at different levels in the sector.

#### **2.1.6 Water Service Governance**

Ahmad et al (2005) suggested that, a variety of governance approaches have been proposed to increase access to piped water and improve the efficiency of existing water utilities in developing countries. Those proposals include municipal management of water service in a decentralized governance approach, privatization of water utilities and administration of water service at the community level.

In addition to variation in terms of system ownership these forms of service governance have different incentives and function within particular institutional arrangements that rule the interaction between water consumers and suppliers and that may influence the effectiveness of utilities in providing drinking water.

#### **I. Municipal Water Services**

Ahmed et al (2005) indicated that, Decentralization of operational and managerial functions to lower-level, locally elected governments is often proposed to increase efficiency and equity in providing public service. In theory decentralization improves the allocation of the sources since local governments know better the needs of their constituents. Due to their proximity to a relatively low number of constituents, local governments tend to have lower transaction costs and more information than the central government which enables them to be more responsible and efficient, particularly in heterogeneous societies.

World Bank (2009) stated that, Decentralization however, has not always improved the efficiency of service providers (In India Asthana (2003) found that locally managed water utilities were less efficient than state-managed utilities in terms of expense and asset utilization.

Anwandter and Ozuna (2002) also reported that the decentralization of water services to the municipal level had not improved the efficiency of water utilities in Mexico local governments may lack technical, financial and administrative capacity needed to provide public service manage local resources.

## **II. Private Water Services**

Hall and Delamot (2005) proclaim that, the theoretical perspective, markets are efficient in supplying private goods in the absence of externalities, asymmetric information and monopolistic practices. However, these imperfections are often present in water markets. Regardless of these imperfections, privatization water services (with appropriate regulation) have been deemed a viable means to introduce competition and improve efficiency in the water sector. More importantly, due to its profit, maximization incentives, the private sector is expected to increasingly investing in infrastructure and this increase access to improved water services.

This section reviews the theoretical foundations of municipal (or local), private and community-based governance of water service and presents empirical evidence on the performance of water utilities administered under those approaches. However, existing empirical evidence on the performance of private water utilities does not always support theoretical expectations. For instance Chang and Lopez-de-Silanes (2004) reported improvements in profitability, operating efficiency investments and access to water after privatization of some water utilities in Argentina, Bolivia, Brazil, Chile, Colombia, Mexico and Peru. In contrast, Prasad (2006) argued that private utilities are no more efficient in delivering service than the public sector. Budds and McGrhanhan (2003) also argued that private utilities in developing countries (for example, Bolivia and Tridand and Tobago) perform poorly.

Less contradictory is the fact that water tariffs increased after privatization. Budds and McGranahan (2003) reported that water tariffs increased by as much as 200% after water services were privatized in Cochabamba, Bolivia given that increase in water tariffs may have a

regressive welfare effect on low-income households (Israel,2007), initiatives to private water services have sparked public resistance worldwide (see Hall, Lobina and De LaMotte,2005).

Martimort and Straub (2009) indicated that public discontent with privatized water services is also associated with changes in the degree and pattern of corruption derived from privatization process (that is privatization is often perceived as transferring profitable state-owned companies to the ruling elite). In some cases, public discontent with privatization of the water supply has reached levels high enough to cause water services to revert the public sector (Budds and McGranahan, 2003).

### **III. Community-Managed Water Services**

Community participation in planning, designing, delivering, Monitoring and evaluating services has been deemed a critical component for local development (Bovaird, 2007). 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. In a community –managed system, water consumer are also water suppliers, often required to provide voluntary inputs for system operation and infrastructure maintenance. They may also be required to participate as committee members performing such tasks as collecting water fees and undertaking organizational endeavors.

This dual role imposes additional costs that do not exist in other forms of service governance (for example, municipal and private utilities). Moreover, Goetz and Gaventa (2001) argued that implementation of community-managed system is not always responsive to community preferences of ten times community management is a condition that government agencies and non-governmental organization imposes when they invest in the communities water infrastructure.

In recent evaluation of community-managed system in Bolivia, Peru and Ghana (Whittington, 2009) found that many community-managed systems were operational, particularly when supported with technical assistance yet, similar to local governments communities may lack the technical, financial and administrative capacities needed to operate and maintain water systems.

One of the difficulties faced by the water authority is determining the accurate water demand of the city as the consumption during the past years that should have been used as a base is far below the actual demand due to shortage of water consumption of water for the city is therefore is based on the amount supplied rather the actual demand. For these reason estimate of the future demand by the water authority is found to be uncertain.

People having in-house service that are estimated about 4% of the total population use the water on average between 80 and 100 liters per capita per day, while the remaining population with access to safe drinking water (94%) are served by yard connection and use between 15 and 30 liter/capita/day domestic uses excluding industrial and industries water use are about 25 liter/capita/day and 7 liter/capita/day respectively.

In addition as Harvey and Reed (2007) noted the sustainability of community-managed systems may be jeopardized by community fatigue in providing voluntary inputs, by mobility of community leaders and by distrust in the community organization responsible for managing the system—presumably due to lack of transparency, accountability and requisition. The sustainability of community-managed system is also at risk due to low water tariffs ,low user compliance and lack of financial resources to repair water infrastructure (San Som,2006: Whittington et al , 2009) under these circumstances water infrastructure may fall in to disrepair and community managed systems may provide poorer service than other providers.

## **2.1.7 Urban Water Demand and Coverage**

### **a) Urban Water Coverage**

Un-Habitat,( 2003) declared that, Water supply coverage provides a picture of the water supply situation of one specific country or city and helps to compare one country with others and the inter and intra city distribution with in specific country.

The percentages of population with or without piped water connection are relevant indicator to compare the coverage of water supply in areas. Although the water supply coverage is better in urban areas while compared with the rural, the actual water supply coverage in cities

of developing countries in general and African cities in particular is very low while compared to the demand.

According to the Global water supply and sanitation assessment 2000 report ,the African largest cities are having 43% house connection or yard tap ,21% served by public tap while 31% of the population are un-served. A household is considered to have access to improved drinking water if it has sufficient amount of water (20 liters/person/day) for family use, at unaffordable price (less than 10% of the house hold income) available to house hold members, without being subject to extreme effort (less than one hour a day for the minimum sufficient quality), especially to woman and children.

On the other hand a minimum quality of 25 liters of potable water per person per day provide at a minimum flow rate of not less than 10 liters within the source being available within 200 meters from a house hold and the supply not interrupted for more than seven days per year (that is water should be available 98% of the time) is considered as a basic service for Southern African cities domestic water supply.

## **b) Water Demand Management**

Water demand is defined as the volume of water requested by users to satisfy their needs. In a simplified way it is often considered equal to water consumption, although conceptually two terms do not have the same meaning. In most developing countries the theoretical water demand considerable exceeds the actual consumptive water use.

