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THE INFLUENCE OF WATER SECTOR REFORMS ON ACCESSIBILTY TO WATER IN THE RURAL AREAS: A CASE STUDY OF KITUI CENTRAL CONSTITUENCY.

BY

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DECLARATION

This research project is my original work and has not been submitted for award of a degree in any other university

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This research project has been submitted for examination with my approval as the university supervisor

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Dr. Joshua M. Kivuva Date

DEDICATION

This work is dedicated to my dear wife, Esther, and my lovely children Diana, Ian and Claudine for their patience, encouragement, and support that they gave me during many times I was away doing my research for this study.

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ABBREVIATIONS

BICC	Bonn International Centre for Conversion
CAACS	Catchment Area Advisory Committee
CDF	Constituency Development Fund
CIDA	Canadian International Development Agency
DRC	Democratic Republic of Congo
ECK	Electoral Commission of Kenya
GoK	Government of Kenya
GTZ	German Technical Cooperation
GWP	Global Water Partnership
IPCC	Intergovernmental Panel on Climate Change
IWRM	Integrated Water Resource Management
KANU	Kenya African National Union
KITWASCO	Kitui Water and Sanitation Company
KIWASCO	Kisumu Water and Sewerage Company
MOA	Ministry of Agriculture
MWI	Ministry of Water and Irrigation
NAWAPO	National Water Policy
PPPs	Public Private Partnerships
PRSR	Poverty Reduction Strategy Paper
SDA	Supply Driven Approach
SOE	State Owned Enterprises
UN	United Nations

UNCHS	United Nations Centre for Human Settlements
UNDP	United Nations Development Program
UNESCO	United Nations Education Scientific Cultural Organization
UNICEF	United Nations International Children's Education Fund
URT	United Republic of Tanzania
USA	United States of America
USAID	United States Agency for International Development
WAB	Water Appeals Board
WARMA	Water resources Management Authority
WASH	Water Supply and Sanitation Services
WASREB	Water Service Regulatory Board
WHO	World Health Organization
WRUAS	Water Resources User Association
WSRB	Water Services Regulatory Board
WSPS	Water Service Providers
MP	Member of Parliament
WSSD	World Summit on Sustainable Development
KI	Key Informant
SPSS	Statistical Package for Social Sciences

CHAPTER ONE: INTRODUCTION

1.1 Background

There is sufficient water in the world for everyone's essential domestic needs. However, poor governance and other problems surrounding its distribution, management and the way it is extracted and harvested from the ground make its accessibility problematic. The politics of water distribution, which lead to inequitable allocation further limits people's access (UN-HABITAT 2008: xix). This is because water isn't only a physical good, it is a cultural and social resource with great economic and political significance. This, to a great extent explains why the water industry does not easily fit into the standard economic theory of competitive markets (Ballance and Taylor 2005). There are important *externalities* (social and political costs and benefits) attached to it, and the industry—as is often the case with utility services—is regarded as a *natural monopoly* (Ballance and Taylor 2005).

According to a US Geological Survey of 2011, there is adequate water in the globe to meet the needs of the earth's population. The Report points out that if the global fresh water resources were well utilized the problem of access to water would be a thing for the past. This position is affirmed by a UNESCO (2006) study which blames the current global water crisis not, on a lack of water supply or technology, but rather on the failure in the governance of water. That is, today's water crises are not caused by the fact of having too little water to satisfy people's needs but rather it is a crisis of managing water so badly that billions of people do not access it. In short the problems of water in the world are political— mismanagement, poor governance, discriminatory distribution or

outright use of water as a political weapon to reward supporters while punishing opponents. Nowhere is this more apparent than in Africa where mismanagement and corruption by authorities, the lack of appropriate institutions, bureaucratic inertia and a shortage of new investments in building human capacity and physical infrastructure have limited people's access to water.

Efforts to correct these problems through public sector reforms in general, and water sector reforms in particular, have not been so successful as a result of of three factors: first, incomplete decentralization; second, the non-transparent nature of local politics; and, third, political patronage and the capture of strategic resources by (local) elites (Guha-Khasnobis et al 2007; Chabal et al; 2006; Bierschenk 1997; Mamdani; 1996). The clientelistic nature of local politics (Bayart 1993), as well as the alliance of politicians and administrators with 'traditional' authorities and local strongmen, has created powerful local interest groups whose interests cannot be easily disregarded even if legal requirements would demand it (Bierschenk and Sardan, 1999, Migdal 1988). The implication of this is that local politics drive the reforms. As Berry argues, to gain access to any vital natural resources, people do not necessarily rely on legal frameworks but rather on social relations and networks (Berry 1993). In such settings, the local outcomes of reforms are entirely driven by local politics and interests.

The politics of water and water distribution have produced four interesting results: countries with sufficient water and where the people have access to water; countries with sufficient water but its citizens have no access to water; countries without enough water

but the citizens have access to water; and, countries without water and the citizens have no access to water. However, different countries have followed different paths in ensuring water availability and accessibility. This is not just because the distribution of resources varies between countries (and even within a country) but because replicating the successes in one country may not work in another country. One thing is however clear, that at the centre of the success of citizens that have access to water is good governance in the water sector. In good governance four essential elements, namely, accountability, people participation, predictability, and, transparency— have been applied to ensure the governance of water is a success. Further, those countries that have fairly good access to water also tend to posses four practices leading in the sector: first, regulation in the sector tends to be stronger as government or other regulatory mechanisms make water providers more accountable to the public. This probably ensures financial sustainability of water systems which protects the long-term value of water resources. Second, better management of the sector opens doors to external expertise and finance from the private sector; third, successful countries also tend to take an integrated, holistic service delivery approach that encompasses water supply management, demand management, wastewater management, research and development, and where applicable, public–private partnerships (PPPs). Finally, successful countries tend to be financially self-reliant by operating as independent, business-like institutions with an emphasis on improving revenue and effectively managing cash flow. Successful water providers also tend to attract, nurture, and retain talent. This produces staff that is capable of carrying out their responsibilities in a more systematic way.

Brazil provides a good example of this. When it was ruled by successive dictatorships from 1964-1985, the country's population had limited access to water. This is despite the enormous water resources from the Amazon. Brazil faced scarcity of water not because it was not available, but mainly because of poor governance exemplified in a culture of water wastefulness, reduced investments, failure to protect water resources, and, low value accorded to water by successive governments. However, after the fall of the dictatorship in 1985, successive governments have reversed this trend and made water more accessible. Reports show that by the year 2010, 100% of urban Brazil had access to water, whereas 85% of rural Brazil has access to clean water. This points to a possible relationship between a country's politics and access to water for its people, this seems to be supported by a 2006 UN report in Human Development that relates the (in) accessibility of people to water to "power, poverty and inequality," all aspects of bad governance.

The DRC presents another supporting case—the DRC has one of the lowest rates of access to water in sub-Saharan Africa, yet it is endowed with abundant water resources and has Africa's largest internal renewable water supply (the Congo Basin). Despite this immense water resource availability, the river network and groundwater resources are largely untapped, and very little safe drinking water is available to the population. This may have been contributed to a large extent by the country's troubled legacy of conflict, military rule and the subsequent bad governance characterized by environmental degradation, rapid urbanization and under-investment in water infrastructure. A further bottleneck in the accessibility to water in DRC may include weak institutions, outdated

sector policies, a dearth of qualified technicians and managers. This could also be the result of continuing insecurity, and a lack of support for infrastructure such as roads and electricity. Between 1990 and the early 2000s, access to safe water in the DRC regressed from an estimated 34% of the population to only 22%. This may be attributed to increasing poor governance.

What the above suggests is that availability of water does not directly translate to accessibility of water by the citizens. Good governance and good policies must be instituted. In fact, where governance in the water sector is good even without much availability of water, the majority of the population is still able to access it. For example, Egypt is wholly covered by a desert yet the people's access to water is among the highest in Africa. Egypt is unique among the nations of the world due to its extraordinary dependence upon a single water source, the River Nile. For more than 5000 years, Egyptians have been managing Nile waters for irrigation through a series of hydraulic structures "Dams and Barrages" starting from Aswan High Dam at Lake Nasser in the South to Zefta and Edfina Barrages at the Mediterranean Sea in the North. Egypt has no effective rainfall, except in a narrow band along the northern coastal areas where some rain-fed agriculture is practiced. To be able to sustain the water needs of its people, the Egyptian government has put in place good water governance measures that facilitate an economically viable utilization of water. In addition, water is treated and recycled. This is mainly done by treating and for other uses. The use of treated wastewater is very important in Egypt's water resources management for both environmental and economic reasons.

The Middle East is probably the region where accessibility to water is most political. This is because water is probably scarcest here than anywhere else in the planet. The Middle East represents countries that that have no water resources and the citizens have no access to water. In fact, 10 of the poorest water countries are found in the Middle East (Bayoumi; 2003). Water scarcity in these countries has led many observers to warn of wars over shared rivers. Internally, the acute shortage of water makes it one of the most sought for commodity and therefore in these countries governments use water as a political tool. As groundwater becomes scarcer and fresh water too expensive the power and authority of those who control water and the state are enhanced.

The future of countries and groups for that matter, without water resources may be less secure. In the face of this vulnerability, policymakers ought to act strategically to reform water use. Doing so may require a robust synthesis of political will, governance, and leadership as water mismanagement in these resource scarce countries has often sprung from hyperactive politics and sluggish strategy which governments can no longer afford. What is not clear from the foregoing is how politics determine the domestic distribution of water

1.2 Problem Statement

Kenya is a country endowed with enormous water resources. Its lakes, rivers, springs and underground water sources in the form of aquifers have adequate water to serve the country's population. Each of Kenya's major lakes for example, Victoria, Naivasha, Nakuru, Turkana, Baringo, and Bogoria—and Rivers, Athi, Tana, Nzoia, Mara, Ewaso

Ny'iro and Yala have adequate amounts of water to satisfy the country's water needs. This notwithstanding, only a small percentage of Kenyans has access to water. Even in the major cities of Nairobi, Mombasa and Kisumu and other major towns in the country residents access to water is limited.

More important for Kenya peoples' access to water does not seem related to its availability or nearness to a water source. This is why, although Kenya's major sources of water (lakes and rivers) are fairly well distributed across the country no population in any of Kenya's "water regions" is water sufficient. Access to water in Western Kenya, for example, is limited despite western Kenya's plentifulness and nearness to Lake Victoria. The populations of Nakuru, Naivasha and other major towns in the Rift valley do not have access to adequate water despite the presence of three major lakes in the region. Access and the distribution of water in many regions in Kenya, to a large extent seems to be politically determined. Although there are important problems of accessibility and availability caused by inadequate abstraction, unavailability, poor management and cost, politics—poor governance, bad policies, mismanagement, discriminatory distribution, corruption and other bureaucratic inefficiencies— play a major role. A good example here is the city of Kisumu whose taps ran dry when Jaramogi Odinga opposed Kenyatta's government. Kisumu taps remained dry until Raila's coalition with Moi's KANU in the early 2000s.

