ACCESS TO POTABLE WATER FOR THE MARAKWET COMMUNITY IN KENYA AND ITS IMPLICATIONS FOR WOMEN AND CHILDREN

BY

Sarah Jepkosgei KISANG

Supervisor: Professor Julie Stewart

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ABSTRACT

This research examines the extent to which the women and children of the marginalised and seriously economically challenged rural Marakwet community are able to access potable water under Kenya's current water management regime. More specifically, the researcher, a member of the Marakwet community, seeks to predict the effectiveness of the proposed provisions of Kenya's draft Water Bill (2012), currently pending before the country's Parliament, which was drafted in an attempt align the provisions of Kenya's current Water Act (2002) with those of Kenya's recently enacted 2010 Constitution. For example, Kenya's water laws are required to realise article 43(d) of its Constitution which provides that every person has the right to clean and safe water in adequate quantities. Other provisions also provide for the devolution of power from central to county government and assign the 47 county governments the responsibility of providing water services for the people living in their respective counties. By adopting the unique grounded women's law approach (which makes the living reality of the respondent Marakwet women and children its constant reference point throughout the research journey), the researcher analyses local existing and proposed water laws, policies and governance structures within the context of relevant international and local human rights instruments in order to evaluate if they are translating the right to potable water into a reality for her respondents. The research journey is empirically directed and driven based on an interplay between the research's assumptions, the research data (including local customary norms and beliefs, relevant governmental laws, polices, literature, interviews, discussions with women and key respondents such as local leaders, administrative officials, health personnel, church representatives and men and women participating in local water projects) which is collected and analysed using a variety of methodologies (embracing the perspectives of human rights, sex and gender) and relevant theories on the subject. The study found that the Marakwet community (which collects its water from natural sources, including untreated springs and rivers) do not have access to potable water. This has graver implications for the health and education of their women and children than men because they have more contact with water due to the stereotyped roles assigned to them by their society as water collectors, care-givers, clothes washers and cooks. One of the main recommendations of the study is that more local investigations should be carried out before water projects are developed so that they may be sustained by the community even in the face of its poor economic status.

Declaration

I, SARAH JEPKOSGEI KISANG, certify that this Dissertation is my original work; it is a honest and true effort of my personal research. I certify that the work has not been presented anywhere else for any other thesis.

SIGNED:

Dedication

This dissertation is dedicated to my beloved children, Sharon, Timothy and Michael and my husband, Dr Kipruto C. Chesang, for taking good care of the children while I was away for my studies.

To my loving parents, Mzee Job Kisang Suter and Helen Teriki Kisang, who encouraged me and brought me up in a warm Christian family.

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Acronyms

-	
ACHPHR	African Charter on the People's Human Rights
CEDAW	Convention on the Elimination of All forms of Discrimination Against
	Women
CESCR	Convention on Economic, Social and Cultural Rights
CRC	Convention on the Rights of the Child
ELDOWAS	Eldoret Water and Sanitation Services
ICT	Information Communication Technology
KVDA	Kerio Valley Development Authority
KNWRMS	Kenya National Water and Resource Management Strategy
KWS	Kenya National Wild Life
LVNBA	Lake Victorian North Basin Authority
MDG	Millennium Development Goals
NGO	Non Governmental Organization
SEARCWL	Southern and Eastern Regional Centre for Women's Law
UN	United Nations
UNIFEM	United Nations Development Fund for Women
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WRMA	Water Resource Management Authority
WSTF	Water Services Trust Fund

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Executive summary

The research topic is concerned with Kenya's Marakwet community's access to potable water and its implications for women and children. The study was carried out in the rural areas of the Marakwet community. The areas covered along the Kerio Valley included Arror, Mokil and Chesongoach; while in the highland area where Marakwet community also live the selected areas were Chesoi, Kapsowar and Chebara. These two areas experience different climatic patterns, hence, these two research sites provided an excellent example for collecting comparative data on the experiences and challenges that face the community when accessing potable water with a special focus on their implications for women and children.

An overview of the study area

This study was carried out in Marakwet District (now Elkeiyo/ Marakwet County) that make up the Rift Valley Province in Kenya. The district is sub-divided into five divisional administrative boundaries and three topographical zones that run parallel to each other, being the highlands, the escarpment and the valley. The altitude ranges from 2700 metres to 800 metres above sea level, (DDP, 1997). The rainfall pattern in Marakwet District is greatly influenced by altitude and the rainfall pattern ranges from 1100mm in the highlands and 750mm along the Kerio Valley which area is characterized by low rainfall, high temperatures and high evaporation rates (Saina, 1996).

The main objectives of the study

- To examine the quality of potable water the Marakwet community access and its implications for women and children.
- To analyze the laws/policies that govern the water sector in Kenya and to assess if the law is applicable on the ground.

The Marakwet people

The Marakwet communities are part of the larger Kalenjin speaking people that include the Keiyo, Tugen, Nandi, Kipsigis, Sabaot, Pokot, Okiek and the Terik. The community is widely known for their water furrow- irrigation system that has existed for over 200 years (Kipkorir, 1983) that occurs along the more than 40 km of the Marakwet escarpment from the south of Arror to the north of Tot (Watson *et al.*, 1998).

The Marakwet communities are agro-pastoralists in nature. In the Kerio Valley they share their time between cultivating drought resistant crops using traditional water-furrow irrigation techniques and keeping livestock, such as goats, sheep and cattle; while in the highlands they cultivate wheat, maize, and keep Merino sheep in Cheran'geny schemes. The communities are also known for their strong traditional customary norms on water governance that pre-date colonial rule (Beech, 1921).

The main methodologies and methods used in the research

One of the main objectives of the research was to examine the quality of water to which the community has access and its implications for women and children. There were various methodologies and methods utilized in conducting this research.

In my efforts to assess women's access to potable water, I had to develop a suitable research framework and, to do so, I used the women's law approach which takes women as the starting point. This methodology helped me to examine the lived realities of the Marakwet community, paying particular attention to women and children. I interviewed women, children and men and listened to them as they narrated their experiences in accessing potable water.

The other main objective was to analyze the state laws/policies that govern water in Kenya and the customary norms and beliefs of the Marakwet people. To achieve a better understanding of the existing laws, I used legal pluralism which, according to Bruns and Meinzen-Dick (2000: 25), argues that 'understanding water rights needs to start from the local perspectives of those who use water, their daily experiences, the meanings through which they conceive of water and rights, and the options they have available for acquiring water and defending their access to vital resource.'

The information for this study is based on primary and secondary data. It is a combination of qualitative research methods which included in-depth interviews, key informants, focus group discussions, library research and observations. The secondary methods included desktop literature review and empirical data including my own experiences since I was born and raised in Kerio Valley. This included background information on the Marakwet community, their history, and their social, political and economic organizations. Other data included

information about the legal/policy frameworks and institutional mechanisms relating to water resource governance at the national and at the county level.

The primary data collected during the fieldwork was conducted over 3 months from October 2012 to late December 2012 and I was supervised by Professor Julie Stewart, the Director of the Southern and Eastern Africa Research Centre for Women's Law (SEARCWL) of the University of Zimbabwe.

The main findings of the research

One of the main findings of the research is that Marakwet communities do not have access to potable water and this has implications for the health and education of the entire community with women and children being more affected than men. This is because the study revealed that women and girls have more contact with water due to the stereotyped roles that have been assigned to them by the society as water collectors, care-givers, clothes washers and cooks. The Marakwet basically access potable water from seasonal rivers, streams, water furrows and springs. Though springs provide safe and clean water, available springs are few and far between, thus, women and children have to walk long distances of up to 10 - 15 km in the rainy season and 15 - 20 km during the dry season in order to collect water. The hours spent fetching water deny women an opportunity to engage in other income generating activities which means that they remain under the continued subordination of their male counterparts who enjoy paid work while women's unpaid domestic work goes unvalued, thus bringing into play the dynamics between the public-male and private-female divide.

The lack of potable water gives rise to the danger that the community access water that is polluted and is likely to become infected with water borne diseases, such as cholera and typhoid. This was the case and when I visited the Arror Health Centre and was given information contained in the patients' register. I discovered from it that diarrhoea was the highest recorded disease and the doctor attributed it to drinking dirty water which contains an excessive faecal content. The samples of the water that I collected and submitted presented for laboratory testing confirmed the problem that the community accesses contaminated water that is not safe for human consumption (see Appendices).