Mwendera et al (2003) announced that, Water demand management refers to any social beneficiations that reduces average or peak water withdrawals or consumption form either surface ground water, consistent with the protection or enhancement of water quality. According to Rother and Macy (2000) water demand management is the adoption and implementation of strategy by a water institution to influence the water demand and usage in order to meet any of the following objectives that is economic efficiency, social development, and sociaequity.

Urban water demand is classified in to different category that domestic water demand includes in-house-use and out-of-house-use is among the others, In-house-use includes domestic for drinking, cooking, sanitation, house cleaning, laundry and car washing while

out-of-house-use includes like garden watering, swimming pools, public stand pipes for public uses and fountains, etc. Urban water demand is usually quoted in terms of liter per capita per day (1/cap/day).

Despite the variation in residential indoor water use from house hold to house hold a typical pattern (referred to as the water use profile) can be developed to provide a reasonable representation indoor water use, based on the different indoor water use components (kitchen, bathroom, laundry and toilet) and house hold occupancy (Mitchell et al, 2000) in many African cities urban water demands are often non-homogeneous owing to manage of levels service occurring within the same urban areas. Levels of services can vary from house hold connections to stand pipes or to no service at all.

One of the difficulties faced by the water authority is determining the accurate water demand of the city as the consumption during the past years that should have been used as a base is far below the actual demand due to shortage of water consumption of water for the city is therefore is based on the amount supplied rather the actual demand. For these reason estimate of the future demand by the water authority is found to be uncertain.

People having in-house service that are estimated about 4% of the total population use the water on average between 80 and 100 liters per capita per day, while the remaining population with access to safe drinking water (94%) are served by yard connection and use between 15 and 30 liter/capita/day domestic uses excluding industrial and industries water use are about 25 liter/capita/day and 7 liter/capita/day respectively.

### **c) The Supply Side of Public Service Delivery**

Birner( 2007) asserted that, Supply side of public service delivery refers to the production and delivery of public services through the involvement of multiple governance actors that include public agencies, private enterprises, NGOs, CBOs and communities at large .Thus, strategies designed to improve the supply side of public service delivery need to focus on increasing the capacity and incentives of public agencies and other service providers to participate in different ways to that theory can best fulfill functions. There are two major approaches of improving the supply side public service delivery, vis-à-vis administrative and fiscal decentralization to public agencies and creating the enabling environment for

involvement of non-state actors that include private sector agencies, user organizations and NGOs in the provision of public services. The first approach aims at improving the capacities of autonomous service delivery public agencies and local governments. This approach, however, is challenged by lack of willingness and commitment by central/state governments to effective administrative and fiscal decentralization.

The second approach of improving the supply side of public service delivery aims at creating the enabling environment for non-state providers to engage in activities that increase and improve service provision to poor people (Batley, 2006). There are a number of institutional arrangements or intervention modalities through which non-state actors take part in the production and delivery of public services. World Bank (1999) declared that, the most common institutional arrangements include contracting out, privatization, public-private partnerships, public-private –civil society partnerships, developing management authority to user groups and service cooperative.

Public private partnerships (PPPs) are other institutional arrangements for service delivery that basically create joint responsibilities for financing and providing services and infrastructure. It refers to the combination of a public need with private capability and resource to create a market opportunity through which the public need is met and a profit is made.

ECA (2005) announced that Of course, public-private partnership is not necessarily suitable for targeting the poor but they can free up the public resources through which the government can focus on the poor and underserved. There are different PPP arrangements through which different levels of partnership are established to improve levels of efficiency, effectiveness, responsiveness and adequacy of public services. The contractual range from service contracts, management contracts, leases, operations and maintenance concessions, capital investments to divestiture and asset ownership. Public sector agencies can establish any form of partnership with small scale independent providers, non-governmental organizations (NGOs) or the private sector. In most cases, the arrangements are service or sector specific. That is not all arrangements best fit to every sector nor has every non-state actor the capacity and expertise to effectively undertake public service delivery in every sector.



Moreover, PPPs are not magic bullets for achieving desired outcomes: their success depends on certain key factors which among others include: through planning, good communication strong commitment from parties and effective monitoring, regulation and enforcement by the government.

Briner (2007) asserted that, Privatization is well suited for service that are not confronted with market failure .If market failures are unavoidable due to natural monopolies and other

Reasons, as with water and electricity supplies, privatization need to be combined with regulations of ensuring that the poor have access to such services. The private sector can be involved in public service functions through a wide range of forms of privatization.

Thus, to select most appropriate type of private sector involvement there is strong need for careful appraising the costs and benefits of each alternative organizational arrangement.

The appropriateness of selecting an alternative organizational arrangement depends on the particular circumstances- cost-effectiveness, opportunity to introduce competition in to the service market, attractiveness to the private sector, ease of administration and post private regulation and capacity to service customer are important criteria against which alternatives may be evaluated, the alternative forms of service delivery through privatization include: contracting out services to private firms, franchising services to the private sector, the use of grants and vouchers: build own-operate-transfer projects(BOOT, mobilizing NGOs, community groups, residents, associations and charitable organizations, introducing self-service and self-reliance measure, employee buy-out schemes (selling an enterprise to the work force) as well as selling out of public enterprises (privatization) to private firms (World Bank,1999) public-private-civil society partnerships involve the collaboration between public, civil society and private organizations to produce and deliver public services. This approach not only helps to mobilize resources from different sectors, but also management experiences that may enhance the efficiency and effectiveness of service delivery.

### **2.1.8 Good Governance for Good Water Management**

Rogers and Hall(2003) stated that, The stated principles of good water governance follow those of good governance in general and build on core concepts of equity, efficiency, participation, decentralization, integration, transparency and accountability (UN, 2003). GWP propose two broad sets of principles which underpin effective water governance that approaches be transparent, inclusive, coherent and integrative, equitable and performance operations be accountable, efficient, responsive and sustainable.

Global Water Partnership (2003) declared that, Effective management of water resources is vital to sustainable development. Government across the world has spent effort and resources to move toward the goal. Water governance refers to “the range of political, social, economic, administrative systems that are in place to develop and manage water resources, and the delivery of water services at different level of society”.

Good water governance depends on a number of factors including strong policy, legal and regulatory frameworks, and more effective implementing organizations: active determination to improve water governance and appropriate investments. Each of these factors is elusive, particularly in developing and middle-income countries, but several countries are beginning to address these issues.

## **2.2 Empirical Evidence**

Fenta et al (2012) concluded that, many housing units connected to water supply system get water during the night when there is less competition from hotels, industries and other sectors. Finding from the survey indicated that 63% respondent in Addis Ababa reported that they get water on irregular basis, moreover, it is common to see broken water lines in which water is wasted, in the period 2007-2010 ,on average only 56% of water produced in Addis Ababa was actually delivered to users.