In Kenya, problems in the water sector hit a low in the 1990s when only 30% of Kenyans had access to water. This forced the government to initiate reforms in the sector

culminating in the Water Act of 2002 that brought a number of changes in the sector, the major ones being the introduction of new water management institutions to govern water and sanitation, decentralization and commercialization as well as the involvement of committees in water management. In addition, policy and regulation responsibilities were separated, improving accountability and transparency in the water and sanitation sector. However, the impact of these reforms is largely unknown. This in mainly because there does not seem to be a study that has examined the impact of these reforms in improving accessibility to water further, these reforms do not seem to have been undertaken free of politics. For example, while the 2002 Water Act created seven Water Service Boards based on the seven drainage basins in Kenya, when Charity Ngilu occupied the strategic position of Minister for Water and Irrigation, she not only created another Water Service Board but also influenced its location in her constituency—Kitui Central. This raises a further question: to what extent is the distribution of water political? This study therefore seeks to examine the extent to which water sector reforms have influenced people's access to water in Kitui Central Constituency.

1.3 Research Questions

The study seeks to answer the questions: to what extent have water sector reforms influenced peoples' access to water. The specific study questions are:

1. To what extent have water sector reforms increased the number of water sources in Kitui Central?
2. To what extent have water sector reforms reduced the distances people travel to a water point?

3. To what extent is the distribution of water sources in Kitui Central determined by local politics?

1.4 Objectives of the Study

The overall objective of study was to examine the extent to which water sector reforms have influenced water accessibility to rural communities. Specifically, the objectives of the study were to examine:

1. The extent to which water sector reforms have increased number of water sources in Kitui Central
2. The extent to which water sector reforms have reduced distances to water points in Kitui Central Central
3. The extent to which the distribution of water sources in Kitui Central is determined by local politics.

1.5 Justification of the Study

Kitui County in general and Kitui Central Constituency is one of the areas with the least access to water in Kenya. Though the water sector reforms initiated in 2002 did not specifically target Kitui Central, this was to change when the MP for Kitui Central Constituency was made Minister for water in 2008. When water sector reforms were initiated 7 water boards were created. Ngilu created an 8^{th} water board and situated it in Kitui Central Constituency. Ngilu also influenced more resources to be targeted to Kitui County in general and Kitui Central Constituency in particular and hence if the reforms

undertaken since 2002 would have increased people's access the best case scenario would be in Kitui.

The study's findings fill the knowledge gap on water sector reforms and their impact on access to water by the rural population in Kitui Constituency. Available literature on the reforms in Kenya have only broadly examined efficiency of institutions formed and increase in investment in the sector and narrowly examine how efficiency and increased investment have impacted access to water by. Literature on the influence of politics on access to resources is also scanty (G.o.K, 2008; Impact reports 2008, 2009, 2010; Wagah et al, 2010).

The study also provides policy makers with empirical data on access to water for rural communities for appropriate intervention measures. Across the globe, previous studies show both positive and negative impact of water sector reforms on access to water (Laila and Smith 2003, Dagdaviren 2008). It is through local participation in water management programs that local communities have experiences increased access to water (Gilbert, 2007; Saeed and Nurul 2009). Finding from this study contribute to existing literature on reforms, adopted to enhance access to water by rural communities.

1.6 Scope and Limitations

The study focused not only on Tana-Athi water service provision to residential areas of Kitui Constituency in Kitui Kenya but also to other sources of water in the area. Given that access to water is determined by several variables, the study examined the available

sources of water, distance to a water point, time spent in water collection, and hours of water supply. These variables are pertinent to study's theme of access to water, which reforms were meant to address. The study period was between the years 2002 when the reforms were officially started until 2012.

Due to time and resource constraints, the study was limited to only two wards of Kitui Central Constituency Mulango and Kyangwithya East. The two wards were considered because the two have different political opinion on whom to support in local politics. The researcher also experienced a number of limitations. Interview with some key informants took longer than anticipated due to bureaucratic procedure in scheduling interview. This delayed the period within which the research was to be completed. The researcher also encountered language barriers as he is not a native speaker o the language used in the study area. Since the study is a qualitative one, depending mostly on perceptions and narrations, some sentiments and information may have been lost in translation.

1.7 Definition of Key Concepts

Key concepts have a nominal definition followed by an operational definition as will be applied in the study.

1.7.1. Access to Water

Nominally access to water means the ability to obtain water at will from a source within easy reach. The study operationalize access to water as, ability to physically reach a water

source at will, within the radius of 1 kilometer, Holistically access to water will take into consideration physical reach to or increasing number of water distribution points.

1.7.2. Water Sources

Nominally water sources mean the water available for a community or region. In the study water sources were operationalized as places were water is made available to the community before it is distributed. These include dams, pans, weirs, community wells and boreholes.

1.7.3. Water Distribution Points

Nominally water distribution points mean points at which water supplies, obtained the sources, are broken down for distribution to subordinate units. Distribution points usually carry no stocks; items drawn are issued completely as soon as possible. A point at which water obtained from supporting supply points are broken down for distribution to consumers. The study operationalized distribution points as where community water is supplied from which includes, water tankers, school tanks, yard taps, market selling points.

1.8 Literature Review

Access to water entails being within physical reach, being affordable, accessible in law and information on water issues being provided (UN, 2003). Improving access to water has been the thrust of most governments, UN agencies, and many different organizations but these have failed to satisfy demand in the shortest time. The water supply and

sanitation coverage for Africa remains the lowest at 62% and 60% respectively (WHO/UNICEF, 2000).

The literature sections reviews the relevant literature for the study with a view to not only exposing the reader to the corpus of literature available but also to show the various gaps that exist which the study seeks to fill. The literature section is divided into two parts: the first is a general introduction that presents an overview of the problem of water globally, while the sections that follow review various ways that communities and countries have addressed water problems. These sections rely on numerous studies undertaken in different countries which we review to expose the reader to the manner in which water problems have presented themselves in different regions and countries and the extent to which the proposed or undertaken solutions have resolved these water problems. Among the countries reviewed here include Uganda, DRC and Botswana in Africa, Brazil in Latin America, India and to some extent China in Asia.

Water is the most widespread substance on earth (Lalzad: 2007) covering more than 70% of the world's surface. It forms oceans, seas, lakes, rivers and the underground water. In a solid state, it exists as ice and snow cover in polar and alpine regions. A certain amount of water is contained in the air as water vapor, water droplets and ice crystals, as well as in the biosphere (Lalzad: 2007). Water may be everywhere, but its use has always been constrained in terms of availability, quantity and quality (Biswas, 2004), mainly the result of the many problems facing the sector everywhere. These include poor planning, mismanagement and lack of technical skills which have led to perennial water shortages

even in a countries that are otherwise endowed with adequate water resources (Maino: 2002).

Problems relating to water are however, neither homogenous, constant nor consistent over time. They often vary from one region to another, and even within a single country, they vary from one season to another, and from one year to another (Biswas, 2004). Since the dawn of civilization humans have addressed these problems in different ways, mainly by devising ways and mechanisms of ensuring access to more water and reducing their vulnerability to irregular river flows and variable rainfall. The early civilizations for example solved their water problems by expanding in regions where rainfall and runoff could be easily and reliably tapped while in cities they relied on advances in civil engineering and hydrology, communities attempted to move water from where it occurs in nature to where people wanted it and also to store water for future use. They used prayer, rain dances, human and animal sacrifices and other rituals Fredrick (1999). Persians constructed hundreds of Karize's, tunnels used to bring water from an underground source in the mountainous area down to the foothills (Helweg 2000). This method of irrigation spread over the Middle East into North Africa over the centuries and is still used today. The ancient Egyptian economy was centered round the annual flood pattern of the Nile. Mays (1996) describes how the Egyptians built thousands of canals and irrigation ditches to capture the Nile's waters in order to grow crops. Roman engineers, for centuries, brought water to Rome via several aqueducts from as far away as 100 km (Mays 1996).

In the last one century, targeted water reforms have been undertaken whose targets, management and objectives varied depending on the region (Frederick 1999). In Swaziland, a major factor attributed to the un-sustainability of many rural water supply schemes was inappropriate technologies, unavailability of spare parts, lack of local maintenance and operational capacity, lack of local community education and participation, ineffective community demand, and lack of coordination of sector agencies. Reforms in this country therefore depended on the willingness of the government to infuse money to the sector (Okorie et al, 2001).

Reforms in Uganda's water sector targeted financing of the sector (both private and public) and coordination water institutions (UNWDR: 2005). The report established that success of water sector reforms hinged on adopting of sector wide approach to planning and stakeholder participation. These two increased openness and confidence of development partners who put more funds in the sector.

Solutions to water problems depend not only on water availability, but also on many other factors such as: the processes through which water is managed; competence and capacities of the institutions (private and government) that manage them; prevailing socio-political conditions that dictate water planning; development and management processes and practices (Ivey et al., 2004; Biswas, 2004); supply management (Ivey et al., 2004) appropriateness and implementation status of the existing legal frameworks; availability of investment funds; social and environmental conditions of the countries concerned; levels of available and usable technology; modes of governance including

issues like political interferences, transparency, and corruption (Loucks, 2000). Others are, educational and development conditions and status; and, quality and relevance of research that are being conducted on the national**,** sub national and local water problems (Biswas, 2004). According to Loucks (2000) everyone involved in water management and development has an obligation to ensure that these systems provide sufficient quantities and qualities of water at acceptable prices and reliabilities, while protecting the environment and preserving the biodiversity.

Dale Whittington, (2002) conducted a study on challenges for water sector in transition economies. The study found out that practitioners interested in water infrastructure planning in developing countries have recognized that unique economic and institutional characteristics of developing countries pose challenges to water and sanitation planning (Whittington, 2002). The study found out that political interference in service delivery, inadequate investment, non- payment of customers and deteriorating service quality are linked in a vicious cycle which hinder a smooth implementation of water sector reforms. The study did find out that there are unique challenges facing many central and eastern European countries (Ibid). The study also found out that the standard policy advice for water reforms in developing countries had made slow progress. The study recommended a substantial improvement in macro economic conditions so that all investments in the water sector can attract international capital. The study recommended for smaller scale initiatives to help meet different levels of demand among households (Whittington, 2002) According to Okorie et al (2001) in a study in Swaziland, a major factor attributed to the un-sustainability of many rural water supply schemes to imposition of inappropriate

technologies, unavailability of spare parts, lack of local maintenance and operational capacity, lack of local community education and participation, ineffective community demand, and lack of co-ordination of sector agencies. Thus, sustainable interventions in rural water supply and sanitation depend on finding solutions to the problems. The community's willingness to commit their time and money to the projects is critical to their sustainability.

In a 2003 UNESCO Report, a key component of non-structural approaches to water-resource management is a focus on using water more efficiently and reallocating more effectively among existing users. A general point made in the Report is of considerable significance. It concludes that there is always great potential for better conservation and management, no matter how freshwater is used (for agriculture, industry or municipalities). According to the report, water is wasted nearly everywhere and until actual scarcity impacts, most people will continue to take access to freshwater for granted (UNESCO, 2003).

1.8.1 Problem of Governance

Water sector problems are essentially governance in nature (UNDP 2004; United Nations 2005 GWP, 2003), that manifest themselves in terms of fragmented institutional structures (UN, 2005); lack of clarity of roles and responsibilities; questionable resource allocation; patchy financial management; and, low capacity of implementing organizations (UN, 2006). There are in the pervasive leakage of sector resources; weak accountability of politicians, policy-makers and implementing agencies; unclear and non-

existent regulatory environments; and, unpredictability in the investment climate for private sector actors (GWP, 2003). This is why the 2000 Hague Ministerial Declaration called for good governance of Water Ministers recommended action on water governance (Rogers & Hall, 2003).