One of the recommendations given in this study is that the county government of Marakwet should come up with water projects that are pro-poor and suitable for rural areas that are

cheap and sustainable. This is likely to be better than engaging in parachute projects which fail because, for example, in one case, boreholes have been drilled but now lie idle because the local people cannot afford to buy the diesel pumps to run them.

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CHAPTER ONE

1.0 INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

A large proportion of the population of the world's people do not have access to improved water sources or microbiologically safe water for drinking and for other essential purposes. WHO/UNICEF has estimated that 1.1 billion people do not have access to 'improved water sources' and that consumption of unsafe water continues to be one of the causes of 2.2 million diarrheal diseases occurring annually, mostly in children (WHO/UNICEF, 2000).

Though major efforts to deliver safe drinking water to the world's population have been undertaken, the reality is that water supplies delivering safe water will not be available to all people in the near term (Argawal *et al.*, 1981; Feachem *et al.*, 1978; IDRC, 1980).

Sub-Sahara Africa accounts for about one third of the World's population without access to improved drinking water suppliers (UNDP, 2008).

According to Momanyi (2005), Kenya is limited by an annual renewable fresh water supply of 647 cubic meters per capita and is classified as a water scarce country, and that only 57 % of the rural population has access to improved drinking water source.

The UNDP (2006) report states that 'people need water and sanitation to sustain their health and maintain their dignity and that water beyond the household sustains the ecological system that provides livelihoods.'

Access to resources such as water is a key theme in the discourse on women's rights and naturally occupies a central place in the exploration of the status of women in society. It is vital for family welfare, food security, gender equality, empowerment, economic efficiency and poverty elimination. Women constitute up to half of the world's population, yet own only 10% of the world's property and produce 60-80% of the food in the developing counties. These gender injustices come up when gender neutral international, regional and national laws and policies on property, environmental and natural resources meet with the reality on

the ground where access to and control of resources are highly gendered (Nyamweya *et al.*, 2003).

Water is a fundamental right that every citizen of a country ought to be provided with; that is, that the water is clean and safe for drinking; it is accessible within a short distance that is physically secure, and that the water should be affordable to all.

The Marakwet community accesses water mainly from springs, rivers and furrows and since it is never treated poses health risks for its women and children denying them the enjoyment of the right to a good health living.

Water is a socio-economic resource that affects a country's Millennium Development Goals and it becomes imperative that Kenya ensure that its citizens, especially women in the rural areas, have access to water in order to ensure sustainable development. This will reduce gender disparities by empowering women through the provision of potable water.

The Kenyan Constitution of 2010 provides a range of rights in its Bill of Rights and the right to clean and safe water is explicitly provided for in article 43(d). The truth, however, is that communities in the rural areas do not have access to clean and safe water and have to travel several kilometres to fetch water that is untreated, posing health problems due to diseases that are related to drinking dirty water. This impacts differently on men than it does on women and children.

According Coles *et al.* (2005), water interventions in development have changed since the 1950s when global water statistics were presented as 'basic needs'. More recently, the UN (2002) has defined water as a 'basic right'. In spite of the decades of commitments to meeting local water needs, however, about 1.1 billion people still remain without access to acceptable water supplies in that only 50% of the world's population has access to piped water, 4% in Africa, 12% in South Asia and 8% in South-East Asia (Coles *et al.*, 2005).

1.2 Reasons for selecting the topic

I was born and raised in a rural part of the Marakwet community, living on the lower Kerio Valley, a place which is semi-arid to arid. In this place access to potable water was difficult

and I had to travel several times a day to the river to fetch water, a chore I managed to escape after entering high school. Having been away from the Kerio Valley for over 25 years, I wanted to go back and find out if the situation had changed. Do children still travel many kilometres to access potable water or not? And if not, what are the reasons? And what has been bothering me is, why do some people access clean water, while others do not? Are some citizens considered better than others? Or, are all citizens equal? Are people differently endowed with natural resources? How are natural resources managed? What are the laws governing water resources in Kenya?

During my studies of a SEARCWL course on access to land and its resources I became more focused on my childhood memories and as my reflections increased so did my desire to return to the place of my birth, research this age-old challenge and may be come up with possible solutions that may be tailor made to meet the needs of the marginalized living in the rural areas in Kenya, like the Marakwet community.

1.3 The Marakwet community

The Marakwet live in the urban and rural areas of the Great Rift Valley of Kenya. Apart from being pastoralists, they are farmers cultivating maize, wheat, millet, sorghum and various fruits. In the Kerio Valley, the Marakwet build their houses along the road and in the escarpment. Whenever they become a cattle rustling target by their neighbouring Pokot and Baringo communities, they move to their escarpment homes for security reasons and then go back to their original ones when peace returns. Since time immemorial, cattle rustling has been conducted by three communities and the Pokot East & West, and Baring North and East (Tugen). It was only in the late 1980s that the raiding stopped following the new regime in government. This long-established primitive activity slowed down development in the area and the place was termed a 'no-go-zone'. The infrastructure is poor with no tarmac roads throughout almost the entire area of study.

The altitude ranges from 2700 metres to 800 meters above sea level and the Kerio river is its main drainage river (DDP, 1997). In the Kerio Valley there is low rainfall because it sits at a lower altitude than the highlands and, thus, experiences drought most of the year which makes water scarce.

The Marakwet is a sub-tribe of the larger Kalenjin community which includes the Tugen, Sabaot, Keiyo, Kipsigis, Okiek, Nandi and Terik. The Marakwet are further sub-divided into five communities called the Endo, Almo, Kitani, Markweta and Cherangeny (Kipkorir, 1998) and they live within clans which are led by clan elders who are all men and ruled over by supreme 'courts' called Kap assiwo where matters of a serious nature are decided (Kipkorir, 1998).

1.4 Statement of the problem

Kenya is classified as a water scarce country with 647 m3 per capita per annum (KNWRMS, 2006), hence, it is categorized as a water scarce country because it falls short of 1,000 m3 per capita per annum benchmark of the United Nations. However, Kenya has developed Integrated Water Resources Management in the water sector to address the scarcity of water in the country but despite these efforts some communities access potable water while others do not. The Water Act of 2002 failed to integrate rural communities' water governance into its framework and therefore marginalized rural communities continue to suffer due to the lack of provision of potable water. This has impacted negatively on rural communities, especially on their women and children, hence, there is a need to carry out this research to ascertain the problems associated with the lack of access to potable water and make recommendations based on its findings.

1.5 The main objective of the study

To examine the quality of potable water to which the Marakwet communities have access and its impact on women and children.

1.5.1 The specific objectives

- To look at the water resources available to the Marakwet community and how such resources are being utilized to the benefit, if any, to the resource holder.
- To analyse the laws/policy that govern the water sector in Kenya and assess whether the law is applicable on the ground.
- To ascertain the extent to which the Marakwet's right to water has been infringed by the state's failure to provide safe and clean water.
- To assess the gender dimensions in the Marakwet community's inaccessibility to potable water.

• To make recommendation for necessary laws, reforms and suggest possible practical solutions that may suit the Marakwet community.

1.6 Significance of the study

According to Montgomery (2007), the usefulness of information gathered ensures that there is the gaining of a better understanding of economic, social and technical factors on sustainable development. In this case, access to potable water and the implications caused by the lack of it will be analyzed and shared with the officials of the county government of Elkeiyo Marakwet.

1.7 Research assumptions

- 1. The lack of access to potable water impacts upon women and children differently from men.
- 2. There is the potential problem of obtaining adequate funds from central government for improving access to potable water. (Each county has to make an investment and collect its own revenue as it only receives a small budget from central government).
- 3. There are ineffective government legal/policy frameworks in place to deal with access to potable water for the Marakwet community of Kenya.
- 4. The government through its county representatives has a legal obligation to provide potable water to the Marakwet community.
- 5. The current water reforms do not safeguard the rights of women and other vulnerable groups like marginalized communities.
- 6. The existing traditional water furrow irrigation system should be improved by the government and other willing donors.

1.8 Research questions

- 1. Are there ineffective government legal /policy frameworks in place to deal with access to potable water for the Marakwet community of Kenya?
- 2. Is there the potential problem of obtaining adequate funds from central government for improving access to potable water? (Each county has to make an investment and collect its own revenue as it only receives a small budget from central government)?
- 3. Does the lack of access to potable water impact upon women and children differently from men?