Fenta et al (2012) found that access to water refers to the degree of difficulty for customers to get water from the source as well as own meter connection, evidence show that the city far from a way ensuring universal access to safe drinking water because of expansion and population growth. According to data obtained from water agencies access to safe drinking water reached 75% household respondents were asked to evaluate access to safe drinking water. With regard to

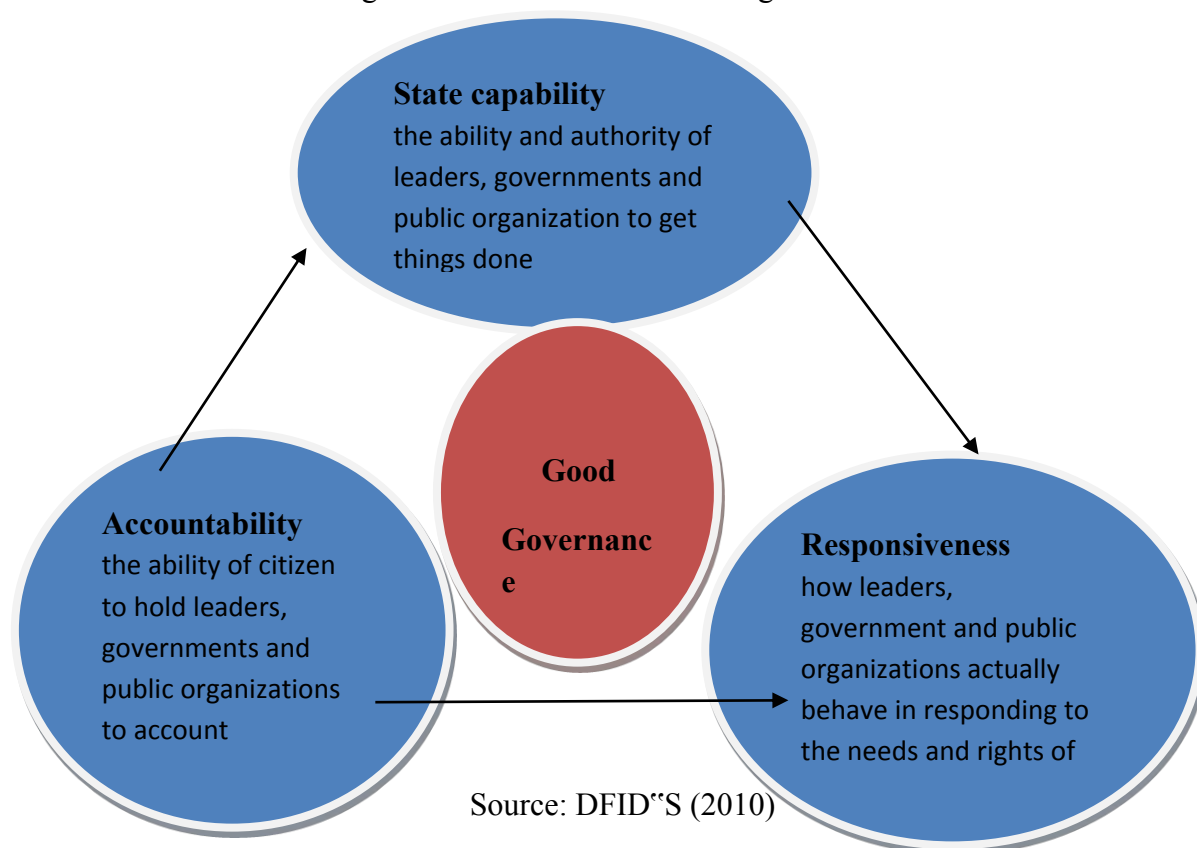
difficulty in getting water from the source 45.4% respondents indicated that it is easy or very easy. Some 26% and 24.7% of the respondent reported it is to be difficult/very difficult and modest respectively. In governance aspect household respondents were asked to indicate whether they know any clear legal system and practical mechanisms put in place to ensure accountability of the water supply agencies, only 12.2% of the respondents replied “yes” while 16.5% replied “no”. The majority (71.3%), however, did not have any knowledge whether exist or not.

## 2.3 Theoretical Framework

### 2.3.1 Applying the CAR Framework to Improve Governance in Water Service

DFID’s (2010) paper “eliminating world poverty making governance work the poor” emphasis that governance is central to development and sets out three requirements for good governance; state capability ,accountability and responsiveness.

Figure 1.The CAR dimension of governance



The frame can be developed to provide analytical tool for sector assessment and whether and how it can be used to describe how to improve governance in the development implementation of water service interventions. The CAR frame work potentially provides a tool for both;-

I) Sector analysis and ,II) for defining sector goals at the country level it provides a useful way to integrate and mutually reinforce activity at country level, and at the sector analysis project appraisal ,measuring and monitoring stages.

### **2.3.2 State Capability as a Dimension of Governance in Water Service**

State capability in relation to water concerns the ability and authority of leaders. Governments and public organization to get water services to the people through effective polices and sound implementation practices. this requires appropriate human and financial resource for activity related to water supply, effective institutions performing delineated roles, improved information and management systems ,and political will backed by the necessary rules(be they regulations or informal norms)for service delivery. it requires sufficiency in revenue and budgetary allocations, effective policy formulation and implementation and skilled and accountable staff working in effective institutions.

### **2.3.3 Accountability in Water Service**

Accountability is about being answerable for what is done, and requires the ability of citizens, civil society organizations non-governmental organizations (NGOS), community-based organizations (CBOs) and the private sector to scrutinize public institution and governments and hold them to account. Fundamentally accountability in water service is about the power relationships shaped by actors and influencing the water sector. accountability for water service delivery requires some basic ingredients government understanding at the objectives and processes for improved accountability respect for civil society to play a role in holding government to account over water service delivery, and civil society having the confidence, trust and skills to fulfill the role .while much focus is placed on the government position, there is often little understanding at the difficulties (reticence and capacity)the weak civil societies face. This requires understanding the incentives for civic engagement and the conditions under which it is likely to happen, the burden this places on the poor and ways in which this burden could be reduced through creative engagement with local government“s politicians and civil society organizations. In relation to water, citizens often do not know their rights, what service they have

or should expect and so are unable to hold government to account for the level and quality at service provided. Evidence suggests that cross class alliance are one way to promote this demand and accountability (especially given the public good characteristics of water) but little work has been done in this regard.

### **2.3.4 Responsiveness to Citizens and Users Water Service Needs**

UN(2003 P16) present that Responsiveness refers to how leaders and public organizations take account at the needs of citizens and uphold their rights“ central to a responsiveness is the development at ways for people to articulate their views and needs. Government responsiveness to citizens over water includes articulating and moving towards rights to water, equity in the development at water services, including concern for women“s rights and access, pro-poor policy making and implementation, and the integrity at public officials in fulfilling their roles and responsibilities to citizens.