Poor governance occurs when governance systems lack the essential conditions necessary for governance (Rogers & Hall, 2003). These conditions are inclusiveness, accountability, participation, transparency, predictability and responsiveness (Rogers & Hall, 2003). Poor water governance leads to increased political and social risk, institutional failure and rigidity. This essentially leads to increased poverty since the malfunctioning system causes misallocation of scarce resources. It is within this realization that reforms in the water sector have been recommended and are being effected the world over (UN, 2005). A few examples here will suffice.

India's water sector was faced with problems of governance including: poor infrastructure, mismanagement, wastefulness, water rationing and poor water quality (Madhav, 2008) and the sector was under-financed, despite significant government and donor funding (Madhav 2008). Faced with these problems the Indian government started reforming its water sector in the 1990s. This, it did, through the revision of its laws and policies, encouraging private sector participation as well as developing innovative means of market-based financing mechanisms. Individual states have also undertaken state specific reforms. These reforms have generally been successful and have

led to the increased access to water by the India population over the years (Vaidya, and Vaidya, 2008).

The above notwithstanding, a study by Tushaar (2004) on Lesson's learned for India's water policy and reforms found out that water policy reforms in India had received varied mixed responses from the stakeholders including the consumers and communities in the country. Tushaar found out that the community had a problem with the way water governance was undertaken and preferred water rights to be vested in communities instead of some abstract notion of the India state. Tushaar concluded that that the implementation of the water reforms was unlikely to succeed unless such reforms were far-reaching enough institutions were adopted. He recommended (a) involvement of all relevant stakeholders in carrying out water sector reforms in India for any meaning success (b) a comprehensive strategy for sustainable management of ground water harvesting which was more reliable than rain water harvesting. In general India, water sector reforms have produced mixed results depending on the level of stakeholders' participation. Many Indian communities resisted the reforms because they did not target communities. Stakeholders were also in disagreement on whether the reforms should target rain water harvest or ground water harvesting.

The Democratic Republic of the Congo (DRC) is one of the most water-rich countries in the world. Nevertheless, by 2000 only 22% of the population had access to water (CSO, 2006). DRC's water problems included inappropriate legal framework to address water problems. The sector was also uncoordinated and state institutions were dysfunctional.

Conflict, environmental degradation, rapid urbanization and under-investment in water infrastructure further compounded the problem (Neondo, 2011). As a result, although the country possesses over half of Africa's water reserves, 76% of its population – or approximately 51 million people – lack access to water (Neondo, 2011).

In 2003 systematic reforms were introduced in the management of Congo's natural resources including water, minerals and forests. These reforms targeted Congo's legal framework, institutional restructuring and capacity building. This has been improved with the end of the civil war, which seems to have returned some sanity to Congo's public sector (Neondo, 2011). This has slowly, but steadily, improved access to water in the DRC (CSO, 2006).

Brazil has since the 1960's faced similar problems which were made worse by the rapid and poorly planned development, population growth and centralization of resources especially during the years of dictatorship (1964-1985). By the end of the 1980s water scarcity had become a concern even in traditionally water-rich regions such as southeast Brazil (Formiga- Johnsson, Kumler, 2008) In the 1990s addressing water problems became a concern of the new government (Lemos, 2008). To address these issues, the Brazilian government and water managers sought to improve existing managing organizations and institutions to promote more sustainable water use. This involved consultations with a wide range of stakeholders. The governance of the water sector was also reformed. These reforms resulted in improvements in a number of areas including; accountability of service providers and cleaner water; improved sanitation (Kumle et al,

2008). The reforms have been undertaken in a generally pro-poor manner leading to several entitlements for vulnerable and marginalized groups.

Like the DRC, Tanzania is a water rich country. However the average Tanzanian doesn't have access to water. This is mainly the result of legacy of the socialist policies pursued by Nyerere, Tanzanian president and the corrupt regimes that succeeded him. Further, the government neglected non-engineering aspects of water schemes; personnel were not trained; and, water distribution networks were archaic while responsibilities in the schemes were fragmented between numerous institutions (Böge, 2006). Due to the top-down approach used, users did not develop local ownership for the facilities, which led to the decay of infrastructure (Therkildsen 1988, URT 1995). The promises of free water for all citizens and the Rural Water Supply Program of the 1970s were therefore not achieved. As Hepworth argues, water in Tanzania was managed "by force, by power, by influence" leading to most Tanzanians not accessing water (Hepworth, 2009).

The government's adoption of a National Water Policy (NAWAPO) in 2002 was therefore an attempt to address these problems. NAWAPO provided far-reaching institutional reforms and restructured the water administration (Dobner 2010; IPCC 2008). Under these reforms, the role of the government has changed from that of an implementer and manager to that of a facilitator and regulator (URT, 2000). The government has significantly encouraged community participation in most water supply schemes and other projects, especially in rural areas. This has encouraged public private participation where other stakeholders are involved as well. Benefiting communities

manage many of the water schemes through various management options such as water user groups, water committees and, water user associations. This has led to a steady increase in the population that has access to water in Tanzania (URT, 2000).

1.8.2 Solutions to Water Problems

Solutions to water problems depend not only on water availability, but also on many other factors such as: the processes through which water is managed; competence and capacities of the institutions (private and government) that manage them; prevailing socio-political conditions that dictate water planning; development and management processes and practices (Ivey et al., 2004; Biswas, 2004); supply management (Ivey et al., 2004) appropriateness and implementation status of the existing legal frameworks; availability of investment funds; social and environmental conditions of the countries concerned; levels of available and usable technology; modes of governance including issues like political interferences, transparency, corruption, etc.; educational and development conditions and status; quality and relevance of research that are being conducted on the national**,** sub national and local water problems (Biswas, 2004).

According to Loucks (2000) everyone involved in water management and development has an obligation towards correcting these myriad of problems and ensuring that the systems put in place. provide sufficient quantities and qualities of water at acceptable prices and reliabilities, while protecting the environment and preserving the biodiversity.
Kundzewicz (2000) discusses the need for water resources management in terms of supply and demand. His conclusion is, firstly, that development of new sources of water

supply can largely be avoided by implementing intelligent water conservation and demand management programs, installing new efficient equipment and applying appropriate economic and institutional incentives to optimize water usage among competing groups. This approach to water inaccessibility assumes that water is readily available and therefore it does not address itself to conditions of water scarce areas such as Kitui Central where water has to first be made available before people can access it.

Bandaragoda, (2006) conducted a study on the status of institutional reforms for integrated water resources management in Asia. He found out that the actual implementation after forming the institutions has been slow due to many social, economic and political reasons. The study was to come up with indications from policy reviews in five countries. He found out that the current water related issues led to identification of some emerging water management constraints. The study found out that there are four key problems which are common to all five river basins in Asia. The study, through a stakeholder's consultation, recommended that there was need for an apex body to coordinate water allocations among the various water user groups. There was also a recommendation that there was need for a clear water policy and related water laws.

Radosewich, (2003) conducted a study towards water sector reforms, a policy case study on China. The study found out all water reforms objectives can best be realized through comprehensive planning at national level. The study found out that the reforms should be consistent with national economic and social plans as well as specialty plans relating to flood control.

1.8.3 Nature of Reforms

A number of reform measures have been undertaken to correct many of these problems identified. These reforms have taken under three main areas: Privatization; decentralization and PPPs.

1.8.3.1 Privatization

Megginson (2005) argued that the policy of privatization has been one of the most visible signs of greater reliance on markets to allocate water resources. Privatization, defined as the sale of state-owned enterprises (SOEs) or its assets to private agents, has for more than 100 countries increasingly become a legitimate and accepted tool of statecraft in almost all sectors of the economy.

There is no universal definition of privatization, a factor that has contributed to the emergence of a myriad of understanding of the term and process, both in theory and in practice (Aktan, 1991). Aktan provides a detailed account of the mechanisms through which privatization process takes place. He argues privatization process should be understood in two different ways based on its narrow and broader definitions. In a narrow definition, Aktan conceptualizes privatization process to mean sale of government owned company‘s assets or shares to an individual/s or private firm/s with the purpose of generating capital (Ibid). In its broader perspective privatization is conceptualized to mean the introduction of policies that increases the role of market forces in the provision of goods and services. Permitting market forces to determine distribution of goods and services may entail adopting to the following mechanisms: corporatization; lease

contract, service contracts, management contracts, concession contracts, public private partnership, built own transfer contract, franchise, deregulation and control, introduction of user charge, grant system, voucher system among others (Aktan, 1991).

To Clarke, et al, (1999) privatization of water services in Guinea entailed inviting a partnership between the government, through a public holding company (SONEG) as minority shareholder and a private company (SEEG). In the lease agreement SONEG owned water assets and was in charge of investment planning, while SEEG was responsible for maintaining and operating provision of water services (Clarke., et al, 1999). Major improvements were recorded with regards to improved water quality and connections, improved billings, increased metering to Conakry residents among other efficiency measures (Clarke., et al, 1999).

1.8.3.2 Public Private Partnerships

The literature on public private partnerships based on large scale state owned or private water companies focuses on the corporate contract model for service delivery (Nickson and Franceys, 2003). Some authors emphasize that full privatization of formally publicly owned entities is not the only option for improving performance of water and sewerage authorities in third world cities (Hukka and Katko, 2003).

According to the Walker there is increased private sector participation in the water sector in order to increase efficiency and attract private sector investment (Walker, 1993). Brook-Cowen et al observed that it is difficult for developing country governments to

attract private sector interest in water provision. They recommended four options for increased PPP: taking a stepwise approach (incremental upgrading); simplifying contracts; contracting-out parts of the regulatory function; and 'increasing predictability in the use of discretion', that is, the need for management information for proper regulation. This, they observed will eventually lead to increased access to water by a larger population (Brook-Cowen et al, 1997)

1.8.3.3 Decentralization of Water Service Delivery

Although decentralization has been defined variedly, it is generally accepted that in the broad sense, it denotes "the transfer of power and responsibility to plan, make decisions and manage public functions from higher level of government to a lower one" (Conyers, 1990:19). Decentralization deals with the territorial distribution of power, authority and responsibility for the political, fiscal and administrative systems between the centre and the periphery (Brinkerhoff and Azfar, 2010). Decentralization is frequently advocated as a means of improving public services delivery based on the assumption that in a decentralized system services are more responsive to local needs and demands of service users because citizens can directly or indirectly influence decisions about resource allocation and service delivery (Rakodi, 2002; Conyers, 2007).

Decentralized institutions are viewed to improve matching of public services to local needs and preferences and increase accountability of local governments to their constituencies (World Bank, 2001), resulting in better targeted policies and lower transaction costs (Ribot et al. 2006). The World Bank (2004) stresses that

decentralization is an institutional mechanism that has the potential of enhancing the service users' voice in a way that leads to improved services.

Underlying these arguments is the assumption that decentralization of service delivery occurs within an institutional environment that provides the political, administrative and financial authority to local institutions, along with effective channels for local accountability and central oversight (World Bank, 2001; Azfar et al., 2004).