- 4. Does the government through the county representatives have a legal obligation to provide potable water to the Marakwet community?
- 5. Do the current water reforms safeguard the rights of women and other vulnerable groups like marginalized communities?
- 6. Should the existing traditional water furrow irrigation system be improved by the government and other willing donors?

1.9 Demarcation of the study

The study was carried in two different climatic areas. In the lower lands, the selected areas along the Kerio Valley were; Arror, Mokil and Chesongoach with their respective villages, while in the highlands, Chesoi, Kapsowar and Chebara were selected. This was to enable me to collect wide comparative data from the two regions on how the community and, in particular, women access potable water and the laws that govern the Marakwet community.

The region borders Keiyo, Baringo and the West Pokot county. They all share one common river, the Kerio river, for their domestic, irrigation and livestock use.

There are about four health centres and one hospital all constructed by the Catholic missionaries. At the moment the government has posted a few nurses and clinical officers to them. People living along the Kerio Valley earn from about Ksh.2, 000 to Ksh.20,000 per month by while those in the highlands about Ksh 5,000 to Ksh.100,000. There are no industries or serious business being carried out in these areas. Those from the Kerio Valley region who have done well for themselves have relocated to other places leaving behind the poor and old.

The area of study is basically rural and most people interviewed were rural women, children and men. The respondents were both male and female of diverse ages.

A rural woman has been defined by the CEDAW Committee as 'a construct that is related to both geography and exclusion from services and opportunities'¹ and rural living increases women's socio-economic disadvantages due to lack of access to services including health, education, water, sanitation and transport.

¹ CO Morroco.A/58/38, 29th session (2003) paras 170, and 178; CO Alabama, CEDAW/C/ALB/CO/3(2010) paras 36; CO Ireland, CEDAW/C/IRL/CO/4-5(2005) paras 392-3.

CHAPTER TWO

2.0 SIGNIFICANT METHODOLOGIES AND METHODS

2.1 Methodologies

2.1.1 Women's law approach

The topic of the research, 'women's access to potable water', is an area that required me to read the laws that govern access to water in Kenya as a country and the customary norms that govern access to water in Marakwet as a community. To come up with the correct legal framework I applied the women's law approach which places the women at the centre of the laws and thereby finds the position of the women in both state laws and customary norms and establishes whether these laws are pathways or barriers to women's access to potable water.

According to Stang (1987) the women's law approach interrogates and investigates the law in its pluralities as it affects women. This approach helped me establish all the relevant laws that are at play and to come up with a fuller analysis of the laws that govern women's access to water and land. This is because access to water is interlinked with ownership of land. This will be outlined in the findings chapter of this research.

To get to understand the position of women when accessing potable water, I looked at the customary norms and practices that apply and analyze if such customary laws and norms did indeed support the rights of women in accessing water. Women access water by virtue of relational arrangements and in Marakwet water is accessed by all people as a community with different clans with strict customary water governance rules and land is equally communally owned. In addition, I read the state laws and here I was able to establish the position of the woman also. This was possible by using the women's law approach which, once again, takes women as the starting point. I interviewed several women in their homes, at their work places (retail shops), in the market and at the water points. In interviews I was able to take advantage of the interactive approach I applied because I was able to explore all the experiences women undergo in accessing potable water in the Marakwet community.

The approach allowed me to capture women's voices as they narrated to me their daily challenges of accessing water. Their physical expressions were also of use to me as I was

able gauge their body language and, if I felt it necessary, to make further inquires and questions based on their reactions.

I was able to obtain insight into the Water Act that demands that before one gets access to a water supply he or she must obtain a permit yet securing a water permit requires one to own a plot or land title deed. Women do not own land in the rural area, but only enjoy user rights.

In the field I sought to understand the customary, economic and social barriers women face in accessing water and this was possible through the use of the women's law approach which allowed me to move from one section or group of women/girls to another based on their diverse backgrounds such as their marital status and education level and from village to village and from centre to centre. This approach further provided elaborate data for a fuller and better comparative analysis between a wide range of respondents based on the women's lived realities. Bentzon *et al.* (1998) states that:

'This theory is closely connected to the principle of taking women as a starting point in analysis of the position of women in law and society, and prompts the inclusion of empirical data about lived reality of women.'

Although the research focused on women, men were also interviewed to get holistic perceptions of community problems in accessing potable water and on water governance. Bentzon (1998) states that:

'Through the use of this methodology, there is interactive process in which data, theory and lived realties about the perceptions and norms are constantly engaged with each other.'

This approach enabled me to collect data from men on how they perceive women's problems in accessing potable water and the different types of impacts resulting from the lack of water.

2.1.2 Pragmatic approach

During the research, I wanted to establish what quality of water the communities of Marakwet were accessing and I had to collect various samples of water for laboratory analysis. I had to change my methodological approach and in this case I applied a pragmatic approach which, according to Yin *et al.* (2003), carefully considers the usefulness and appropriateness of various alternative procedures, be they quantitative or qualitative. I had

to collect water in bottles of halve litres from six different water sources that the community access for drinking ,washing and bathing and I had to transport them to Eldoret town by a hired motor vehicle for a scientific laboratory analysis. This approach was employed to ascertain the types of bacteria and other impurities in the water. The samples had to be tested within three days from the date of collection. The three days condition was given to me by the Clinical Medical Officer in charge of Arror Health Centre. I was warned that if I did not submit the water samples within three days the laboratory results could be defective. This methodological of approach enhanced the overall validity and richness of the research (Robson *et al.*, 2003).

2.1.3 Gender and sex analysis

According to K.B Rasjahani:²

'Water is essentially a woman's issue. Men are not bothered about it. They just wash their hands and sit down for food. It's the woman who has to arrange water for all day. Women need the water. And if there is no water in the house, the man will take a stick in his hand and ask - you didn't get water? It is the women who have to pay the price. It's the woman who needs water for the household work and to sustain the family. It's a woman's resource.'

According to Stolen (1991: 5):

'What men and women should do and how they ought to behave and interact spiced together with cultural, social and legal interpretations of perceived gender differences constitutes a gender system.'

One of the objectives of this study was to establish how the lack of access to potable water impacts on women and children differently from men. It was therefore imperative for me to use sex and gender analysis to ascertain the impact of the lack of access to water potable on both men and women.

Further, the study aimed at establishing gender roles in the households and the community perceptions on who fetches water and why. It was confirmed through various interviews and observations that fetching water is a woman's and girls' duty. The boys who fetched the water were below 14 years of age. The reason for this was that, after undergoing male

² A female activist in Parmer, quoted in 2004.

circumcision at the age of 14 and above, boys are then referred to as 'men' and 'men' cannot go to the river and fetch water because it is 'taboo'. The implication is that 'the Man' is too masculine to do feminine duties such as going to fetch water from the water points.

The sex and gender approach identifies the opportunity costs attached to women and girls performing water duties as women spent many hours looking for water and the time they could have had to engage in in-come generating activities is reduced drastically as her domestic work usually goes unquantified. It brings in the concept of the private/public divide discourses which will be discussed in more detail in the findings and analysis chapter.

The women informed me of their general views of how they must first go to fetch water by around six o'clock in the morning before embarking on other duties, such as feeding the family, going to the fields to cultivate or going to the market. They were free to narrate to me about why it is a woman's and not a man's duty to fetch water. On asking them the reasons for this, many respondents attributed them to their understanding of Marakwet customary norms. Other younger respondents said they just follow in their mother's footsteps by doing what they saw them do.

The gender and sex analysis indicated that women's participation in water provision policies is of great importance as women and girls face challenges to their personal security as they walk long distances in search of water as the water points are far from their homes and they risk being attacked by thugs such as male rapists.

The research revealed women trying to perform several duties such as carrying fruits to the market, selling chickens, washing cloths and or fetching water while the men sit under trees playing games and gossiping. The gender and sex analysis enabled me to interview girls and women at the water points, at the market and by the road sides to get to know who is more affected by the lack of water and why women are busy throughout the day while men find time relax.

2.1.4 Human rights approach

One of the main objectives of this study was to determine if the Marakwet community understands that access to potable water is their fundamental right and I had to use the human rights approach as it recognizes the community and individuals as the holders of basic rights who are at the core of the development process. This approach looks at accessibility, availability and affordability and helped to establish if the Marakwet community do have such rights or not. Can they access water? What is the quality of the water? And how available is the water source? Can they afford to access it? Can the common person pay for water pumps? Has the country signed most of the international instruments? If yes, to what extent are they liable for the violations of these rights?