### **2.3.5 Strength and Weakness of the Framework**

Although the CAR framework (a DFID governance framework publish in making governance work for the poor, 2007) it is generally agreed that there are a number of generic limitations that apply to its use both as governance analysis tool and sectors governance tool. The benefit and limitations set out here should be reconsidered after the framework is tasted.

### **2.3.6 Limitation of the Framework**

- Discussions with governance and sector colleagues pointed towards the static nature of the framework. i.e. it enables an assessment at what governance is and where you might want to so but does not define the means to get there this is certainly the case when applied to the governance of water services, in that it enables broad understanding of the governance in water problem (a snap shot) but does not describe what is blocking or divining change.
- The discussion also flagged the lack at linkages that help to describe politics and power relations is still needed in a sector governance analysis.
- The CAR frame work is for a service such as water, more focused on government aspect at governance and perhaps insufficiently focused on those that are non-state although it may be extremely relevant in some contexts, generally it is more about formal systems

and thus more relevant in the analysis of effective states(although care needs to be taken in these context as well)its utility will depend on whether it can be made more inclusive of informal systems and non-state actors which are particularly prevalent in the water sector.

- There is overlap too-many issues should occur in each dimension CAR and may seem poorly placed when one focuses on water service corruption is an example of this. It's located under the responsiveness but could equally be located in the accountability dimension at governance, (and many at the supply-side anti-corruption mechanisms are related to state capability).

### **2.3.7 Benefits of the Framework**

- The CAR framework is being used in the DFID country governance assessment (CGA) and is a country analytical tool. A sector cut using the same framework is useful to country officials for internal coordination and developing vertical and horizontal synergies across programs.
- The framework attempts do provide a comprehensive rather than partial analysis of governance. In this regard it opens doors/minds to areas of governance not currently being squeezed out by entrenched thinking in particular it frames abroad range at governance issues in relation to citizens.
- The CAR framework provides a structured approach do identifying key issues at the country level, and is also useful in that it presents a means to identifying linkages between the various dimensions at governance.

The need to monitor governance in water supply is also significant. The framework provides a first cut at the type at indicators that the water sector might adopt to measure these different aspects at governance within a governance arena, not a sector arena as has been done in the past.

## **2.4 Conclusion**

The term governance is now used widely by aid agencies but it has been defined in a variety of different ways it originally served to connect debates on politics and administrative which equated governance with government, but the focus has subsequently been broadened beyond government to encompass relationships between a range of state and non-state institutions. As such the term now refers broadly to power and authority and how country manages affairs and it encompasses all the mechanisms, process, relationships and institutions through which citizens and groups articulate their interests and exercises their rights and obligations.

In addition the emerging governance agenda is thus a broad one which reflects its multi-dimensional nature and diverse theoretical organs in different disciplines. Key themes which are directly relevant to the governance in water service agenda include: changing role of government, institutional complexity, effective relationship, centrality of politics are the major.

This chapter also explained about water governance which is a very broad term as the range of political, social, economic and administrative system that are in place to develop and manage water resource, and the delivery of water service at different level of society.

Beside that major stake holder and their role in water service supply in Ethiopia are assessed.

Finally water demand management and water supply side was the major issue in this literature part; water demand refers to the societal beneficiaries that consume water either in house or out of house use.

According to Briner(2007) supply side of public service delivery refers to the production and delivery of public service through the involvement of multiple governance that include public agencies, private enterprise, NGOs, CBOs and communities at large.

## CHAPTER THREE

### 3 Methodology

This chapter presents the research methodology in carrying out of the study. In particular this was employed in order to describe the Governance and Public service delivery in case of water supply in AkakiKality sub-city. It presents research design, description of the study area, sampling technique and sample size, source of data, data collection method and method of data analysis.

#### 3.1 Research design

The study employed qualitative and semi-quantitative approach (mixed approach) in order to achieve the intended objective(s) of the study simple frequencies, pie charts; cross tabulation, content analysis and interview analysis were used. The major purpose was to investigate the governance and public service delivery practices in drinking water supply of Akakikality sub city. The results were interpreted against the theoretical CAR framework that is Capability, Accountability and Responsiveness of the government and non-government organizations.

#### 3.2 Description of the study area

Akaki-kality sub-city is one of the outskirt sub-cities of Addis Ababa and is located between 976127meter-990572meter north latitude and 471084meter-486542meter east longitude. Addis Ababa has a total area of 530.14km square and 18.2 is rural area. From total area Addis Ababa, 23.7 %(12,797.36hectar)areas are defined by Akakikality Sub-city and rural area coverage"s, respectively. The total production from Akaki catchments is about 32% of the total recharge. Out of which 28% is used for AAWSA production. In this area, majority of the aquifers are found to be volcanic aquifer. Unless proper ground water management strategy is implemented in such condition of ground water resource may become at risk of low recharge capacity.

The study area is the only sub-city in the Addis Ababa largely relies on ground water as its main source for drinking purpose. Highly productive aquifers are located in this sub-city.

Akaki-kality sub-city is one of the ten sub-cities of Addis Ababa and consists of seven woreda's. Akaki-kality has at about 181,200 people (CSA, 2007).among them 4,503 are registered customer of AAWSA Akaki-branch office.



One hundred eighty seven (187) questionnaires were distributed to two *woredas* in *Akakikality* sub-city. Total of 150 questionnaires were returned i.e. 80% of the total distributed questionnaires used for the analysis.

### 3.3 Sampling Techniques and Sample Size

The researcher selected *Akakikality* sub city because the sub city is industrial zone with compared to other sub cities, as a result high consumption of water consumed in this sub-cities. Since the population is heterogeneous, stratified sampling technique employed. first the researcher selected two *woreda's* from the total seven (*wereda 2 and 3*) *woreda's* in *akakikality* sub-city this mainly due to one non-state development actors that is Emmanuel development association works in this two *wereda's* then, based on water consumption as a very important variable the researcher divide the whole population of the targeted *woreda's* in to three non-overlapping strata (that is high, medium and low).

**Table1: Stratification**

WEREDA	Level Of Water Consumption in cubic meters			TOTAL
	HIGH	MEDIUM	LOW	
2	320	790	1006	2116
3	380	795	1212	2387
TOTAL	700	1585	2218	4503

**Source: - AAWSA Akaki-Kality branch office(2016)**

**Table 2: Sample Size**

Population size	Sample size		
	Small	medium	Large
51-90	5	13	20
91-150	8	20	32
151-280	13	32	50
281-500	20	50	80
501-1,200	32	80	125
1,201-3,200	50	125	200
3,201-10,000	80	200	315
10,001-35,000	125	315	500
35,001-150,000	200	500	800

Source: J.Carvalho, 1984

Finally, based on the above stratification table and sample determination table the researcher determines the sample size of each stratum by using the following proportionate sampling formula.

$$n_h = N_h / N * n$$

Where „ $n_h$ “ sample size of the stratum „ $N_h$ “ is the population size of the stratum „ $N$ “ is the total population and „ $n$ “ is total sample size.