According to Conyers (2007), the outcomes of decentralization depend on the type of public services involved, the institutional design, the way it is implemented, the capacity of institutions involved, and the wider economic, social and political environment. Hence, decentralized service delivery requires a mix of relations between central and local institutions, referred to as 'institutional pluralism' by Blair (2001).

Decentralization in Zimbabwe started in the 1980s, important improvements have been achieved in rural communal areas in particular the extension of water services and increases in local revenues and popular participation. The problem of continued financial dependence of the district councils on the central government is still noticed with decentralization in Zimbabwe (Mutizwa- Mangiza, 2009).

In Ethiopia, decentralization took the form of the devolution of power and fiscal resources from the federal and regional governments to the local areas (woredas) in 2002 - 2003 appear to have improved the delivery of basic services in education, water and

health. According to surveys carried out decentralization in Ethiopia narrowed the gap in educational outcomes between disadvantaged and better-off *woredas*, especially in the south (Rajkumar, 2008).

1.9 Theoretical Framework: Basic Needs Approach

The study will adopt Basic Needs Approach in examining sector reforms as a policy prescription for achieving accessibility of water. The approach advocates for the identification of absolute minimum resources necessary for long-term physical well-being, usually in terms of consumption goods. The poverty line is then defined as the amount of income required to satisfy those needs.

Streeten (1979) argues that the approach is significant in encouraging more proactive anti-poverty policies. The philosophy behind the basic needs approach is that everyone should be able to pursue well-being. In an inaugural article, Streeten and Burki (1978) explained the rationale of this approach: "The purpose of development is to raise the sustainable level of living of the masses of poor people as rapidly as is feasible and to provide all human beings with the opportunity to develop their full potential."

The central notion of the basic needs approach is essentially materialistic. It works by identifying a bundle of basic consumption and assess whether the population has adequate access to it. It has been generally accepted that the package should contain commodities that are universally needed, such as shelter, sanitation, clean water, food etc. However, there has been no universal agreement on what the bundle should precisely

contain. If any individual has inadequate access to these commodities, then he/she may be considered as poor, and vice versa. This approach has inspired waves of policies that aimed to make public services more reachable for the poor. By increasing the poor's accessibility to basic consumptions, they may thus be able to achieve subsistence and live decent lives. Also, practioners have argued that the bundle of commodities should be continuously reassessed at local levels, since people's needs tend to change over time.

By comparing the accessibility of the basic need bundle at different time and space, one can effectively acquire the patterns of poverty. For instance, policy makers can designate different bundles for various government regions and then compare the pattern of poverty. Consequently, easy operationalisation gave rise to many variants.

1.10 Research Hypotheses

This study will test the following two hypotheses

1. Water sector reforms have influenced accessibility of water to the rural areas of Kitui Central.
2. Local politics in Kitui Central have influenced the distribution of water in Kitui Central.

1.11 Methodology

This section describes the study sites and their selection procedures, identifies primary and secondary sources of data, provides sampling techniques, sample size, data collection method and analysis techniques.

Site Selection

The site of this study was Kitui Central Constituency of the former Kitui District of Kitui County. The county in general and Kitui Central in particular is a water scarce area. The area is not situated among the classified water towers in Kenya. In addition, Kitui district was chosen because it was the home district of the former Minister for Water and Irrigation who contributed a lot to bringing water to the area and was used as a test ground for many of the reforms that were being undertaken in the water sector. This area also benefited from many of the reforms and resources that the Ministry of Water put towards bringing water to water scarce areas, including the decision to locate the Tana-Athi Water Service Board in the Constituency. This is further supported by the many allegations in and out of parliament that the Minister favored her region in the allocation of water resources.

Kitui Central is one of the most expansive constituencies in Kenya and therefore will not be possible to cover the whole constituency for the study. Instead a purposive sampling technique was used to select two of Kitui's five administrative wards for the study. Kitui Central wards are Miambani, Township, Kyangwithya West, Mulango and Kyangwithya East. Using 2007 ECK election results the study selected two administrative wards: one that supported her and another one that did not. The two selected wards were Mulango ward and Kyangwithya East ward

Data Collection Techniques

The study relied on both primary and secondary data. Primary data was obtained through interviews with households, observations and in-depth interviews with individuals and those representing institutions dealing with water. A standardized survey questionnaire was administered to collect data from selected respondents. Secondary data sources included journal articles, policy papers, impact reports of various years, non-governmental reports on water, records from Water Company, books and internet sources.

Through observations the number of water sources (dams, pans, boreholes, wells, weirs and community water tanks) were counted.

Sample Size and sampling techniques

A sample of 100 households was randomly drawn (50 from each of the two wards). The sample size was determined using Yamane sample size formula

$$n = \frac{N}{1+n(e)^2}$$

Where

n=sample size

N=population size

e=level of precisions (the study's precision was 0.5)

The total sample size for the study was 100 households proportionally distributed in the two wards 50 each.

A probability random sampling technique was adopted in selecting households for the study. In the two wards selected, with aid of a local person knowledgeable of the constituency, a landmark was identified as a starting point in each ward while sampling households. From the landmark as the starting point, a household was systematically selected at an interval of 5 houses as one moved deeper inside the ward from the main road.

Data Analysis

Households were the main units of analysis for the study. Qualitative data from primary sources was coded and analyzed using SPSS and was organized according to various themes pertinent to the study. Frequency tables and statistical averages were used to present, analyze and interpret quantitative data.

CHAPTER TWO: WATER SECTOR REFORMS AND THE IMPACT ON ACCESSIBILTY OF WATER IN RURAL COMMUNITIES

2.1 Introduction

Since independence Kenya's water sector has been beset by a number of problems: poor policy formulation, overlapping roles and insufficient financing in the sector. Different administrations have addressed them with different types of reforms, and that the current Water Act is the latest of the several reforms undertaken since independence, but one that has provided a paradigm shift, from a need based approach to an asset based one. This chapter examines the history of water sector reforms in Kenya. The chapter is divided into 3 sections. Section one discusses water management in Kenya through the different regimes starting from Kenyatta to Kibaki, section 2 deals with the problems that have been experienced throughout these regimes. Section 3 will discuss the need for regimes in Kenya. The chapter argues that there have been attempts to reform the water sector in Kenya since independence with results being not realized because of external factors the latest being political influence in water accessibility.

2.2. Water Management in Kenya

2.2.1 Kenyatta Era

As Kenya gained independence in 1963, the new administration used five year development plans to harness rapid development of the republic. The first development plan from 1964-1970 was mainly a carry-over from the colonial period whose focus was economic growth (Ochieng, 1995). Water development was declared important for the economy, and priority was given to schemes that were expected to be financially self-

sustaining, such as water services for the municipalities (GoK, 1964). Manzoni recommendations were implemented in 1964 during which the Water Development Department was formed under the Ministry of Agriculture.

Until 1964, the Hydraulic Branch of the Ministry of Works was responsible for water and sewerage development in urban areas. Rural water development was under ALDEV of the Ministry of Agriculture. The two organizations were amalgamated under the Ministry of Natural Resources in 1964 and later transferred to the MoA in 1968 when the Water Development Division was established. The distribution of authority and responsibility was vaguely defined leading to persistent weakness in management of water supplies.

In 1972 about 560 rural water supply schemes were running in Kenya and provided water to a population of about 664,000, UNICEF reported. Local communities also started developing their own water supplies and set up water committees: they received training about design systems, hydraulic calculations, costs and submission methods. In the same year the Water Development Division was elevated to a Department and the Director of water Development became directly responsible for water development for the provincial organizations. The Water Department was given the overall responsibility for water development in the country (WHO, 1972). The Ministry of Local Government was in charge of water supplies in major municipalities.

Around the same time, government policy shifted and water development became a prioritized area for intervention. Backed by a strong economy, the government developed

an ambitious program for a state led expansion of water development in the Development Plan 1970-74. The program had the objective of "bringing acceptable water supplies to all the rural population before 2000" (Nyanchaga and Ombongi, 2007).

Commitment towards the advancement of the citizens was discernible. Efforts were made in order to control and maintain high quality and quantity of water for all. The government and international organizations collaborated towards this. In 1974 a fully fledged Ministry in charge of water was created. This was due to the increasing awareness that water supply and environmental sanitation were the biggest contributors to acceptable health standards. The ministry took over all government operated water schemes, self help schemes and county council operated schemes.

The first attempt to coordinate planning in the water and sanitation sector came in 1974 when the First National Water Master Plan, developed with assistance from the government of Sweden was launched. Implementation of the master plan was not effective because government development activities were then based on project approach, perceived to have several weaknesses, including, piece meal planning, donor driven, little incentive to minimize costs.

2.2.2 Moi Era

By 1979, it was obvious that the government's goal of water for all by the year 2000 was not achievable. The water sector was characterized by very poor financial performance to expand services as planned (Nyanchaga and Ombongi, 2007). The government

accordingly reformulated its goal in the Development Plan 1979-83 “to have an adequate water supply available to the entire population soon after the year 2000.”This period witnessed a very high level of participatory development through emergence of self help water projects (under the Harambee Motto).

From the mid 70’s to early 80’s the spirit of Harambee which advocated for community action and self help came into existence. Schools, roads, dispensaries and water supply systems were built by harambee groups – some 2500 such facilities during the first two decades of the independence (Notley et al, 2005). Harambee was a key tactic in hastening rural development after independence and has been estimated to have contributed to about 30% of rural development investment (Notley et al, 2005). Water systems became very popular in self-help projects.

In the late 80’s, there was a break with the past policies with more emphasis on participation for progress and resource mobilization to attain sustainable development. After 1988, rural development was no longer of central focus in policy circles; instead there was a movement towards cost sharing, sale of parastatals and privatization. Removal of government subsidies and rationalization away from social programs was also witnessed (Republic of Kenya, 1994).

In 1988 through Legal Notice no. 270, the president ordered that the National Water Conservation and Pipeline Corporation be established, under the State Corporations Act. NWCPC was supposed to operate those water supplies placed under its care on

commercial basis (Nyang'eri, 2003). The main were to commercialize water sector operations by determining the charges for water supplied by the corporation and establishing water tariff structure for any particular consumer (Nyanchaga and Ombogi, 2007).

In 1992, the Ministry of Water Development released two important documents that continued to guide the sector up to the end of the decade. Delineation Study—a defined and improved delineation of roles, functions and responsibilities of the principal actors in the sector, with special focus on those roles, functions and responsibilities which best suited the MOWD and NWCPC. The 2nd National Water Master Plan—set out long-term plans for the much-needed reforms in the management and development of the water sector. One of the most important recommendations to come from the two reports was that the Ministry should develop a water policy.

Up to early 1990s, the implementation of rural water supplies were based on supply-driven approach (SDA) development strategy with high construction targets that left little opportunity for community involvement. The SDA strategy was found to be non-viable and thus a demand-driven approach (DDA) strategy was introduced (Skytta, et al, 2001)
Between 1995 and 1999, the ministry was involved in a policy development process for the sector. This was published as Sessional Paper No. 1 of 1999 under the title "National Policy on Water Resources Management and Development". This document is the blue print that has since then guided legal, administrative and investment reforms in the water

sector. The document also proposed the necessary framework and provided a mechanism for mobilizing resources to safe guard and develops the Country's water sector.