Kenya has ratified several international instruments that deal with the right to access to potable water and in order to establish if Kenya has fulfilled those provisions, this approach was used to analyze the Marakwet situation from a human rights perspective according to the international human rights standards (Groonesekere, 2000).

The study aimed at finding out how water resource developments are carried out and the extent to which the community is involved and then who participates in the projects. Do women participate? What is the quality of their participation? And, finally, the study aimed at establishing who are the players in water projects.

This approach was useful as it encompasses civil and political rights, such as the right to self realization, right to freedom, equality and the right to participation. It further emphasizes the role of social, cultural and economic rights, for example, the right to health, the right to food and the right to livelihoods and, lastly, solidarity rights, such as the right to development and the right to environment (Hellum, 2000).

What are the options available under international instruments for a citizen/community to invoke when these fundamental rights are infringed?

In my quest to obtain answers on the issue of water resource development in the area of the study, I visited the county head office to see the governor as he is the person in overall authority. I introduced myself and explained why I was visiting his office. I gave him a copy of the introduction letter from the University and he was keen on my research and its outcome. He introduced me to the county executive in charge of water resources. I wanted to know if this executive understood the national laws and international instruments that govern water and further establish how water resources are handled in the county. Since he was one of my key informants I requested him to be available on the day my research supervisor,

Professor Julie Stewart, would be in Eldoret town. The reason was to obtain better guidance from my supervisor on the area of laws I should ask of the officer and ways of causing change in access to potable water in Marakwet County. Indeed this method of approach contributed enormously to getting better insight on water issues not only at the local county level but at the national and international outlook as well. We were able to interact freely as the venue was not an office environment full of interruptions and noise.

2.1.5 Legal pluralism

The water sector in Kenya is governed by several legal order and they are state laws which are borrowed laws mainly from England, India and customary laws. According to Kameri-Mbote (2002), diffuse legal pluralism arises where a group has its own regulating social behaviour whose operation is neither sanction nor emanates from the state law. It also refers to a situation characterized by the co-existence of multiple normative systems all of which are valid (Von Benda-Beckman *et al.*, 1997).

The Marakwet people of Kenya have their distinct indigenous knowledge of accessing potable water (Cheserek, 2005) and have sets of rules that protect women's rights to access to potable water. This will be elaborated in the findings chapter on the Marakwet customary norms and practice.

The method I adopted to get insights into Marakwet customs and norms was to interview old women and men whom the community consider to be its elders who are the keepers of the community's customary laws, beliefs and norms. They are aged between 45 and 100 years old and they are predominantly male.

2.2 Data collection methods

2.2.1 Interviews

Table 1: Showing the respondents interviewed

Interviewees	Female	Male	Total Numbers
Senior chief of Arror	0	1	1
location (Tunyo			
location)			
The sister in-charge	2	0	2
of St. Benedicts			
Catholic Church			
The clinical	1	1	2
officer/nurses at Arror			
Health Centre			
Leaders of the church	2	3	5
Elkeiyo/Marakwet	3	3	6
officials			
Quality manager	2	0	2
Eldoret Water and			
Sanitation Services			
People in charge of	2	0	2
Chebara Water			
Project			
TOTALS	12	8	20

The key respondents were selected based on their experiences, expertise, familiarity and knowledge of the people's customs and norms. They included the chief, local councillors, traditional men and women, officials at the county office in charge of water resources and the medical personnel. For example, the clinical officer provided me with details of diseases that are water-related and common in the area of study. The chief was able to give an outline of chronological events that lead to the underdevelopment of water structures in the area from the early 1960s to date which included the primitive cattle raiding practice in which many people, including women and children, were killed by the Pokot raiders.

The county executive provided me with and insight into the complexity of the laws that govern the water sector in Kenya and how the law cannot be implemented on the ground since what happens practically on the ground is totally different from the provisions of the laws. The manager of Eldoret Water and Sanitation Services (ELDOWAS) explained to me how water is first collected and dammed, purified and eventually supplied to the consumer using different processes until chlorination level and when I asked him why they do not supply even a drop of clean water for the Chebara dam to the residents of Marakwet, he informed me that ELDOWAS only deals with water services supplies and not the resource management which he said was handled by the Water Regulatory Board (WRB).

The interviews were useful as they allowed me to meet with key personalities in the county, such as the governor and the Member of Parliament (MP). They were able to share with me their visions for the county with the current devolution of power to the local county level. The officer in charge of resources briefed me on the county/government challenges, and one of the challenges was the creation of investment in order to collect revenue that can be used for development and the provision of water supply to the rural poor. According to him, this reality may be achieved in the long term but not the short term.

I organized a general group discussion based on site, villages and sex to get more data from different groups.

2.2.2 Group discussions

Table 2: Showing details	(research sit	te, location	and ge	ender) of	the respondents	in
general group discussions						

Research site	Female	Male	Total
Arror& Chepkum	7	2	32
Cheuman &	5	4	16
Chesetan			
Mokil &	8	4	11
Chesongoach			
Chesoi &	15	11	16
Kapsowar			
Cheptongei &	12	9	29
Chebara			
Totals	47	30	77

The above group discussions were general in nature and they were participatory oriented, i.e., encouraged free discussions between the researcher to the researched. A total of five group discussions were conducted and the composition was based on the sites and sexes. It was a mixture of both men and women, and this was possible because I pitched camp at a local centre so as to spend time quietly organising group discussions with the help of the local chief and the priest at the Catholic Church of St. Benedict Arror Mission. I also used the services of telecommunications although many respondents did not have access to a cell phone. The chief knew people who had cell phones and he co-ordinated the whole processes. The chief was particularly resourceful as he is friends with my father and this was an advantage to me as he did not want to fail their friendship by not helping me.

The women I interviewed narrated how they must first go and fetch water in the morning by around six o'clock before embarking on their other duties such as feeding the family, going to the market or cultivating their farms. Men, on the other hand, said that their main duty is to protect the family, the clan and the community, especially during war with neighbouring communities. They also said that they clear the fields, burn the bushes and do the fencing.

This method gave me an insight into the different roles the community has subscribed to men who are given masculine roles, e.g., being made charge of protection and fencing the fields (hard labour), while the women are assigned feminine roles such as care-giving and water collection.

The table below represents village perceptions as to who draws/collects water in the Marakwet community.

Village/centre's	Women	Girls	Boys	Men	Totals
Kiptani	4	3	1	2/only bachelors	7
Kambaa	3	4	3	3	13
Kasonok		5	5	2	12
Kabonon	3	8	9	0	20
Samar	3	6	6	0	15
Chesio	5	5	4	2	16
Chebiemit	5	5	3	2	15
Totals	18	36	31	11	98

 Table 3: Showing a comparison between the responses of respondents of Kerio Valley and the highlands as to who is responsible for collecting water among the Marakwet

From the above responses which were done by filling in of questionnaires showed that respondents from the highlands represented by (Chesoi and Chebiemit) responded that water can be fetched by both men and women while those from Kerio Valley responded that water is fetched by women and girls. The analysis is that people from the highlands have interacted with other tribes who are not conservative like the Marakwet while those in Kerio Valley have not interacted.

Also younger respondents were of the opinion that water collections should be carried out by both men and women while the older generations maintained that the duty lies with the women, children and girls.

Description	Female	Male	Total
Primary	10	19	29
Secondary	15	7	22
Diploma	5	12	17
Graduate	2	1	3
Not-schooling	16	4	20
Totals	48	43	91

Table 4: Showing the level of education of the respondents

I needed to triangulate my findings obtained from the various interviews with individuals so I had to organize a focus group discussion with different groups of persons. First I met with a women-church group and this group represented the locals, teachers, nurses, nuns and priests of the parish. The other focus group, the interview was based on their educational level. Unfortunately most of the educated persons have relocated to major towns, cities and into the Diaspora. This is because of the shortage of employment opportunities and the hostility of the arid area which has no modern facilities, roads or credible economic activities.

 Table 5: Showing details (research site and gender) of respondents in focus group discussions

Research site	Groups	Female	Male	Totals
St. Benedicts	Church women	15	6	21
Catholic Church				
Koitilial Pry	Pupils & teachers	16	11	27
School				
Chesoi –open	Women& men	23	12	35
Market	selling wares			
Cheptongei	Women in a	13	0	13
Market	merry go-round			
	meeting.			
		67	29	96

The members of the focus groups discussed with me their daily challenges in accessing potable water and I noted in the upper lands of Marakwet women access water differently from those in the lower lands. In Kerio Valley women do not have tap/piped water at all while in the highlands there are areas with piped water, for example, in Chesoi, Kapsowar and Chebara.