Therefore, the researcher took 29 clients from high consumption level of water, 65 clients from medium level of water consumption and 92 clients from low level consumption from both woredas, i.e. (woreda 2 and woreda 3) by using simple random technique.

### **3.4 Source of Data**

The source of data based on both primary and secondary sources. The primary sources are questionnaires and key informant interview. Secondary source of data was collected from annual reports, books, magazines, internet sources and AAWSA researches.

### **3.5 Data Collection Method**

Due to qualitative and semi-quantitative nature of the study the researcher used mixed approach of data collecting method key informant interview and questionnaires used. The researcher used key informant interview to gather information in administrative organ of water and sewerage authority in Akaki Kaliti sub city branch offices and selected organizations respectively.

The advantage of key informant interview in this paper is to make the study balance from the governance side such as AAWSA and Emmanuel development association and the public side this method of collection is important to investigate the topic in depth.

### **3.6 Method of Data Analysis**

The method of data analysis that the researcher used is simple statistical tools such as percentage, mean, charts and table. This was done to assess the available data. Apparently, SPSS<sup>1</sup> application was used to analyze some circumstance.

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<sup>1</sup> Statistical package for social science version 20

## CHAPTER FOUR

### **4Data Presentation, Analysis and Interpretation**

In this chapter, the researcher presented, analyzed and interpreted based on the collected data thorough field survey, key informant interview and content review, 187 questionnaires were distributed to AkakiKality Sub City wereda 02 and wereda 03 water and sewerage authority clients ,from the total questionnaires, 150 questionnaires were filled and returned properly. For the purpose of detailed analysis this chapter is breakdowns into 3 sections .The first section deals with the presentation and analysis of the demographic distribution of respondents. In the second section, the sub- sections which is analyzed based on descriptive statistics techniques like frequencies, percentages were presented, then, in the third section the cross tabulation analysis was conducted. Finally, the interview analysis was conducted.

#### **4.1Demographic Distribution of Respondents**

In this section the demographic profiles of the respondents were analyzed under the dimensions sex, age, and educational level and occupation by using frequencies and percentages.

**Table: 3 Characteristics of Sampled Respondents**

<b>Variable</b>	<b>Options</b>	<b>Frequency</b>	<b>Percentages</b>
<b>Gender</b>	Male	57	38
	Female	93	62
	<b>Total</b>	<b>150</b>	<b>100</b>
<b>Age</b>	Under 20	33	22
	21-35	70	46.7
	36-50	42	28
	50-65	4	2.7
	Over 65	1	0.6
	<b>Total</b>	<b>150</b>	<b>100</b>
<b>Education level</b>	Grade 10 and below	77	51.3
	Certificate	57	38
	Diploma	10	6.7
	Degree and above	6	4
	<b>Total</b>	<b>150</b>	<b>100</b>
<b>Occupation</b>	Salaried	10	6.7
	Self-employed	86	57.3
	Retired	0	0
	Other	54	36
	<b>Total</b>	<b>150</b>	<b>100</b>

**Source; - Field Survey (2015)**

Table 3 reveals that majority of the respondents 93(62%) were female; however, 38% of the respondents were men. As also depict in table 3 the majority group of respondents were aged 21-35 which represents 70 (46.7%) of the total respondents. Respondents with aged group 36-50 account 42(28%) and less than 20 years count 33(22%), the rest 4(2.7%) and 1(0.6%) respondents are aged group 50-65 and greater than 65 years respectively. Table 3 also indicated that 77(51.3%) respondents were attained high school, 57(38%) respondents are certificate awarded, whereas, 10(6.7%) respondents are diploma holder and the remaining

6(4%) respondents were degree holders and above. The result suggested that most of the less educated engaged in fetching water regularly.

Regarding occupation of the respondents, self-employed persons dominate the sample with 86(57%) respondents, 10(6.7%) respondents are salaried, whereas, 0(0%) respondents were retired and the rest 54(36%) of the respondents are classified in other categories most of them are unemployed. This indicated that majority of the respondents who engaged in fetching water are self-employed followed by un-employed groups.

## 4.2 Descriptive Statistics Analysis

**Table: 4 Respondents Perceptions towards Water Service Delivery**

Item		Number and percentages of respondents	
		Frequency	Percentages
Akaki Kaliti Sub City Water and Sewerage Authority provide sufficient information about water distribution in your sub city.	Strongly agree	12	8
	Agree	22	14.7
	Neutral	10	6.7
	Disagree	41	27.3
	Strongly disagree	65	43.3
	<b>Total</b>	<b>150</b>	<b>100</b>
Akaki Kaliti Sub City Water and Sewerage Authority provide clear information?	About financial information	21	14
	Water supply delivery information	36	24
	Newly established water projects	83	55.3
	Any other	10	6.7
	<b>Total</b>	<b>150</b>	<b>100</b>
In which way the clients get information about water service from the Authority?	Through media	83	55.3
	Through news paper	11	7.3
	Through AAWSA pamphlets or brochures	48	32
	Any other	8	5.4
	<b>Total</b>	<b>150</b>	<b>100</b>

**Source; - Field Survey (2015)**

As indicated in table 4, 34(22.7%) respondents were strongly agreed and agreed to the statement “Akaki- Kaliti Sub City Water and Sewerage Authority provide information about water

distribution of the Sub –City”, about 10(6.7%) respondents were a neutral opinion to this statement, while, significant portion of the respondents 106(70.6%) strongly disagreed and disagreed to the statement “Akaki-KalitiSub City Water and Sewerage Authority provide information about water distribution of the Sub –City”. The result suggested that Akaki-KalitiSub City Water and Sewerage Authority provide less information about water service delivery.

Concerning the nature of information, 21(14%) respondents were stated that the authority provide information regarding financial information like revenue and expenses.36(24%) respondents were agreed that the authority informed about water supply service delivery, however, most of the respondents83(55.3%) responded that they get information about newly established water projects this is due to the authority is currently engaged in a project that would realize the drilling of 40 deep wells at Akaki well field, and the rest 10(6.7%)believed thatthe authority give information about different issue like historical water supply in the city.

As also revealed in table 4, significant portion of the respondents 83(55.3%) believed that they get information about water service from the authority through media, whereas, 48(32%) respondents said that they get information by the authority pamphlets or brochures, the rest 11(7.3%) and 8(5.4%) said they get information through newspaper and any other source respectively.