2.2.3 Kibaki Era

The 2002-2008 National Development plan indicated that out of the 142-gazette urban areas in Kenya, only 30% had sewerage systems (Republic of Kenya, 2002). The governance of water was in the Kibaki era was held back by lack of coherence and integration in its services. The analyses of water governance along different regimes present a diverse overview of the growth of water sector management in Kenya as each period had its unique management implications. Through simple and all-inclusive institutional set-ups, tradition societies effectively sustained water resources, however this disintegrated through poor management set ups through different regimes in Kenya.

2.3 Water Problems in Kenya

2.3.1The Water Act Cap 372 (From Kenyatta to Moi Era)

During the 1980/90s various studies notable among them, the National Water Master Plan Study (1992), pointed out that the then widely acknowledged major constraint in the development of the water sector - inadequate financial resources, was due to underlying compounded problems such as lack of comprehensive policy, institutional and legal framework, centralized decision making and lack of adequate financing mechanism in the water sector.

According to the 5th Kisima Issue, the bottlenecks in the Water Act Cap 372, in force then, with regard to policy formulation, regulation and service provision functions which were not separated include: Inadequate funds for development, operation and maintenance of water supplies and management of water resources; Institutional weaknesses especially the scarcity of qualified manpower and lack of skills of the users to properly operate and maintain water supplies; unavailability of water resources due to its uneven distribution in space and time; poor choice of technology in water supply and sewerage development, and inconsistent project selection criteria which has resulted in adoption of technologies and delivery mechanisms which are not well suited to sector development; lack of proper coordination of various actors and sectors; and, lack of proper inter-linkages with other related sectors: (Kisima 5th Issue: 5 years On, 2008). Generally, The overlapping roles and responsibilities of key public actors in the water sector were the main causes of conflicts and poor services in the water sector (Kisima 5th Issue: 5 years On, 2008). Problems in the water sector in Kenya under the Water Act Cap 372 are summarized in the table below.

Table 2.1: Bottlenecks in the water sector under Water Act Cap 372

Policy formulation	• Poor co-ordination in the sector • Poor policy accountability • Poor attention to water resources management
Regulation	• Lack of a clear regulatory framework • Lack of monitoring and evaluation • Poor performance of water-undertakers
Service provision	• Poor management of water resources (quality and quantity) • Failure to attract and retain skilled manpower • Inadequate allocation of resources • Poor, inefficient and unreliable service delivery • Low coverage of water supply and sewerage services • Inability to attract investments • Dilapidated water supply and sewerage infrastructure • High levels of unaccounted-for-water • Low revenue collection, including corruption

Source: Kenya (2006)

Kenya (2006)

KIWASCO (2007) acknowledges that in the past years prior to reforms, the water sector has experienced numerous challenges which include: lack of comprehensive sector policy or strategy to guide sector organization in the performance of their tasks; unclear roles and responsibilities for the sector leading either to duplication of efforts or gaps in some areas; deteriorating infrastructure as a result of poor maintenance and lack of new investments; erratic and insufficient funding by the government and local authorities; increasing pollution of water resources; non-existence of comprehensive legislative framework for managing water; lack of sector policy on water resources management and water supply and sanitation; and, lack of stakeholder involvement and ownership by consumers and users.

2.4 Need for Reforms

The first attempt to "reform" the water sector came as early as 1974 when the first Master Plan was launched (Kisima, 2007). The primary aim of the plan was to ensure availability of potable water, at a reasonable distance, to all households by the year 2000- under the legal framework of Water Act Cap 372. In line with the plan, the government upgraded the Department of Water Development of the Ministry of Agriculture into a fully fledged Ministry of Water. However, the ministry lacked financial resources and the plan was not sustained. As the needs of the country changed over time, there were various government policy pronouncements, among them being Sessional Paper No. 1 of 1986 on Economic Management for Renewed Growth.

The idea of water sector reforms in Kenya gained momentum in 1999 following the publishing of the Sessional Paper No. 1 of 1999 on National Policy on Water Resources Management and Development. The paper identified and analyzed the shortcomings in water resource management, institutional framework and financing of the water sector (Kenya 1999, Gakuru 2008).

The new Government in 2003 recognized the problems and the need to reform and started the long process of addressing many of the issues. It was generally accepted that the grim situation regarding water resources, with deteriorating services and diminishing coverage of water supply among the growing population, was a direct consequence of decades of poor management, corruption and a lack of political resolve (Notley et al, 2005).

Specifically, Notley pointed out two major impediments to the success of reforms in the all important sector. First, poor governance was cited as one of the major impediment to any attempt to reform the water sector. According to Notley administrative system in water services was best described as "bureaucratic" de-concentration, where the provincial and district administration was used to extend power of the centrally ruled state on the local level. Participation of non-officials and citizen groups was very limited.

Corruption levels were high local and central level. High transfer rate of staff reduced the accountability of the government staff in their given position (Notley et al, 2005). Second, low levels of investment in water resources management, including storage, improved water use efficiency was a further bottleneck in the sector. A study of the water

sector in 1992 (Delineation study on the Water sector in Kenya) described that the GoK was neither able to operate water supplies efficiently nor maintain adequate service level due to financial constraints. The share of the water sector of the overall GoK annual budget was decreasing substantially over the years. Water consumption was estimated to be below 25% of production capacity. Tariffs were too low, and only a small portion of the revenue was collected.

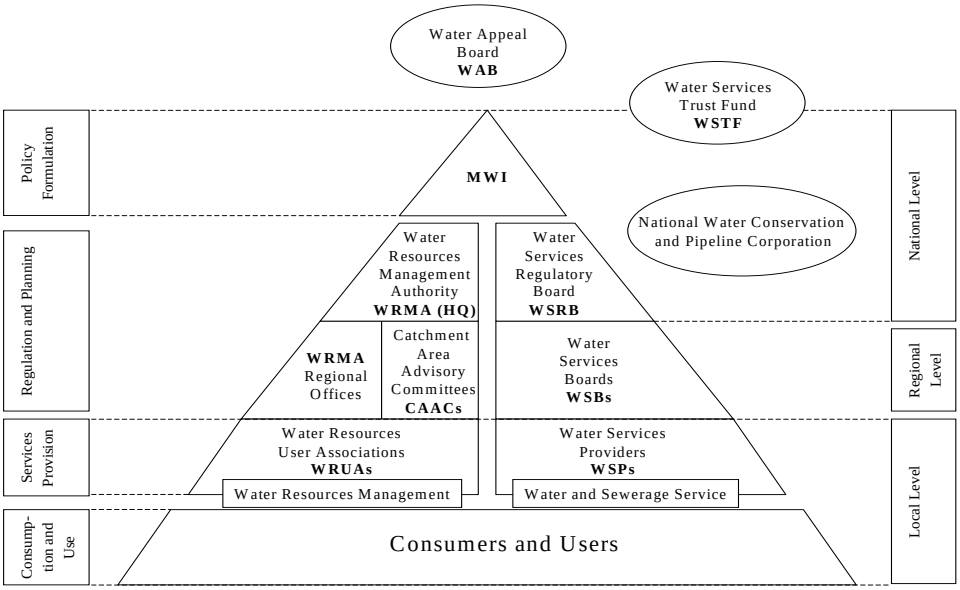
Kenya embarked on a radical water sector reform in order to improve the dire state of the water services and water resource management. Kenya's intention to reform in light of the problems faced and the lessons learnt paved the way for the Sector Wide Approach. The Water Act of 2002 is currently the main piece of legislation for the regulation of the water sector in Kenya. All policies, regulations and bylaws, directives and administration actions from the water ministry and strategic plans and all activities by water sector institutions must be carried out in accordance with it.

Notable were the principles in the Act which were: Separation of functions, the separation of policy making functions from day-to-day administration, implementation and regulation; decentralization: The decentralization of functions to lower level organs. Decision-making and operations decentralized from the national level to the regional level for increased efficiency and effectiveness. The devolution of responsibility for asset development to the Water Service Boards, and for water resources management to the Water Resources Management Authority, Catchment Area Advisory Committees (CAACs), communities and other actors; clarity of mandate, avoiding duplication of

functions and confusion of competencies. “No responsibility without authority”; all actors have clearly defined roles and will have delegated authority when performing their roles; transparency and good governance, transparent sector budget allocation, fund use and reporting. To define water rights and legislate ways in which water resources can be allocated and utilized within a clear framework for prioritized use in an efficiently and sustainable way. Inclusion of stakeholders and users in advisory and decision-making capacities. To entrench public participation and involvement in water services and water resources management; avoiding conflict of interest, institutions and authorities should not be both “referee and player”. Separation of policy from implementation functions within the water resources management sector (Notley et al, 2005).

Most of the new institutions provided for in the Water Act 2002 were established in 2004 and have started operations. Responsibility for policy and resource mobilization rests with the Ministry of Water and Irrigation (MWI), which still acts a service provider of last resort especially in the rural areas (GTZ, 2011). Figure 1 presents the ‘famous triangle’ summarizing the institutional set-up of water sector reforms under the Water Act 2002. As said before, the reforms aim at addressing the weaknesses that faced the water sector by separating policy functions from regulation and services delivery. It further separates service delivery functions into asset holding (ownership) and investment and direct water and sewerage services provision.

Figure 2.1: Institutional Framework under the Water Act of 2002



Source MWI: 2005

The Act provides for the establishment of 3 levels of institutions for the provision of water supply and sewerage services: Water Services Regulatory Board, Water Services Boards, and Water Service Providers. On the other hand, the management of water resources is under Water Resources Management Authority and Water Resources User Associations. Water Resources Management Authority executes its mandate through the Catchment Areas Advisory Committees whose membership consists of government officials, stakeholders and the community.

Table 2.2: Roles and responsibilities of institutions in the sector reforms

Institution	Roles and responsibilities
Ministry of Water and Irrigation	Policy formulation, sector coordination, monitoring, financing and supervision**.**
Water Resources Management Authority	Regulation of water resources management through, developing principles, guidelines and procedures for the allocation of water resources; assessing water resources potential; determining and monitoring permits for water use; regulating and protecting water resources; determining water user charges and fees from source; and maintaining a database on water resources.
Water Services Regulatory Board	Regulation of water and sewerage services through; issuance and monitoring of licenses for the provision of water; determining and monitoring standards for the provision of water services to consumers; providing procedures for handling and dealing with complaints from consumers; and developing tariff guidelines for the provision of water services.
Catchment Areas Advisory Committees	Advise the Water Resources Management Authority on issues concerning management of water resources at the catchment level.
Water Services Boards	Responsible for the efficient and economical provision of water services within their area of jurisdiction through signing of service provision agreements with Water Service Providers.
Water Resources Users Associations.	Provides a forum for conflict resolution and cooperative management of water resources in designated catchment areas. In other words, it enables the public and communities to participate in managing water resources within their catchment areas
Water Service Providers	Direct provision of water and sewerage services as agents of Water Services Boards.
Water Appeal Board	Handle disputes in the water sector.
Water Services Trust	Support financing of pro-poor water services in un-served areas.
National Water Conservation and Pipeline Corporation	Bulk water supply, dam construction, flood control, land drainage, ground water development and Ministry of Water and Irrigation reserve Water Service Provider.
Kenya Water Institute	Training and research

Source: MWI (2005).