The water along the Kerio Valley is polluted mainly with human waste due lack of sanitation facilities. People use the bushes and toilets are rarely constructed. In the urban area pollution is caused by men who graze their animals inside the forest and by charcoal dealers.

There were different responses to the issue of distances to water sources as some of the women had water piped into their homes, some shared common water points and toilets and spent less time fetching water. The water from their streams is polluted by male charcoal burners and people grazing their animals near the water catchment areas (i.e., forests). One interviewee informed me that when animals graze in the water catchment forest the animals loosen the soil and cause soil erosion and the water runs that through into the rivers contains animal waste. The charcoal burners leave behind dirty charcoal dust that turns the colour of the water black and gives it an unpleasant taste and smell.

This method helped me to analyze the factors that affect women both at the lowlands of Kerio Valley and in the uplands.

2.2.3 Observations

When I would travel along the road, I would observe exhausted young girls carrying 20 litres of water on their backs. Those who are too young would be assisted by other water drawers who would be trying to position the water containers on their backs.

I observed and interviewed women washing and bathing and fetching water from a polluted stream while others would queue for water at the water springs. This will be fully addressed in the chapter on the study's findings.

The method of observation as a tool of collecting data was selected as it allowed me to obtain information directly rather than through the reports of others and I was able to triangulate what I gathered during the interviews and verify the accuracy of data.

I was able to take photographs of women, children, and people doing their daily duties in their own environment, making it firsthand information that has not been exaggerated.

2.3 Evaluation of the methodologies

I found the data collection methods effective and reliable because I gained confidence from the interviewees who were impressed that I was one of their own, born and raised in Kerio Valley. Being able to speak the language was an added advantage because it allowed most respondents to talk freely and in the local language which has a unique deeper meaning which I was able to understand. This was the case when I was interviewing some elders of the Marakwet community who normally speak in parables. For example, one elder once answered me with the words, *'Kichemakilot chito'*, meaning 'he couldn't listen to anyone'. This is a Kalenjin saying to describe that some leaders are 'bulldozers' whom no one can stop doing what they want; it was in reference to why communities do not participate in community development projects.

The challenge I had to individuals and focus groups was people's incorrect expectation that I had money to give them since they are of a low income status. Others mistakenly believed that I intended to make a profit out the information that they gave me and so were hesitant and I had to take time to explain to them the reasons for the research. The introduction letter from the University was helpful because after reading it these people relaxed and volunteered to answer my questions.

However, despite people's mistaken expectations about money and donations, the data collected remains valid as I was able to triangulate my data throughout the research to ensure the validity of its contents.

CHAPTER THREE

3.0 LITERATURE REVIEW/DISCUSSIONS

3.1 Sustainable water governance

According to the Global Water Partnership (GWP, 2003) the current water crisis is mainly a crisis of governance, meaning that improved water governance can solve water problems facing many countries such as Kenya. This is one of the main reasons why most global initiatives are keen to improve governance in the water sector and many researchers, such as Bayliss (2003), Budds & Macgranah (2003) and K'akumu (2004), have come up with the common symptoms of poor water governance in developing countries which symptoms include: failure to cope with demand, failure to manage supply and institutional weakness in terms of financial and technical problems. Although the Marakwet people have one of Kenya's largest remaining natural forests (the Ebobut Forest) which is an important catchment and water resources, such as Moiben river, its communities do not benefit from such resources due to poor water governance in the water sector which excludes marginalized rural areas such as the Marakwet.

Effective water governance as per GWP (2003) refers to the configuration of relations between the three basic institutions of political or social administration viz a viz the state, the market and society. According to Loughlin (2004) it is the market that dominates the states in terms of economic management. All these ignore the woman's contribution in water governance yet women are known to be the best managers of natural resources because women suffer more than men in the absence of resources such as water.

According to Rogers and Hall (2002), poor governance of water has dominated the world due to lack of inclusiveness, accountability, participation, transparency, predictability and responsiveness. These conditions are absent when analyzing the allocation of resources in Kenya and particularly in Marakwet, where the communities do not benefit from their own resources due to the malfunctioning water sector which ignores the needs of the rural poor.

Although poor governance in the water sector has been discussed by Onjala (2002) and K'Akumu *et al.* (2006), there is no research done on access to potable water in Marakwet, and that is why I chose to carry out this study.

According to Bakker (2003), inclusiveness means full participation throughout the policy formulation level to the implementation level. This implies that the national government, county government and community people or stakeholders need to be well informed so that a national outlook of governance can be achieved. This is more so in dealing with community water resources mainly in rural areas where the majority of the citizens are illiterate but have a rich traditional knowledge of water governance.

3.2 International instruments that recognize the right to water

Article 14(2) of CEDAW recognizes that women's exclusion from voicing their opinion in development planning has often resulted in planners' failure to take their needs into account³ and in its General Recommentation No 28 the Committee urges state parties to make the promotion of gender equality an explicit component of its national development plans and policies, in particular, those aimed at poverty alleviation and sustainable development. The Committee further urged state parties to pay special attention to the needs of rural women ensuring that they participate in decision making processes.⁴ The Committee also recognizes the importance of the equal participation of women and men in community activities where the village leaders are male chiefs or elders and despite the fact that 80% of the world's populations live in the rural areas only 1% of village chiefs are women.⁵ This situation is similar to the prevailing findings in the area of study where the village elders and chiefs are all men and the exclusion of women from decision-making implies that women's needs and rights are ignored.

Articles 11 and 12 of the Convention on Economic, Social and Cultural Rights (CESCR) of 1966, recognized the right to adequate standard of living (including adequate food) and the right to the enjoyment of the highest standard of physical and mental health. The right to health cannot be enjoyed by the Marakwet community because the communities do not have

³ Marking International Day of the Rural Women 2009, International Fund for Agricultural Development (IFAD) at http://www.ifad.org/media/events/2009/rural_women.

⁴ CO, Equatorial Guinea. A/59/38, 31st session (2004), Para 190.

⁵ CO Lao People's Democratic Republic, A/60/38, 32nd session (2005), Para 104.

access to potable water forcing them to access polluted water and thus exposing them to so many health risks.

In its comments on paragraph 10, the United Nations Committee on ESCR states that the right to water contains both freedoms and entitlements. The freedoms include the right to maintain access to existing water supplies necessary for the right to water, and the right to be free from interference, such as the right to be free from arbitrary disconnections or contamination of water supply. By contrast, the entitlement includes the right to a system of water supply and management that provides equality of opportunity for people to enjoy the right to water.

This provision, by using the term 'entitlement', connotes the existence of a rule of law which not only protects the entitlement but also provides for a remedy for the realization of the provisions in articles 11 and 12 of the ICESCR of 1966. This will require that substantial obligations be placed upon the institutions responsible for the arrangements (Fisher, 2009: 89). This position was emphasized at the Fourth World Water Forum held in 2006 that stressed the importance of the ICESCR as a mechanism requiring governments to implement the right to life and the right to clean water (Beintema, 2006). In essence, the right to water is an extension of the right to life and health because they are interwoven and are further linked to an actual right to an environment of an appropriate standard.

The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) is one important human right instrument that promotes the rights of women to have access to potable water and advocates for women's participation in water governance at the national and at the local level of development. The Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa provides in Article 18(2)(a) that state parties to the convention shall:

"...ensure greater participation of women in planning, management and preservation of the environment and sustainable use of the natural resources at all levels."

Article 14 of the Convention on Elimination of All Forms of Discrimination against Women obliges state parties to take into account problems faced by rural women and this strengthens women's existing rights by taking the woman's perspective into account. In General Recommendation No 24, CEDAW noted that access to safe drinking water is critical for the prevention of diseases and the promotion of good health care. CESCR General Recommendation No 15 noted that the lack of access to a clean supply of water constitutes discrimination against women and obliges state parties to progressively extend safe sanitation services, particularly to rural and deprived urban areas, taking into account the needs of women and children⁶ and that lack of sanitary facilities has been linked to the denial of the right to education, particularly for girls.⁷

The government is thus obliged to embrace sound investment of people to enable them, especially women, to empower themselves by being part of earlier development plans in their community.

The explicit recognition of water with the 1989 Convention on the Right of the Child (article 24) guarantees that the child enjoy the highest attainable health and a reduction in infant and child mortality rates. In the area of study, children were found to be at risk of infection by water-related diseases despite these entitlements of the rights of the child.