**Table: 5 Source of drinking water in Akaki-kality**

<b>Types of source</b>	<b>Frequency</b>	<b>Percentage</b>
Public taps	<b>97</b>	<b>64.70</b>
Taps inside house	<b>25</b>	<b>16.70</b>
Yard taps	<b>14</b>	<b>9.30</b>
Vendor(kiosk)taps	<b>14</b>	<b>9.30</b>
<b>Total</b>	<b>150</b>	<b>100</b>

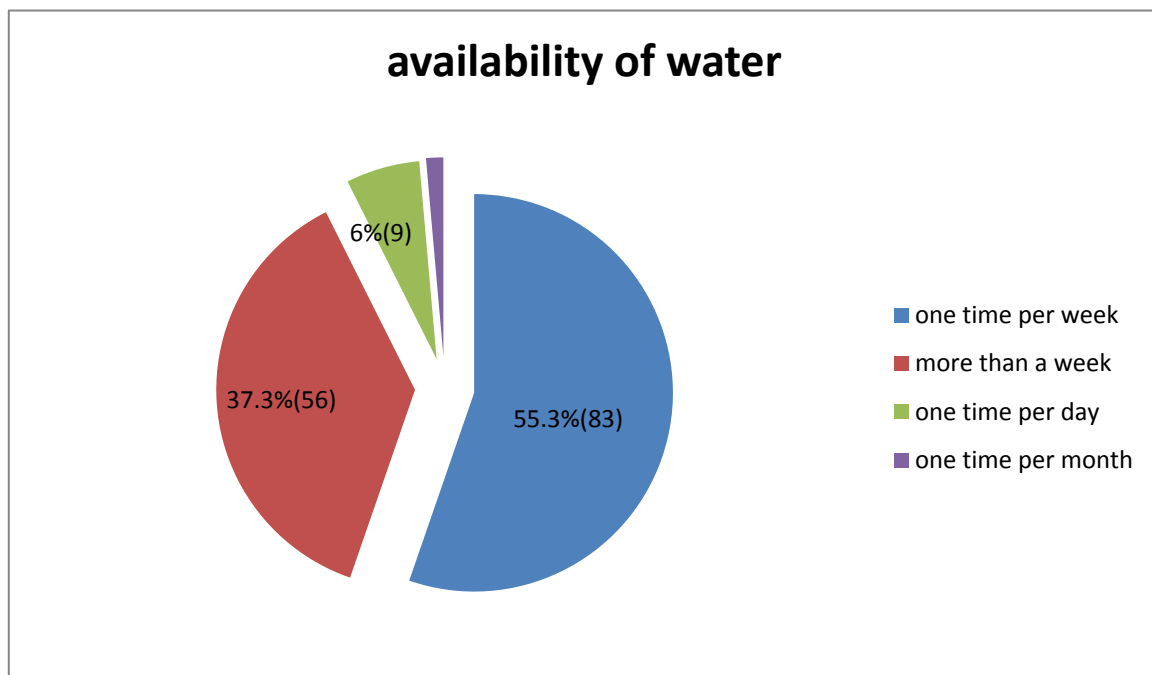
**Source; - Field Survey (2015)**

As revealed in table 5, 83.3% of the households depend on primary water sources, public taps, yard taps and vender or kiosks,while,16.7% of the households use private taps as their primary

source .All these water sources are supplied by the AAWSA municipal system. In the case of interruption of municipal water supply, water vendors (kiosks) are the main source of water supply. This indicates that most of the urban poor households in the study area are dependent on public taps.

### 4.3 Availability of water in the study area

**Figure 2:water availability in Akaki-Kality**



**Source; - Field Survey (2015)**

Out of the total sampled households 55.3% said that water is not available continuously that is one time per week. Only 6% said it is available the rest 37.3% and 1.4% said we get water more than a week and one time per month respectively. However almost the entire sample said that the time of water availability is also very unpredictable i.e. sometimes it is available daily basis or more than a week.



#### 4.4 Respondents satisfaction in water servicedelivery

**Table 6: Respondents' satisfaction towards water service supply**

Item	Frequency	Percentage
Highly satisfied	22	14.7
Satisfied	40	26.7
Dissatisfied	56	37.3
Highly dissatisfied	32	21.3
<b>Total</b>	<b>150</b>	<b>100</b>

**Source; - Field Survey (2015)**

Although evidences shows that drinking water coverage in Addis Ababa has reached 88%, clients are not yet satisfied, according to the data (22)14.7% respondents were highly satisfied, while, (40) 26.7% respondents were satisfied on the other hand (56)37.3% respondents are not satisfied with water service ,the rest (32)21.3% respondents were highly dissatisfied. Almost more than 50% of respondents are not well satisfied in water supply of Akaki-kality sub-city.

#### 4.5 Reliability Analysis

The reliability analysis was used to measure the consistency and stability of the data obtain from questionnaires by using Coronbach's Alpha scale in SPSS ver.20. As revealed in table 7 the cronbach's alpha values were 0.804. Since a rule of thumb suggested that the Coronbach's Alpha values greater than 0.80 the item shows good reliability

**Table 7: Data Reliability**

Item	Coronbach's Alpha
4	0.804

**Source; - Field Survey (2015)**

#### 4.6 Respondents opinions towards Water governance system in Akaki-kality sub-city

In this section the system of government is the dependent variable on the other hand capability, accountability, responsiveness and transparency are the independent variables. Cross tabulation technique was used to show government effectiveness. In order to analyze the data based on the cross-tabulation the five point likert responses of respondents can be categorized into two categories of disagreed (strongly disagreed and disagreed) and agreed (strongly agreed, agreed and neutral)

**Table 8: Respondents, capability\*government cross tabulation**

			Capability		
Government			Incapable	Capable	Total
	Agree	Count	33	16	49
		%within cap.	64.7%	16.2%	32.7%
	Disagree	Count	18	83	101
		%within cap.	35.3%	83.8%	67.3%
Total		Count	51	99	150
		%within cap.	100%	100%	100%

**Source; - Field Survey (2015)**

Table 8 indicated the cross tabulation between government and capability. The result shows that (33)64.7% respondents were agreed with incapable government and (18)35.3% of respondents were disagreed; while, 16(16.2%) respondents were agreed with the capability of government and 83(83.8%) respondents were disagreed with the capability of government.

Secondary source of data shows that in 2011 the capacity of the authority to produce was 110mM<sup>3</sup>/year, on average the water demand for the entire planning year 252mM<sup>3</sup>/year. To fill the gap between the current supply capacity and potential demand at the year 2020 AAWSA should produce 315,309M<sup>3</sup> additional water per day.

**Table 9: Demand for water and proposed projects in AkakiKality**

Description	Unit	Year Gregorian calendar					
		2011	2013	2015	2017	2019	2020
Total popn.	N0	2,979,615	3,107,424	3,240,715	3,379,724	3,524,696	3,599,497
Housing  Units	N0	679,815	735,116	774,489	816,058	859,948	882,807
Mean per capita DD	l/c/day	100	111	122	132	142	148
Average production daily	M3/day	432,399	488,872	544,572	599,754	654,654	689,906

**Source: AAWSA 2014/15**

As result, the gap between the city's water demand and supply has been significantly reduced. Currently about 93% of the city's water demand is being addressed. the authority is currently engaged in a project that would relies the drilling of 40 deep walls at Akaki well field, which is expected to yield 14,000m3 of water per day.