All new institutions outlined in the preceding section have been set up and are fully functional, with established boards and an operational management structure. Their activities are based on annual performance contracts closely monitored by the MWI, and annual audits are conducted by external auditors. The new institutional framework also made it necessary to restructure the MWI, which included a substantial reduction of the workforce. This process is ongoing and requires sensitivity and extensive negotiations with the workforce to be redeployed within or outside the sector.

2.5 Conclusion

In Kenya, the main objective of water sector reform was to rectify inefficiency in provision of water services. It is argued that an efficient water supply services increases consumer access to water services. Reforms saw the enactment of Water Act 2002 which established institutions mandated to manage provision of water services in the country. The Act separated policy formulation and regulation and assigned services delivery roles to different institutions as means to improve access to water. This was in a bid to solve the problem of centralized power which ministry of water wielded that negatively affected provision of water services.

CHAPTER THREE: ACCESS TO WATER SERVICES BY LOCAL COMMUNITIES

3.1 Introduction

This chapter presents findings and discussions on availability and accessibility of water in Kitui Central. The chapter is divided into two broad parts, each with several sections. Part one examines the availability of water services by considering the main sources of water, distance to a water source, hours of water supply, quality of water and cost of water before the current reforms were initiated. Part two examines the influence of politics on availability of water services by considering the number of major water projects undertaken in Mulango and Kyangwithya East wards since the current phase of reforms began. The chapter argues that water sector reforms have increased the number of water sources and water points in Kitui Central, reduced the distance travelled by water users to access water, reduced the cost of accessing water and therefore has increased water accessibility in Kitui Central Constituency in a significant way. The chapter concludes by arguing that water sector reforms have had positive impact in Kitui Central Constituency. However, the positive has not been uniformely experienced in the two wards under study and therefore politics seems to play an important role in the distribution of both water sources and water points. Mulango ward which has supported the former water minister seems to have more water sources and water points that Kyangwithya East which did not provide as much support. This finding seems to be supported by the respondents who pointed out that the availability and distribution of water seems to be politically influenced.

A total of 100 respondents were interviewed for the study. Mulango contributed 50 respondents while the other 50 respondents were from Kyangwithya East. In both study areas, 59% of the respondents were 38 years old and below, 52% of the respondents had attained at least secondary level education, earning a living from small scale farming or petty trade whose average monthly income ranges between Ksh6, 000 to 14,000. Female respondent constituted 61% of respondents interviewed while the men were 39%. Higher representation of female respondents was due to the unwillingness of men to participate in the interview claiming water issues were women‘s domain. In Mulango and Kyangwithya East 74% of the respondents had stayed in the area of study for over 10 years as most were born in the area. This period was considered ideal for establishing changes in water service provision pre and post water sector reforms.

3.2 Kyangwithya East Ward

It is located at the entrance to Kitui from Machakos where the main water line passes. It is highly populated with an elitist set up. They were among the first residents of Kitui to receive the Masinga water went it first arrived in the 1990s due to their location. Being at the mouth of Kitui Central, the district water officer installed water kiosks along the Kitui – Machakos and Kitui – Matuu roads. Most of the residents in the ward are well off (government houses, officials and wealthy individuals) and being in proximity of the water line, they became the pilot or pioneer clients. Since 1992 the ward has not supported the former MP. This may be as a result of the area being almost self-sufficient and elitist in nature and therefore not requiring much help from the MP.

3.3 Mulango Ward

It is located on the east of Kitui Town the ward has a population of almost 28,573 with an area of 155km^2. Since 1992, the ward has been a stronghold of the former MP, Charity and has consistently supported her in her political bids. Economically, the ward lags behind as compared to other wards mainly because of its expansive nature and typical rural setting in addition the ward had been dependent on outside aid for daily self sufficiency.

3.4 Availability of Water in Kitui Central

Kitui Central is in Kitui County and is part of the old Kitui District, a region not well known for its availability of water or its peoples' access to it. Kitui county and the former Kitui district have for decades, been classified by the Ministry of water as a water-scarce area. This is mainly because the region is an arid and semi-arid area, where annual average rainfall is below 700 mm. The area also lacks a major source of water and therefore relies on sources outside the district. The area, for example, does not have a major river, lake or big dam that would provide it with regular water. Seasonal rivers and streams therefore form the key sources of water for in the area.

Apart from seasonal rivers, other water sources in existence are Kalundu (a semi-dam) three boreholes, sand dams constructed collectively by the community and several shallow wells. More recently yard taps, water kiosks, sand dams, pans, shallow wells, dams and boreholes have become common sources. The dry riverbeds of Nzeu River provide water for both livestock and human populations.

Water Sources

The main source of water for Mulango ward was sand dams which were approximately 9 in number. 76% of the respondents identified sand dams as their main source of water before the current phase of water sector reforms were initiated in 2002. Other sources of water in the ward included, two seasonal rivers, the area also had one semi-dam, and approximately 3 household wells and one borehole that wasn't working. Noteworthy is the fact that the area had no household piped water. This can be explained by the fact that the area is far away from the main Masinga Dam pipeline. Table 1 shows the available water sources in Mulango before the current phase of reforms began.

Table 3.1: Available water sources in Mulango Ward pre2002

Source of water.	Number of source
Sand dams/sand wells/weirs	9
Dams	1
Borehole	1 (not working)
River	2 (seasonal)
Household well	3
Community taps/yard taps	0
Pans	0
Total	

Research Data

The residents of Mulango considered this quite inadequate some had to travel for kilometers in search of water, the only dam available wasn't well manned, de-siltation

had never been done and the dams water was way below its capacity, in addition it has been turned into an all activity source for humans and animals, women did their washing in the dam as well as children swimming in the dam. The lack of enough water sources and the mismanagement of the few available sources translated to the people of Mulango having little water, this in itself was a constraint to water accessibility by the residents.

With the advent of the current phase of the reform process at around 2002-2003, deliberate efforts have made to increase the number of water sources in Kitui Central Constituency and in Mulango ward in extension. This was done through injection of funds to the water sector in the constituency and the region in general.

There has been construction of 5 household wells bringing the total number of wells to 8 in Mulango; the water pipeline from Masinga has been extended to the ward. Incredible increase in the number of sand dams has also been realized from the earlier on 9 sand dams to the current 20 sand dams. The bulk of the water projects have gone to the construction of water tanks in common places like in schools and market places, most important the Kalundu semi-dam has been de-silted which has led to the increase in amount of water in the semi dam.

According to the residents, the water sources are still far from being enough. However, the increase in water sources has translated to increase in the amount of water for the people in Mulango which has translated to increased access to water for the people in the ward. 76% of the respondents said that the increase in the number of water sources has

increased access to water. The table below shows the available water resources in Mulango ward since the new phase of reforms began.

Table 3.2: Available water sources in Mulango Ward post 2002

Source of water.	Number of source
Sand dams/sand wells/weirs	20
Dams	1 (de-silted)
Borehole	1 (not working)
River	2 (seasonal)
Household well	5
Community taps/yard taps	10
Pans	1
Total	

Research Data

From table 3.1 and 3.2 one is clearly able to see the difference in the water situation in Mulango pre and post 2002 by looking at the increase in availability of water sources for domestic use. For Kyangwithya East, the main source of water pre2002 was tap water which 26% of the respondents were using before the reforms began. Pipe water was in form of a household tap, communal tap and a few yard tap. The piped water was mainly from Masinga pipeline and connections from the 2 boreholes in the region. The area also enjoyed the services of a few water boozers and water kiosks. The area was also serviced by 2 seasonal rivers) 2 pans, 3 sand dams and a several household wells. Table 2 below

shows the available water sources in Kyangwithya East before the current phase of reforms began.

Table 3.3: Available water sources in Kyangwithya East pre 2002

Source of water.	Frequency of source
Sand dams/sand wells/weirs	3
Dams	0
Borehole	2
River	2 (seasonal)
Household well	3
Community taps/yard taps	20
Pans	3
Water kiosks	10
Total	

Research Data

Kyangwithya East had more water sources available than Mulango in the pre2002 period. This translated to Kyangwithya East having more water available for the people than Mulango. However, the residents of Kyangwithya also considered the available water sources inadequate to meet their needs. This was due to the frequent water disruptions experienced through tap water, the high cost of buying water from kiosks, the pans were not well managed and the water was always dirty. This translated to people in Kyangwithya East also have limited access to water as 68% of them said they had no access to water.

Kyangwithya East has also seen development of water projects in the ward. The existing pipeline has been extended to accommodate more consumers. 3 sand dams have been constructed adding to the already existing, 2 pans have been constructed and the old pipelines have been renovated. A number of the projects in Kyangwithya East are yet to be finished and even the finished ones are yet to be operational. According to the respondents in Kyangwithya East, the process of initiating more water sources started with a bang and a lot of resources were poured into the area to construct new water sources like dams, pans and boreholes. However, the process stalled after a few months and most have been abandoned ever since. According to one of the respondents:

These projects are never going to end, especially now that we don't even have the backing of the former minister of water. Hence we don't know whether the incomplete ones will be finished.

The table below shows the available water sources in Kyangwithya East post 2002.

Table 3.4: Available water sources in Kyangwithya East post 2002

Source of water.	Frequency of source
Sand dams/sand wells/weirs	6
Dams	2 (both incomplete)
Borehole	2
River	2 (seasonal)
Household well	3
Community taps/yard taps	20
Pans	5
Water kiosks	10 (16 un-operational)

Research Data

In general, there was a difference in the sources of water between the people of Mulango and Kyangwithya East pre2002. This is mainly due to the difference in setting of the two

wards Kyangwithya East being near town and Mulango a typical rural setting. This meant that when water was being piped from Masinga, the pipe traversed Kyangwithya East ward leading to its residents having more connections to the pipe water and therefore access to water. Those that were not connected to tap water, water kiosks were constructed and connected to provide them with water. There was also a presence of water boozers. A stark difference from the kind of water sources in Mulango.

Apart from small projects to mainly undertaken to increase water for domestic use, there have been major water infrastructure development projects in the two wards. The tables below illustrate the major water projects undertaken within 2005-2009. These projects go a long way in ensuring that the correct infrastructure is set up to ensure that people have access to water.

Table 3.5 Major Water Projects in Mulango Ward

Project Name	Project Amount in shillings	Year Started	Status
Chuluni- Kyambiti W/P	2,500,000	2005	Completed
Mulango	2,500,000	2007	Completed
Kyangunga-Kalatine	2,000,000	2005	Completed
Musyau W/P	1,400,000	2009	Ongoing
Kyambiti Extw/P	1,000,000	2009	Ongoing
Kathukini - Kilukuya	800,000	2008	Ongoing
Kitundu B	800,000	2008	Ongoing
Mulango Dam	500,000	2006	Completed
Kwa Mututo Line W/P	500,000	2008	Ongoing
Kithamba Ngii W/P	310,859	2008	Ongoing
Kwa Mweu	150,000	2007	Complete
Kwa King'Ole	150,000	2007	Completed
12 major projects	Total: 12,610,859		

Tanathi Water Services Board

The table below shows the major projects that have been undertaken in Kyangwithya East 2002-2008, the amount invested in them and the statue to completion.