In its General Comment No.15 on the right to water, the UN Committee (2002) on Economic, Social and Cultural Rights observed that, 'Everyone is entitled to sufficient, acceptable, safe physically accessible and affordable water for personal and domestic use.' According to the draft guidelines for the realization of the right to drinking water and sanitation prepared by the Special Rapporteur on 9 August 2004, they recommended 10 guidelines that states and the international community should follow and act urgently to realize the right to water. One of the major guidelines is that states parties to the Convention on Economic, Social and Cultural Rights (CESCR) should improve access to drinking water supply and ensure that where resources are not sufficient to deliver high-quality services, states should invest in services that give priority to the needs of those without basic access, through low-cost services that can be upgraded, rather than through expensive services that only benefit a small section of the population. But in Marakwet the government has failed to come up with low cost water projects, such as hydraulic water pumps, that do not require the use of diesel to pump the water.

⁶ CESCR, General Comment 15 (2003) UN Doc E/C/12/2002/11, Para 29.

⁷ UNDP, Human Development Report (2006); Water (2006).

According to the United Nation Committee on ESCR, there are three principle elements to the right to water which are availability, quality and accessibility.

3.2.1 Water availability

In order to get an understanding of water availability, the study relies on the work of Carlevaro *et al.* (2011) that identifies sources of water and categorizes them into three main types, namely, rainwater, surface water (rivers, streams, lakes) and ground water and requires that the water ought to be physically available or be close to users' homes. In the area of study, however, women and children travel tens of kilometres to fetch water and spend many hours queuing at water points during the dry season. It also revealed that rain water cannot be harvested because people in the communities live in grass thatched houses and in cases where some houses are made of iron sheets roofs, their owners lack financial capital to set up structures for water harvesting. Thus the lack of access to nearby water sources by the Marakwet community is a direct contravention of General Comment No.15.

3.2.2 Water quality

The comment further provides that water supplied or accessed must be safe for human consumption which implies that the water should be free from contaminants. Access to potable water is also one of the Millennium Development Goals (MDGs) agreed upon by world leaders in the United Millennium Summit in 2000. The MDGs drinking water target is to halve by 2015 the proportion of people without sustainable access to safe drinking water (WHO, 2011). The report further states that access to safe drinking water is an element of sustainable development and is central to the goal of poverty reduction. The WHO (2002) report states that lack of access to potable water, basic sanitation and good hygiene practices is the third most significant risk factor for poor health in developing countries with a high mortality rate and that diarrheal diseases occur as a result of inadequate water, sanitation and hygiene.

The samples of water collected from the research area failed the microbiological laboratory test and was found unsafe for human consumption exposing the Marakwet community to health risks. The study revealed that women and children are at a higher risk as they are more in contact with water than men. This is because the stereotyped roles to which women have been assigned by the community (i.e., to collect water, wash cloths, clean their homes and do their cooking) all require the use of water.

3.2.3 Water accessibility

The UN Guidelines provide that water facilities and services must be available to every human being. They further provide that water must be within physical reach of all sections of the population. They also require that the water must be sufficient, safe and acceptable water which must be accessible within or in the immediate vicinity of each household, educational facility and work place. The conditions in Marakwet community do not meet these standards. For example, children must carry their own water when they go to school; women and children travel long distances to fetch water from the water springs in the rainy season and during the dry season they queue for even longer hours at crowded water points.

The Comment further provides that physical security must not be threatened during access to water points but the situation in Marakwet does not meet this standard, as girls told me the fear they encounter while fetching water. Others praised the use of cell phones that they can use when they are in danger from idle rapists.

3.2.4 Water affordability

The UN Guidelines further provide that water facilities and services must be affordable to all. They also provide that the direct and indirect cost associated with securing water must not be compromised or threaten the realization of other rights. This concept does not apply to the people along the Kerio Valley because the water is owned by the community and there are no charges levied.

The Comment calls for the non-discrimination of marginalized areas or groups in that water facilities and water services must be accessible to all, including the most vulnerable or marginalized sections of the population. Thus, governments are obliged to take steps to remove any *de facto* discrimination that could impede the enjoyment of the right to water.

These are the circumstances prevailing in the Marakwet community where the water resources do not benefit the community because they cannot afford to access water from the Chebara Dam, which is a multi-million water project that services other communities in Eldoret town while the resources holder cannot access the clean and purified water. This will be discussed in length at the findings chapter.

According to Kabeer (2002), there is a need to understand the perceived rights and the status of the excluded as well as their capacity to reflect on their situation. A critical precondition to claiming rights is the extent to which women incorporate the rights to have rights.

Key aspects of the right to water

- 1. The right to water contains freedoms which include protection against arbitrary water disconnection.
- 2. The right to water contains entitlements for one to have access to minimum amount that is 20 liters per day.
- 3. Water and sanitation facilities must be physically within reach.
- 4. Water must be available to all.
- 5. Water for personal and domestic use must be safe and acceptable.

3.3 The development of water policies and the right to sustainable development

The earlier development of water was focused on centralizing, government- run public sector departments and water was no exception. Here, women were completely ignored between 1950 and 1960 (Collie *et al.*, 2005) and it was not until the 1970s and 1980s when the obvious fact that women were the managers of domestic water, and usually the carriers of it, was recognized. According to JOSHI (2002), water policy witnessed ambiguities generated by different development trends which included the rejection of the role of states in public provisions which was seen as costly and inefficient and there were cuts in public sector spending imposed through structural adjustment programmers. This changed prior to the Rio Conference in 1992 when the international community had directed its attention to water resources at a conference convened in Ireland earlier that year and the following Dublin principles were affirmed (Fisher, 2009):

- 1. Fresh water is finite and vulnerable resource, essential to sustain life, development and environment;
- 2. Water development and management should be based on a participatory approach involving users, planners and policy-makers at all levels;

- 3. Women play a central part in the provision, management and safeguarding of the water;
- 4. Water has economic value in all its competing uses and should be recognized as an economic good thus the 'user pays' and 'polluter pays' principle which is usually referred to as Integrated Water Resource Management (IWRM).

These principles incorporated the main elements of sustainable development in water resource management which are: social (the perspective of conservation for present and future human needs), economic (the perspective of resource development) and ecological (the perspective of the environment) whose expectation, among others, is to alleviate poverty and disease and ensure rural water supply.⁸

This was followed by The Plan for Action-Agenda 21which deals with the protection of the quality and supply of freshwater resources.

All these development water principles ignored to incorporate community-based water laws in rural areas like the Marakwet where water governance is under the management of the traditional elders following their cultural rules and norms. This will be addressed fully in findings chapter.

Sustainable water resources management has been described as a practice that avoids irreversible damage to the water resource and all resources linked to it and that it conserves in the long run the ability of the resource to extend its services including ecological services (Simonis, 2007: 329). This approach links the relationship of the resource and the values associated with the management of the resource in order to achieve the provision of clean and safe water for all (Simonis, 2007).

The definition of water governance for sustainable development is a range of political, organizational and administrative processes through which communities articulate their interests, their inputs are absorbed, decisions are made and implemented, and decisions makers are held accountable in the development and management of the water resources and delivery of water services (Hass *et al.*, 2004: 279).

⁸ The Johannesburg Declaration 2002 included in Para 2 a commitment to build a humane, equitable and caring global society cognizant of the need for human dignity for all.

The Vienna Declaration states that the right to development is a universal and inalienable right and article 8(1) of the Declaration on the Right to Development stipulates that state parties should undertake at national level all necessary measures for the realization of the right to development. The research has showed that in Marakwet community there is no equality of opportunity because the rural women are not given chances to participate in development projects like income generating activities as they spend their valuable time sourcing water.

The Bruntland Commission Report of 1992 Earth Summit (UNECED) defines development as that:

"...which meets the needs of the present without compromising the ability of future generations to meet their own needs" (WED, 1987).

This is not the case in Marakwet where the only large water resource of the Chebara Dam has been developed to supply clean water to other communities and the resource holder cannot access safe drinking water from its own resources. This will be explained in the findings chapter of this thesis.

For the Marakwet community to achieve the several Millennium Development Goals they need to be given urgent attention and provided with a potable water supply, especially in primary schools where many girls drop out of school due to water related constrains, thereby widening the gender gap contrary to MDG No. 3, that is, the promotion of gender equality and empowerment of women.