**Table 10: Respondents, accountability\* governments cross tabulation**

			<b>Accountability</b>		
<b>Government</b>			Not accountable	Accountable	Total
	Agree	Count	38	11	49
		%within acct.	77.6%	10.9%	32.7%
	Disagree	Count	11	90	101
		%within acct.	22.4%	89.1%	67.3
Total		Count	49	101	150
		%within acct.	100%	100%	100%

**Source; - Field Survey (2015)**

House hold respondents were asked to indicate whether there is effective accountability system in AAWSA Akaki-kality branch office or not,(38)77.6%respondentswere agreed with the government is not accountable and also (11)11% of the respondents weredisagreed, on the other hand(11)22.4% respondents were agreed with the government is accountable and(90)90% respondents were disagreedby the government accountability.

AAWSA is led by a general manager who is answerable to a board of directors. There are three deputy generals leading the water production, resource management and sewerage service units. Since 2009 the authority has fully implemented business process reengineering (BPR).hence, now it is structured into processes unlike the earlier functional mode of the organization(AAWSA, 2012).

There are two core processes which is accountable for board of directors. Namely:-

- 1) Waterproduction, distribution and catchment management core process.
- 2) Sewerage disposal service development and reuse core process.

The eight branches offices were recognized into two sub process after the model in the head office. AAWSA ~~Akaki-kality~~ branch office is accountable for water production, distribution and catchment management core process. The AAWSA has started encouraging water users to establish their own forum which is community forum to enforce accountability.

**Table 11: Respondents, responsiveness\*government cross -tabulation**

			Responsiveness		
Government			Not responsive	Responsiveness	Total
	Agree	Count	32	17	49
		%within res.	86.5%	15%	32.7%
	Disagree	Count	5	96	101
		%within res.	13.5%	85%	67.3%
Total		Count	37	113	150
		%within res.	100%	100%	100%

**Source; - Field Survey (2015)**

Responsiveness in the context of this study is refers to the degree to which water service providing agencies take actions to solve the problems of the clients and to satisfy their demand. Table 11 shows that 32(86.5%) respondents were agreed with the statement the government was not responsive and (5)13.5% disagree with this statement, while, 15% of respondent or 17 out of the total sample agreed with responsive government and 96(85%) are disagreed with responsive government.

**Table 12: Respondents, Transparency \*government Cross -tabulation**

			Transparency		
Government	Agree		Not transparent	Transparent	Total
		Count	38	11	49
		%within tran.	84.4%	10.5%	32.7%
	Disagree	Count	7	94	101
		%within Tran.	15.5%	89.5%	67.3%
		Count	45	105	150
Total		%within Tran.	100%	100%	100%

**Source; - Field Survey (2015)**

Transparency of water service delivery is measured in terms of information flow from water supply agencies to service recipient and vice versa. AAWSA officials stated that the authority provides information to citizens about newly established projects and distribution problem related issues through media and published bulletin. Table 8 revealed that about 38(84.4%) of respondents agreed with not transparency government and 7(15.5%) disagreed with not transparent government, while (11)10.5% respondents were agreed with transparent government and (94) 89.5% of respondents were disagreed with transparent government.

## **4.7 Interview Analysis**

### **4.7.1 Interview result analysis with AAWSA Akaki-kality sub-city Branch Office Administration**

Based on theoretical frame work, collected information needed through interviews in order to see the reality from service provider point of view, according to AAWSA Akaki-kality branch office manager the state actors in water service delivery in the sub-city Addis Ababa water and sewerage authority is the only provider of drinking water, on the other hand the non-state actors are NGO's Emmanuel Development Association play the sole role in providing water from non-governmental organizations. Beside that community forums are the other non-state actors, concerning to provide information to the citizens AAWSA official stated that the authority provide information through the community forum leaders at the time of meeting to be aware of citizen with their rights and duties in water consumption.

AAWSA has established complaint handling complaint office at head and branch level to which customers can provide their complaint through telephone, media, either physically or in letters form. Beside that clients can present their complain to public meeting at community forums.

During the household survey in the study area it was recognized that the management and operation of the water supply system of the authority have encountered major problems, these problems can be considered as obstacle for AAWSA in providing quality water to its inhabitants. According to the authority power interruption, rapid urbanization, changing living conditions, old pipes and valves are the major challenges, whereas unmonitored waste disposal and private ground water exploitation, exposing water to pollution, unplanned land use, requiring large investment to control and improve water service delivery.

### **4.7.2 Interview result analysis of Emmanuel Development Association**

Emmanuel development association is an Ethiopian charity development organization committed to improving the lives of vulnerable children, youth and women through integrated and community based development programs partnered with international donor organization the organization implements projects on education, child protection, livelihood and environmental development, community health and WaSH. Emmanuel development Association has implemented WASH projects with financial and technical support of water aid Ethiopia.

In the course of Emmanuel development association and water aid Ethiopians partnership the first project was implemented in two Akaki-kality communities between 2009 and 2012 the projects aim were to perform action research on WaSH related problems in the community. The second project implemented between 2012 and 2015, with the aim of improving livelihoods of slum dwellers by providing water and sanitation service.

The primary goal of Emmanuel development association is to improve access to WaSH facilities for poor school and communities. Accordingly, over the course of their two projects, the partners have built nine school water points and separate blocks of male and female latrines, nine community water points, and six community WaSH centers complete with latrines, showers and hand washing station.

Regarding to transparency the organization has cultivated good relationships with government sector offices, such as water works, women, children and youth affairs. More importantly the collaboration of different sectors has promoted better integration and implementation of WaSH projects.

Major limitation facing the community and partner organizations can be summed up by the shortage of natural and financial resource due to population growth and poor infrastructure there is a severe water shortage in Addis Ababa especially in Akaki-kality sub-city. There is also a shortage of financial resource in relation to the great need of these communities. These gaps can be addressed by development actors like the government; NGO's and even the community itself, whose contributions can help alleviate the lack of resource being poured in to the sector.

#### **4.7.3 Interview result analysis with Community Forum Leaders in Akaki-kality Sub-City**

According to Ethiopian water resource management policy, in order to enhance readiness to pay and ensure transparency in the water service user and communities are required to participate in the governance system. (Bereket, 2006). At the beginning of 1998, AAWSA initiate partial communication with community about water service delivery. The first community forum was established at the beginning of 2001 with a total of 90 members stand for all Addis Ababa city dwellers.



During the time of Ethiopian millennium the new community forums re-established with one hundred members of each branch office of the authority, the new customer forum's arrangement was like the previous forums but it has sub-branches in each eight AAWSA branch offices which is derived from civil society, *idir* and from the AAWSA employees. It also increases the numbers of members from 100 to 350 in each branch office.