Table 3.6 Water projects in Kyangwithya East

Project Name	Project Amount in shillings	Year Started	Status
Mutune W/P	2,500,000	2006	Completed
Kwa-Ngindu-Makutani -Kalala	2,000,000	2005	Completed
Makutano-Kunguluni W/P	1,500,000	2005	Completed
Kwa Ukungu Masonry Tank	1,000,000	2007	Complete
Mulundi-Mutendea-Mutune Boys	600,000	2005	Completed
5 major projects	Total: 7,600,000		

Tanathi Water Services Board

From the above the tables it shows that Mulango ward received most of the major infrastructural development from 2005-2009 that amount to over 12 million as compared to Kyangwithya East that receives over 7 million shillings and much fewer projects. A number of reasons can explain the why Mulango received more water sources and infrastructure that Kyangwithya East. First, it can be attributed to the fact that before reforms Mulango did not have many water sources, hence development of more sources here was a way of ensuring that more people in the ward had access to water. Second, more water sources and infrastructure in Mulango can be attributed to political inclination. The residents of the ward have been ardent supporters of the former MP (C.

Ngilu). After the reforms started in 2002, and with the introduction of CDF, she 'rewarded' her supporters with more water projects as compared to the ward that did not support her.

According to one respondent in Mulango:

It was about time we got water in this area. She had always promised to bring us water especially during campaigns from 1992. That has not been happening so I thought she finally realized that we have been her unwavering supporters and when this money for CDF came plus other people we have received most of the water projects. This goes a long way to illustrate how politics has influenced people receiving water services in both Mulango and Kyangwithya East ward.

Distance to a Water Source

Apart from the increase in the number of water sources, another determinant of access to water among the rural folk is the distance covered in search for water. Long distances to a source of water are major hindrances of accessing water services. Before the current reforms commenced average distance to a water source was reported in both wards as an average of between 4-6 kilometers for approximately 42% of the rural dwellers. A distance of 1-3 kilometers to a water source is the recommended rural distance to a water source.

Respondents in Kyangwithya East travelled an average of between 4-6 kilometers before the current phase of reforms started which accounted for 60% of the respondents. This was mainly due to the fact that there was a water pipeline in the area. The availability of

the water pipeline translated to the availability of water kiosks and water distribution points in Kyangwithya East. This, according to the respondents contributed to the reduction of distances travelled in search of water. The table below gives the distances travelled by the people of Kyangwithya East pre2002.

Table 3.7 Distance to a Water Source in Kyangwithya East Pre2002

Distances to a water source	%
1 to 3 kilometers (recommended)	16
4 to 6 kilometers	60
7 to 9 kilometers	24
10 kilometers and above	0
Total	100

Research Data

With the advent of reforms the situation has not experienced many changes, 64% of the respondents still travel an average of 4-6 km to get water. This is mainly due to the fact that the ward has not has many water sources constructed as compared to Mulango. However, 25% of the residents of Kyangwithya East said they had received water connections and therefore reduction of distances travelled. The table below shows distances travelled in Kyangwithya East after the reforms.

Table 3.8 Distance travelled in Kyangwithya East after reforms

Distance to a water source	%
1 to 3 kilometers	20
4 to 6 kilometers	64
7 to 9 kilometers	16
10 kilometers and above	0
Total	

Research Data

In Mulango, the scenario was different. Respondents in the ward travelled an average of 7-9 km to get water before the current phase of reforms began. According to one respondent in Mulango:

You should have seen where we used to get water from. It is in the next village which is kilometers away. Fetching water was a journey which somebody started in the morning and come back in the evening. Plus you can imagine the sun in this area, plus the distance, it was really tough.

The long distances travelled in Mulango can be attributed to the scarcity of water sources in the ward and the expansive nature of the ward. The residents had to travel for long distances so as to get water. This in turn translated to no access to water by the respondents of Mulango which in turn slowed development endeavors. According to one respondent:

Traveling for a minimum of 10 km daily was a hard task for me and my girls. Imagine I have walked all that distance, I would not do anything else that day and by the time I get

home, I just want to sleep. The same was for my daughter, who ended up dropping out of school. The distance was just too long for us.

The table below shows the distance travelled to a water source by the residents of Mulango pre2002.

Table 3.9 Distance to a Water Source in Mulango pre 2002

Distance to a water source	%
1 to 3 kilometers	4
4 to 6 kilometers	24
7 to 9 kilometers	52
10 kilometers and above	20
Total	100

Research Data

Since the reforms started there has been considerable decrease in the distances that people travel in search of water in Mulango Ward. This has been achieved mainly by construction of additional water sources so that residents don't have to travel long distances for water.

Construction of water sources, especially kiosks and school tanks has especially benefited the residents of Mulango who were the ones travelling longer distances to access water. These have been built in common places like markets and schools where the residents can access them easily. According to one respondent from Mulango

> I used to walk almost 15km to the borehole in Kyangwithya East. It is good mama (Ngilu) brought us the water near here hence our children will not suffer due to lack of water. I just wish she had continued being at water then we would have completely forgotten the story of long distances to water. Now I can fetch water from that school next to my home or go to the market place where I am sure of finding a water tank selling water.

This position was held by a total of 76% of the respondents in Mulango who said that since the reforms started there has been reduction in the distances travelled in search of water. Increase in water points has ensured that water is near the homesteads and therefore no need travel in search of water. This has translated to access of water by the residents in Mulango. The table below shows the distances travelled by residents of Mulango post 2002.

Table 3.10 Distances travelled in Mulango before and after reforms

Distance to a water source	%
1 to 3 kilometers	20
4 to 6 kilometers	56
7 to 9 kilometers	18
10 kilometers and above	6
Total	

Research Data

Although the distance is still not the recommended one, there are great strides to ensure that the people of Mulango have access to water by reducing the distances travelled to get water.

Inconsistency in Water Supply

Before the current phase of reforms started in Kitui Central Constituency, there were numerous water disruptions. These were mainly occasioned by the persistent drought experienced in the wards year long.Residents in Mulango were mostly the bearers of this drought brunt of this never ending drought. This led to pans drying or the water levels going down, wells drying, sand dams drying and seasonal rivers drying. The dependence of residents on the naturally occurring water meant when there were nature disruptions in the natural occurrence—which was most months of the year—the residents had no water. According to one respondent:

Our dependence on water from the ground was not good for us since as soon as they dried we were off suffering from water shortages. This was mainly because there were no measures to ensure that water was stored to be used in the dry seasons. With the initiation of the current phase of reforms, the frequency of water disruptions has reduced. 67% of residents in both the wards said with fewer disruptions in water supply, accessibility to the resource had been greatly increased.

In Mulango, the construction of storage facilities has reduced the disruptions in the supply of water. Although the main source of water in Mulango is sand dams, when this dries up due to the drought, there are alternative sources like water kiosks that went a long way to avoid disruptions in water supply. Apart from the alternative sources available for the respondents of Mulango, there have been efforts to instill the culture of water conservation among the residents. According to one KI:

> We have rolled out a project in partnership with DANIDA aimed at ensuring people save water through rain collection using gutters in homesteads. We have officers going round in the area educating people on how to set up gutters and tanks for storage. However, the project was at the initiation phase and was yet to be rolled out everywhere because of the large financial commitment needed. 54% of the respondents said existence of alternative water sources had made disruptions in water less frequent and therefore increasing accessibility.

Kyangwithya East residents were also affected by frequent disruptions in the supply of water. However, unlike the residents of Mulango, the main source of water in Kyangwithya East was tapped water coming from Masinga Dam. This meant that the disruptions were not due to the drying of the dam but rather due to other causes like, poor infrastructure (busting of pipes), un-payment of water bills leading to disconnection. In addition, they were also victims of the drought that affected other water sources. This, according to the respondents, greatly affected accessibility of water by the residents of Kyangwithya East.

In Kyangwithya East there has been an increase in the hours of supply in a day. This has been aided by the reduction of illegal connection therefore more water to supply to the residents. 30% of the respondents said they get water for an average of 4hrs in a day. Apart from the increase in hours of water supply, the reforms have led to the emergence of water vendors especially because of privatization of service delivery. The vendors get water from the service provider and sell it to the people in the ward. This has greatly reduced disruptions in water supply as the vendors are always available to take water where it is needed due to their purely profit motivation. 52% of the respondents said that

they now buy water from the vendors who are always available and convenient. According to the respondents, this has translated to them accessing water for longer periods without disruption and therefore increasing general access to water.

The above notwithstanding, the hours of supply of water in both wards is still below the recommended hours of supply. According to a KI in KITWACO, they still don't receive enough water to supply the area with water continuously, this has led to them having to rational the water to a few hours in a day sometimes even in a week. However, the KI goes further to and says this is still better than the era pre2002, on average they give 6 hours of water supply in a day as compared to 2 hours pre2002 illustrating that with the increase in hours of water supply, the residents have longer durations to access water and therefore increasing accessibility to water.

Quality of Water

Residents in both wards pre 2002 did not think the quality of water was good. 68% of the respondents said that the water was not safe for direct consumption. Attempts to treat the unsafe water was an extra expenditure on water one that added extra strain on the already merger budgets in the areas.

According to the respondents in Mulango, the water they got was unsafe for human consumption because of various reasons, the pans and sand dams that were the main suppliers of household water were not well secured against animals that would dirty the water, there was no control on the activities that would be done at water sources like

washing clothes, bathing, and animals drinking from the source leading to them defecating in the water and even children playing in the water especially the open sources like pans and dams. This translated to them having to treat the water and hence extra cost for the rural poor and therefore limiting their access to water.

> According to one respondent:
>
> We had a pan which is near home and therefore was our main source of water. There were rules on things that would be done in the pan but you know people especially children rarely listen so we would always find them taking animals to drink water there, them playing in the water. You can imagine going to fetch water for drinking and you have to step in the water to fetch the water and furthermore you can see animal waste in the water.

This led to reduced accessibility to water especially water meant for household consumption. In Kyangwithya East, the case was a bit different due to the fact that most of them used piped water. 54% of the respondents in Kyangwithya East said their water was clean for straight consumption.

After the reforms were initiated there is general agreement that the quality of water has greatly improved. 66% of the respondents in both wards believe the water they get is clean enough for direct consumption like drinking and cooking. 50% of the respondents said the infrastructure created has reduced the risks that were associated with earlier sources of water.

According to one respondent:

Fetching water from a tank gives me so much peace of mind. I know that nobody has stepped in the water no animal has pooped in the water people haven't washed their clothes in the water and nobody has taken a birth in the water. Just the fact I can see the place in enclosed and gated gives me a lot of satisfaction of the quality of water I receive now.

Cost and affordability of Water and water services

The determination on affordability of water services requires benchmarking the ratio of household's monthly expenditure on water to household's monthly income (Fankhauser and Tepic, 2005). The World Bank and WHO which states that, for a water services to be considered affordable, a household should not spend more than 5% of total household monthly income on water (Dagdeviren, 2008). The study adopts this since it is the common benchmark ratio used across the globe. However, recording the exact monthly income and exact amount spent on water monthly could not be arrived at with precision due to the culture of the people who were unwilling to discuss the money they earned and the use. However, the result shows the extent to which households afford water services.

Rural dwellers in Mulango and Kyangwithya East recorded to earn 6,000-14,000 per month. Of the recorded income in Mulango and Kyangwithya East respondents used to spend averagely more than 14% and 52% respectively of their monthly income on water Inability to afford water services had both social and economic implication on the development of the area. The lack of affordability of water service led to a number of water borne diseases leading to extra cost for the respondents.