The women in Marakwet are not economically empowered due to poverty evidenced during the research and, secondly, by the burden women endure searching daily for water, as a result of which they are unable to engage in income generating activities. This means that the balancing the ratio of women and men in waged employment is dependent on the equal provision of safe drinking water to the whole community.

As far as MDG No. 6 (i.e., to combat HIV/AIDS, malaria and other diseases) is concerned, the research revealed that the Marakwet community is seriously affected by malaria, typhoid,

dysentery, cholera and diarrheal diseases, especially children under the age of five, because their immune system is weak and still developing. One of the health centres (Arror) in the area revealed many cases of patients suffering from water related diseases.

3.4 The Constitution of Kenya - Devolution, water challenges and implications

The Constitution recognizes that access to safe and sufficient water is a basic human right as enshrined in article 43(d) which states that, 'Every person has the right to clean and safe water in adequate quantities.' Article 6 provides for devolution and access to services in the 47 counties of Kenya and in article 10(b) provides for the right to human dignity, equity, social justice, inclusiveness, equality, human rights, non-discrimination and protection of the marginalized. The findings in the study revealed that these rights are not enjoyed by the community who do not have safe and clean drinking water, as the water they access is mainly from untreated streams and furrows.

According to the Water and Sanitation Policy Note of 2013, the government of Kenya that was elected in March 2013 committed itself to the rapid transfer of devolution functions to counties and this position was marked by the transfer of funds to the county government. The process obliges counties to make sure their budgets provide adequate financing for recurrent and development costs. Among other issues devolved to the county government is to 'keep an eye on' and give priority to basic needs such as access to potable water and sanitation.

Although the county government is operational, the water sector lacks a clear sector-specific policy and legal framework to operationalize devolution. This means that until the pending draft Water Bill (2012, which is pro-poor) is enacted into law (see below), the county government will not improve access to water for marginalized communities. This is because the proposed new Water Act has a provision of WSTF that aims to focus on the provision of water services to marginalized communities. Marakwet County is listed as one of the marginalized communities.

The issue of the transfer of county assets needs to be stipulated and made transparent so that individual counties can benefit. The draft Water Bill (2012) talks of 'transfer' which is a provision for the transfer of assets, rights, obligations, agreements and other arrangements from the Water Services Boards to the County Service Providers or the proposed Water

Works Development Boards (national public works in fracture). This provision implies that a county government can re-negotiate to get back or be granted some percentage of the revenue collected from the sale of water supply of water- asset resource that are situated in the county but have been taken away by the central government or other legal institutions, such as the Lake Victoria North Services Board which took control of the Chebara Water Dam Project. The challenge here is that this process of transfer of assets may take a long time and the county government will need support from the National Treasury (WSP, 2013).

3.5 The national laws and policies governing the water sector in Kenya

3.5.1 The Water Act, 2002

The water resources of Kenya remain vested in the state and the Ministry of Water and Irrigation is tasked with the responsibility of creating institutions to manage water resources and provide water services.

The Water Act has introduced a comprehensive legal framework for the management of the water sector in Kenya which revolves around the following themes:

- 1. The separation of the management of water resources from the provision of water services.
- 2. The separation of policy-making from day-to-day administration and regulation.
- 3. Decentralization of functions to lower level state organs.
- 4. The involvement of non-governmental entities in both the management of water resources and the provision of water services.

3.5.1.1 Integrated Water Resource Management Authority (IWRM)

This Authority is to regulate the management of water resources and conserve all water resources in an effective and efficient manner by involving the stakeholders, guaranteeing sustained access to water and the equitable allocation of water while ensuring environmental sustainability. The Authority is further obliged to ensure regional and equitable allocation of water resources, water quality monitoring, testing and surveillance to ensure compliance with international drinking water standards.

3.5.1.2 Water Regulatory and Water Services Boards (WRBS)

The Water Regulatory is established under section 46 while the Water Services Board is established under section 51 of the Water Act.

The mandate of the Services Board is to regulate the provision of water and sewerage services and it has to obtain a permit from the Water Regulatory Board.

The Water Act is gender neutral and women's participation is not factored into the selection of members to run the various institutions. For example, the Act does not have a clear cut way of ensuring that members of the Board are drawn from a representative population of stakeholders in the governance framework. There is no indication on how many males or females should be appointed to the Boards.

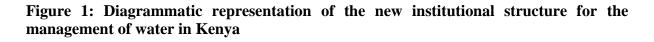
Article 83 of the Water Act establishes a Water Services Trust Fund (WSTF) whose main objective is to assist in financing the provision of water services to areas of Kenya which are without adequate services. It will derive its funds from Parliamentary appropriations, donations (grants and bequest) from any source and, lastly, from statutory contributions.

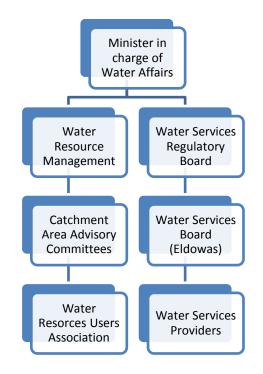
Although the creation of the Trust Fund signals a ray of hope for marginalized people, the Fund lacks accountability as to who qualifies to be trustees of the Fund. The Act provides that the Minister, through a trust deed, can appoint members to the WSTF but this condition of selections is not tenable for a trust that will receive money from public sources and also receive money from other sources on behalf of the public (K'Akumu, 2006).

The Water Act lacks provision for a financial accountability framework for the WSTF, hence, poor and marginalized communities might not benefit from the intentions of the drafters of the pro-poor legislation to provide them with access to water services. The women in particular will be excluded because there is no provision created to enable their equal participation in the management of the WSTF.

Integrated Water Resource Management (IWRM) has been defined as a process that promotes the co-ordinated development and management of water, land and related resources

in order to maximize economic and social welfare and ensure sustainability (GWP, 2000b).⁹ Duda and El-Ashry (2000) defined IWRM as a change from a single purpose to multipurpose water projects. This is not the position in Marakwet where the community's indigenous knowledge on traditional water governance has not been integrated.





Although the Water Act had good intentions, it did not create an effective and democratic institutional framework. The Act is gender neutral and thus failed to address women's rights to water. There is no public participation established by the Act to align the provision provided for and in accordance with article 10(d) of the current Constitution that emphasizes consultation, public participation and co-operation.

The Water Act's institutional framework does not have a link to important existing environmental management institutions and creates too many conflicts in practice (Aketch, 2007).

Available online at www.sciencedirect.com.

The Water Act 2002 further constitutes a mechanism body for the implementation of water policy which has now enacted the new Water Bill (2012) which is still pending in Parliament.

3.5.2 The new Water Bill (Draft Act) - Institutional framework

The draft Bill establishes more institutions for the management of water and sanitation: the responsible Minister, the Director of Water, the Water Resources Management Authority (WRMA), the Water Services Regulatory Board (WSRB), the Water Services Boards (WSBs), the Water Services Providers (WSPs), Catchment Area Advisory Committee (CAACs), Water Resources Users Associations (WRUAs), the National Water Conservation and Pipeline Corporation (NWCPC), the Water Services Trust Fund (WSTF), and the Water Appeal Board (WAB). The creation of these institutions requires the registration of a group and further the group must obtain a license to provide water services and this is provided for in section 56 of the Water Act. This has far-reaching implications for women groups in the rural areas given the requirements for technical and financial competence that is a precondition for obtaining a license. This will clarified in the finding chapter of this thesis.

According to article 4(1) of the new Water Bill (2012) the control of 'every water resource' is entrusted to the Minister of Water. This control takes away the spirit of free participation, consultation and co-operation as provided for in the Constitution of Kenya which undermines the principle of good democratic water governance.

Article 4(2) further allows the Minister to retain the duty to 'promote the investigation, conservation of water resources'. The Minister is required to ensure the effective exercise and performance by any authority or person in relation to their duties relating to water and shall be assisted in his duties by the Director of Water (article 4(3)). This sort of power and control will see marginalized persons and communities being further marginalized and excluded from decision making unless the Bill is amended to conform to the provisions of the Constitution.

According to Aketch (2007), previous experience in Kenya has shown that excessive ministerial powers are not always deployed in the public interest.