According to *Akaki-kality* community forum leaders the role of the forum is mostly rising water service related problem to the AAWSA officials and respond to citizens during the meeting time. Beside that the forum interchange information with the agency with out time limitation moreover the forum held meeting with members in quarterly, monthly and weekly.

## **CHAPTER FIVE**

### **5 Summary of Major Findings, Conclusions and Recommendations**

#### **5.1 Summary of Major Findings**

The AAWSA akaki-kality branch office unable to provide sufficient water supply for its people, the policies practice and tools for translating that in to sustainable governance of water resource are not keeping the growing demands of society. From the above analysis the findings revealed that Water governance related problems are the main cause to shortage of drinking water in Akaki-kality sub-city. On the other hand Lack of information about water service delivery aggravates the dissatisfaction of the clients and Availability of drinking water in Akaki-kality sub-city is unpredictable. The data also revealed that theCAR frameworks in water service delivery were found to be ineffective due to lack of transparency, accountability and responsiveness. In addition to this the capacity of water service giving agencies is limited with compared to the current demand of the clients. Besides, the transparency and accountability mechanism in water service delivery were found to be ineffective. The level of transparency suffers from perceptual different between public agencies and customers, the agency believe that its enough transparent but the customer complain with lack of transparency.

The observation also showed that there is no check and balance between customers and water supplier agency to ensure accountability. However accountability is not effective in water service supply in Akakai-kality sub-city, Respondents proved that due to lack of quick responsiveness many water pipe lines detachment are not maintain timely, due to this lack of responsiveness clients suffer to water shortage. Clearly observed that there is a restriction of private sector organization in providing pipe line water service to the clients.

The community forum members are elected and organized by the AAWSA officials; these create a query to the community form leaders stand from the side of customer, beside that the community forum has not any role in decision making regarding water services except providing customer complain to the agencies.

NGO's play a great role, In providing drinking water service for Akaki-kality sub-city dwellers. Lack of support from government organs are the major bottleneck of NGO's to provide Water service. Population growth, poor infrastructure and lack of financial resource are the major obstacles of water service delivery in Akaki-kality sub city.

## **5.2 Conclusions**

The AAWSA's water governance practice is becoming incapable of supplying sufficient water service to its clients. The study shows that there is unbalanced demand and supply in the Akaki-kality sub-city.

The transparency and accountability mechanisms in water service delivery were found to be ineffective. The system of information provision by the water agency is not yet considered as mandatory to provide information to customers about water supply and allocation.

The governance of water as a critical should be done in a sustainable manner taking in to account the needs of the present and future generations, in this respect effective governance system of water should take in to consideration the principals that water governance should be decentralized, participatory and community-based and conduct at the lowest appropriate level.

In general Findings show that, restriction of private sector in the supply of potable drinking water with pipe line and the community forums role is insignificant in decision making of water service and NGO's play great role in providing drinking water for Akaki-kality client

### **5.3 Recommendation**

- ❖ In order to provide effective water service delivery to the resident, the authority has undertaken different water supply projects by establishing additional pipelines and reviewing its governance practice.
- ❖ To make available or improve access to water to meet the realistic water needs of the sub-city client requires the development of water infrastructure.
- ❖ Increasing transparency and accountability in water giving agencies should introduce a system of information that is sensitive to supply and demand oriented information. The agency should introduce a system that ensures periodic flow of information to customers.
- ❖ The need of neutral party establishments which make check and balance in the governance system of water service delivery in Akaki-kality sub-city.
- ❖ The need for support to non-state actors, there is no support from government to private sectors as well as NGO's to provide drinking water supplies, supporting of these actors may improve water service delivery.
- ❖ The community forums must be organized by the choice of the people without the interference of the government body.

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## Appendix I

### Questionnaires

This questionnaire is prepared to collect data about governance and water service delivery in AkakiKality sub city. The data collected is confidential and will only be used for Analysis of the study and not for any other purpose. This questionnaire consists of two sections the first section consist question regarding demographic information the second section consist of question about customer general opinion of water service delivery. Write down your name is not necessary, make cross( ×) mark for your choice thank you for your cooperation.

### Section I demographic information

#### 1. Gender

Male ☐ Female ☐

#### 2. Age in years

Under 20 ☐ 21-35 ☐ 36-50 ☐ 50-60 ☐ 61-70 ☐ 71-80 ☐ Over 65 ☐

#### 3. Educational level

From grade 1-12 ☐ certificate ☐ diplomas ☐ Degree and above ☐

#### 4. Occupation

Salaried ☐ self-employed ☐ retired ☐ other ☐



**Section II customer general opinion about water service delivery in the sub-city.**

1. AAWSA provides sufficient information about water distribution in your sub-city?

Strongly agree ☐

Agree ☐

Disagree ☐

Strongly disagree ☐

2. If you agree on the above question in which department are clearly provide the information?

Financial information about revenue and expense of the authority ☐

Water Delivery information of the cities ☐

About newly established water project in the city ☐

Others ☐

3. If you have information about water supply delivery in your sub city, in which way you get

The information?(more than one choice is possible)

Through media ☐

Through news papers ☐

Through AAWSA pamphlets or brochures ☐

Any other ☐

4. What are the main sources of drinking water in your area?

Public taps (Bono) ☐

Taps inside house ☐

Vendor/kiosk ☐

Yard taps (tap in compound) ☐

5. How frequently you get water in your sub-city?

One time per day ☐ More than a week ☐  
 One time per week ☐ one time per month ☐

6. Are you satisfied with the current supply of water delivery in Akaki-kality sub-cities?

Highly Satisfied ☐  
 Satisfied ☐  
 Dissatisfied ☐  
 Highly dissatisfied ☐

7.

Item	Strongly agree	agree	Neither agree nor disagree	disagree	Strongly disagree
AAWSA have a capacity to afford sufficient drinking water to the public.					
Are the AAWSA official accountable					
Are AAWSA official responsiveness					
Are AAWSA officials transparent					

## **Appendix II**

### **Interview Questions for AAWSA government officials**

1. Are the state and non-state actors in water service delivery in Akaki-Kality Sub-City? What are the roles and responsibilities of those actors?
2. How does the Akaki –Kality Sub City water and Sewerage Authority make citizens aware of their right and duties regarding to water service delivery?
3. How to handle customer complain regarding to water service delivery?
4. What are the major obstacles in the sub-city regarding governance and water service delivery?

### **Interview questions for NGO'S**

1. What service is provide by your organization for the citizens in akaki-kality sub-cities
2. Is your service is transparent to the public?

### **Interview for community forum leaders**

1. How many members are involved in *Akakakality* sub-city forum?
2. What is the role of the forum in *Akakikality*sub-city water service delivery?
3. How many times shall conduct the meeting by forums?
4. How do you address the customer complain in your sub-sub city?