In Mulango, where they had no direct connection to water during the pre 2002 period had no conventional paying for water. They used to get water from the weirs or sand dams, communal wells and boreholes most of them that had been drilled by NGOs. This communal water was mainly paid through social capital. For example, one person would volunteer to be the guard of the borehole, or pan and the payment was free water from the source. However, the communities around the source were required to pay a small amount for maintenance and this could range from 200 shillings to 400 shillings which in turn guaranteed unlimited access to the communal water sources. This in turn led to improved accessibility of water by the residents of Mulango based on the cost of water.

Communal water sources especially in Mulango are still fairly cheap as compared to other sources of water. These are mainly the wells dug as community projects; dam shared in a community and even wells done by a community. According to one respondent:

We pay 500 shillings per month to the board that takes care of the pan. With that I am able to fetch as much water as I want the whole month that is as long as I comply with the set rule of not dirtying the water by washing the clothes I can fetch as much water as I need. For example I have just sent a whole cart of water from the pan and I haven't paid anything.

The amount charged in Kyangwithya East, who mainly bought water or had household connection, was expensive in relation to the average monthly incomes earned by the residents. 72% of the residents of Kyangwithya East said the water bills were too expensive and the water had been disconnected. According to the respondents in the

ward, the situation was even worse at water kiosks. The sale of water was 1 shilling per liter. This meant that 20litesr jerican was going as 20 shillings which was too expensive for the people further contributing to inaccessibility of water by the residents of Kyangwithya East.

Currently, in Kyangwithya East water is charged at 5 shillings per 20litre jerican. This is an improvement from the 20 shillings that was initially charged on the same amount of water. This is true for those who receive their water from water vendors or water kiosks. This amount of money is still too high compared to the average income they earn per month. 44% who had mentioned household taps as their source of water said the water has become cheaper compared to the pre-2002 era. This has been achieved by reinforcing the tariffs that service providers use while charging water. These tariffs are subsidized to ensure more people can access water.

The above highlights the views of most people who used communal sources of water. Noteworthy however is the fact that most of these communal water sources are located in Mulango. According to a respondent in Kyangwithya East.Those people in Mulango have gotten all the water. We are told to write proposals to Tanathi (WSB) so that they can start water projects in this area. But so far we have seen more projects going to the other ward and not coming here. They say they have more need. I see everywhere is dry. So I just wonder how come they have more need than us.

Conclusion

Reforms in the water sector have provided rural areas with alternative water sources by constructing new sources so that the respondents can have options for water when their main source isn't providing water anymore. This has improved the availability of water services by reducing the distances travelled especially in Mulango although still are not at the recommended distances, availability of multiple sources has also lowered the price of water in both wards, although the prices aren't still at the recommended ones, quality of water has improved especially for the residents of Mulango ward. However, continues success in reforming the water sector is undermined by the politics of access. People who support the person in power are still favored and receive water as compared to those that are against the regime.

CHAPTER FOUR: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

4.1 Summary

The water sector in Kenya has undergone significant changes in the last decade a response to deterioration of rural and even urban services in the 1980s and 90s. Initiated with a new Water Act, significant policy revision and restructuring of institutional roles is still ongoing and will need to be aligned with the new Constitution of Kenya 2010. These reforms are beginning to yield impacts in the coverage and quality of service. This mainly involved development of new water sources with higher service capacity so as more people have access to water. Financial allocation to the sector has increased six-fold since 2003/04, while development partner contributions have almost quadrupled since 2006/07.

However, politics of access in the sector limits achievement sustained success. A good example is Kitui Central Constituency where the supporters of a regime have received more water project than the opposers of the regime.

4.2 Conclusion

In theory, it is argued that reforms transform the structural and institutional setup all that leads to efficiency in provision of water services which translates to increased access to water services by consumers. However, there have been reservations whether rural folks can still access water areas where scarce resources are distributed politically. This thought is premised on the assumptions that, in areas where water is scarce, the resource cannot be equitably distributed to everyone. This in essence means that a few people are

able to access the resource in exchange for loyalty in form of votes to the leader. The influence of politics on accessibility of water is what formed the study's first objective to examine the influence of local politics on the availability and access of water services for rural residents.

At the onset of the current phase of reforms, stakeholders were required to increase the number of water sources available to the people all over the country. Increased water sources consequently increases the amount of water available and therefore increasing accessibility to the resource. Increase of water sources is what informed study's second objective to examine reforms and its effects the increase in the number of water sources available for the rural people.

This study finds water sector reforms increasing accessibility in provision of water services. It also finds reforms in the sector to have increased the availability of water sources for rural people. Alternative water sources have been developed that eliminate dependency on one source of water making water more accessible to the people. This finding confirms the study's first hypothesis that reforms improve accessibility of water for rural folks.

The increased availability of water sources for rural people is however negated by increased non- uniformity in distribution of the water sources. Upon the inception of reforms of water sector, the study finds that there was an increase in the number of water sources that were available to the people. The increased number of water sources was a

direct attempt to increase the number of people who have access to water. However, the study find that the trend is being reversed as local leaders reward those who support them with water and punish those who do not support them with no water resources. This leads to more water sources in the area that is seen as pro as compared to the area dimmed anti. The influence of politics on accessibility, where some people don't get water due to their political inclination, confirms the study's second hypothesis that politics influences distribution of water resources in local communities.

The study concludes therefore that, water sector reforms have only increased the number of water sources in the rural areas but has not improved access to water by rural people.

4.3 Recommendations

Reform of water services in Kenya is still an ongoing process which has had varied impact in different areas. The envisaged level of access in the water sector is far from being achieved. A number of gains and challenges have been identified. To strengthen the process and increase access to water, the study suggests the following recommendations.

The distances to a water source are still strenuous to the rural dwellers. The amount of time spent walking in search of water is still a lot. To further reduce the distances travelled and time spent in search of water, it is recommended that more water sources especially those also aimed at storage like tanks be constructed at strategic social places like markets for easier access to water.

Political patronage and rent seeking nature of local politics have compromised the attainment of uniform reform development in the water sector which is an indicator of whether the reforms will be sustainable. The study recommends for withdrawal of the local politicians from matters of access to water. This can be achieved by a more liberal approach to supply of water. This measure would greatly reduce levels of disparities in access to by residents despite their political inclinations.

Price of water at water kiosks, water boozers and supply points is beyond the recommended price that making rural dwellers not afford the commodity. It is recommended that mechanisms be adopted to ensure these suppliers of water adhere to recommended retail price. KITWASCO should work together with local communities in identifying water kiosks that flout price regulations. Issuance and renewal of operating license to water kiosks should be pegged on compliance with stated water pricing policy.

The study recommends for a further research to examine water sector reforms and their impact on access to water by categories of consumers comprising rural and urban residents.

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APPENDICES

Appendix 1: Survey Questionnaire

My name is David Onyancha Okechi. I am a postgraduate student at the Department of Political Science and Public Administration, University of Nairobi. I am conducting a research on **'the impact of sector reforms on water accessibility in Kenya: the case of Kitui Central Constituency'.** The research is targeting households in two wards in the constituency. You are among a large group of people selected for this study. The information you will give will be treated in confidence and will only be used for this study and for no other purpose.

Questionnaire number_____ Date_____

Demographics

1. Name of the respondent (*optional*)……
2. Gender

Male	1
Female	2

3. What is your year of birth? …….
4. What is your current marital status?

Married	1
Single	2
Windowed	3
Divorced	4
Separated	5

5. What is the highest level of education you have competed?

No formal schooling	1
Some primary schooling	2
Primary school completed	3
Some secondary schooling	4
Secondary school completed	5
Post-secondary qualification other than university	6

Some university	7
University competed	8
Post-graduate	9
No answer given	99

6. Approximately, what is your family's/household's monthly income ……

7. How many members are there in your family? …….

8. How long have you stayed in this area of residence? ……

Water sources and accessibility

A. Before 2002

9. What was the main source of water for your household use?

Household taps	1
Community taps	2
Household wells	3
Community wells	4
Borehole	5
Pans	6
Dams	7
Sand dams/ weirs	8
River	9
Other (specify)…….	

10. Other sources (name two in order of preference)

Household taps	1
Community taps	2
Household wells	3
Community wells	4
Borehole	5
Pans	6
Dams	7
Sand dams/ weirs	8
River	9
Other (specify)…….	

11. What was the distance to main source of water in meters _____

12. What is the cost of water per 20 litre jerrican? _____

B. After 2002

13. What is the main source of water for your household use?

Household taps	1
Community taps	2
Household wells	3
Community wells	4
Borehole	5
Pans	6
Dams	7
Sand dams/ weirs	8
River	9
Other (specify)…….	

14. Other sources (name two in order of preference)

Household taps	1
Community taps	2
Household wells	3
Community wells	4
Borehole	5
Pans	6
Dams	7
Sand dams/ weirs	8
River	9
Other (specify)…….	

15. What is the distance to main source of water in meters? _____

16. What is the cost of water per 20 litre jerrican? _____

17. Do the following activities take place at the source (ask this about pans, dams etc)

Activity	Yes	No
Washing clothes	1	2
Animals drink water	1	2
Fishing	1	2
Swimming	1	2
Bathing	1	2
Any other (specify)		

18. Are there times that it is opened and there is no water?

Yes	1
No	2

19. For the last one week, how many days is the water available at the water point? _____

20. On average, what is the amount of water you collect and use on daily basis from your water sources? _____

21. Is the amount of water you collect sufficient for your household daily use?

Yes	1
No	2

22. If no, explain

……

……

……

……

23. Is the main source of water characterized by any disruption?

Yes	1
No	2

24. If yes, specify

……

……

……

……

25. If yes, how would rate the kind of water services provided by the board?

Excellent	1
Good	2
Bad	3

26. I want to ask you a question about local politics. Do you think local politics have influenced

	Yes	No
Access to water	1	2
Availability to water	1	2

27. Explain

……

……

……

……

Appendix II: Introduction Letter

Dear Respondent

My name is David Onyancha Okechi. I am a final year student at the University of Nairobi undertaking a Master of Arts Degree in Political Science and Public Administration. I am required to submit as part of my course, a research project entitled **"The Influence of Sector Reforms on Water Accessibility: The Case Study of Kitui Central Constituency".** The purpose of the study is to examine the impact of the reforms on the accessibility of water and how politics influence the access. This Service Board has been selected for study.

I will appreciate if you assist me by responding to set of questions concerning the board. The information you provide will be treated with utmost confidentiality and will solely be used for academic purposes. Thank you.

Yours faithfully

Okechi David Onyancha

Appendix III: Interview Schedule for KII

Part A: Demographic Information

No	Questions			
1.	What is your gender?	(i) Male □	(ii) Female □	
2.	How old are you?	(i)18-29 yrs□	(ii) 30-39 yrs□	(iii)40-49yrs□
		(iv)50-59 yrs□	(v) 60-69 yrs□	(vi) over 70 yrs□
3.	What is the highest level of education you have attained?	(i)Lower Primary □	(ii)Upper Primary	(iii)Secondary □
		(iv)Tertiary (Tech.College& University)	Any other (Specify)	

4. How long have you worked for the Board?
5. What are your main duties and responsibilities at the Board?
6. What were the sources of water available here before 2002?
7. What are the available water sources currently available?
8. What is the procedure of for selecting where a water source will be allocated in this region?