CHAPTER FOUR

4.0 FINDINGS, DISCUSSIONS AND ANALYSIS

4.1 Findings on the lack of potable water for the Marakwet community and its impact on women and children

The study revealed that women and girls in Marakwet community travel long distances to fetch water. Some walk up to between 10 and 20 kilometres a day while others join long queues at the water points. Depending on their ages, children between 5 and 11 years of age carry water in containers of between 5 and 10 litres and from 12 years and above they carry water in containers of 20 litres per trip and they do about two to three trips per day. This situation is made worse during the dry season. They have to walk for about 2 hours to the source of water on each trip. This is because Kerio Valley is prone to drought as it is situated at low altitude in an arid and semi-arid area which receives rainfall than the uplands which has high altitude of about 2,700 meters above sea level (DDP, 1997).

Women and children access water from the springs, rivers and the furrows. Those who live next to and near the road can access water within a distance of 5 km to 10 km, while those living in the escarpment walk for about 10 km to 15 km. The escarpment area is rocky and it is difficult to divert water uphill so residents collect water from the furrows that cut across the middle of the villages and divert them according to the demands of each village.

4.1.1 Available water is polluted

The other finding is that, although they can access the water from a distance, the water they collect is polluted and not safe for drinking and this poses a health threat to the community. On asking whether they treat the water with Water Guard, most respondents said they did not buy it from the shops because it is not stocked; this is because it is expensive for most customers and so shop keepers do not stock it.

This implies that women have to spend many hours in search of water instead of engaging in other income generating activities to economically empower themselves and improve their livelihood and be sustainable. Improved livelihoods for women can be categorized into five frameworks (Twigg, 2001) as follows:

- 1. More income and more economically sustainable livelihood.
- 2. Increased well being (self-esteem, sense of control and in inclusion, physical security, health, access to services, political enfranchisement, maintenance of cultural heritage).
- 3. Reduced vulnerability to external trends, shocks and seasonality.
- 4. Improved food security (which is of fundamental importance).
- 5. More sustainable use of the natural resource base.

According to lkahi *et al.* (2002) and Morrison *et al.* (2007), women's freed time could be used in income generating activities and could better contribute to the world's economic growth. Their freed time could also reduce costs spent on children's health care. This is because if mother's working hours were reduced their children would receive better home care from them than when their mothers neglect their children as a result of spending many hours collecting water and doing other domestic chores.

The right to water as set out in the UN Committee on the Economic, Social, and Cultural Rights (ECSCR) General Comment No.15 declared that water is a human right and that every person is entitled to sufficient, safe, acceptable, physically accessible water which is affordable for personal and domestic use. Other international instruments include CEDAW,¹⁰ CRC¹¹ and General Comment No. 15 (ESCR).¹² These five core qualities represent the foundations of water security yet in Marakwet, these rights are widely violated by the state's failure to provide potable water for the community.

4.1.2 Challenges related to water scarcity

The study revealed that women and children access water from rivers, water furrows and streams that are polluted and the colour of the water is brown signifying that the water is mixed with dirt. This was observed during the research as women and children bathe, wash clothes and fetch water from a polluted stream.

¹⁰ Article 14(2) requires that state parties ensure that women enjoy adequate living conditions, particularly in relation to water.

¹¹ The article requires state parties to combat disease and malnutrition 'through the provision of adequate nutritious foods and clean water.'

¹² States that 'an adequate amount of safe water is necessary to prevent deaths from dehydration, reduce the risk of water-related diseases and provide for consumption, cooking, personal and domestic hygiene requirements.'

Though the water from the springs is clean, the springs are scarce and people queue for ever increasing hours to access them. According to the SIWI (2004) report, some of the benefits associated with improved access to water include, but are not limited to, improved human health, improved education, improved food security and food production meaning that it is entirely possible for a healthy women in the rural areas to have enough energy to cultivate her farm and feed her family rather than be suffering from a water-related disease which, based on this study, is more usually the case in Marakwet.



Figure 2: Photograph of women and children bathing, washing and fetching water from a polluted water stream

When I interviewed one respondent about the quality of the water she boils for drinking she said:

'Toiyoi bei.' (Translated from the Marakwet language means, 'That water is always pure like the shining sun and it will never kill anyone.') She added that her household does not boil water because water is scarce and one has to drink enough of it from the stream before taking the water home in the container; only teachers boil water. This is an accepted norm among the Marakwet community and it has had a negative impact on the quest to educate the community on the need to have clean potable water. Norms are passed from the elders of the community to the younger generation by word of mouth and they are usually accepted and observed from one generation to another.

4.1.3 Access to water sources is a challenge to school children in terms of distance and time

The research revealed the struggles young school girls under go in accessing water as they spend many hours fetching water instead of utilizing that time in school. Girls need water for their domestic use as well as their personal hygiene. Lack of access to water has led many girls in the rural areas to drop out of school due to the constraints that they encounter in relation to the scarcity of water for the purposes of their sanitation. The findings revealed that girls suffer from many water borne diseases and this impacted negatively in their school attendance. According to WHO/UNICEF,¹³ 'Besides impacting school attendance, the resulting burden of diarrheal disease and parasitic infections have negative impact on students growth, nutritional status, physical activities, cognition, concentration and school performance'. During the study I observed a young girl who was so exhausted from carrying water home that she had to stop along the way and put the water container on the ground for a while before picking it up and continuing with her journey. This means that her school performance will be affected as she might not have enough energy to do her school homework.

According to the UNDP (2000) report for young girls, the lack of basic water and sanitation services translates into lost opportunities for education and associated opportunities for empowerment.

The UN report of 2000 further showed that water collection times for a village in Kenya averages 4 hours per day in the dry season and 2 hours per day in the wet season. This is similar to the situation in Marakwet as corroborated during several interviews.

¹³ WHO/UNICEF. Meeting the Millennium Development Goals for drinking water and sanitation target: A mid-term assessment of progress. Geneva: World Health Organization and United Nations Children's Fund Report; 2004.

Various girls narrated to me the hardship they undergo fetching water and attending to other domestic chores, such as collecting firewood and vegetables, and they had this to say:

'Sometimes girls face danger from idle men hanging/strolling along the road waiting to sexually abuse unaccompanied girls. Am lucky to have a mobile, that I call my brother when am in danger.'



Figure 3: Photograph of a young girl carrying a 20 litre container of water for domestic use

The above photograph belongs to a girl aged 11 years and she told me how she learned to fetch water from the age of five. The reason was that she is the first born in a family with three younger siblings and that she misses school if her mother has to go to the market to sell fruits to supplement the family budget.

4.1.4 Burden on first born girls in collecting water influenced by culture

The findings revealed that first born girls are worst hit by the burden of fetching water and if the family were to select who to stop attending to school, it would be the girl and the first born.

It may be observed that the physical growth of the girl in the above photograph has been impacted negatively due to her being forced to carry heavy loads of water from the early age of five. She will not develop to her full height and size and the completion of her schooling is equally not guaranteed. This is because from personal empirical data, the Marakwet community used not to send their girls to school and I saw so many of my playmates being married off at an early age. The girls who were sent to school came from the few Christian families, like my father's, and it was not until the late 1960s when the society's perceptions totally changed and all girls were given the chance to go to school like the boys.

WATER	DISEASES/DISCRIPTION
Water-born	Caused by ingestion of water
	contamination, cholera, typhoid, amoebic,
	dysentery, diarrhoea
Water based	Caused by parasites; schistosomiasis
Water-related	Caused by microorganisms-malaria and
	yellow fever
Excreta-related	Vectors breeding in excreta, Trachoma
Water collection and storage	Caused by open containers and improper
	handling hygiene

Table 6: Showing categories of water related diseases common to the research area

One respondent narrated to me how she has suffered from typhoid for many years. She sometimes seeks medical treatment but sometimes she cannot due to a lack of money for the hospital fees which costs Ksh.100 per card and se said:

'Am frequently attacked by diseases, typhoid and malaria is so common and my body is now immune. I don't visit the hospital each time am attacked because it is expensive.'

One of the Millennium Development Goals (MDGs) is to halve by 2015 the proportion of people without sustainable access to drinking water (WHO, 2011). The report further states that access to safe drinking water is an element of sustainable development and is central to

the goal of poverty reduction. Lack of access to quality water means a lot to women, children and communities. The WHO (2002) report states that lack of access to safe water, basic sanitation and good hygiene practices is the third most significant risk factor for poor health in developing countries with a high mortality rate. Diarrhoea is caused mainly by lack of potable water (WHO, 2004).

The findings in Marakwet showed that, as a result of the demands placed on them, women are forced to fetch low quality of water due to the long distances to clean springs, time constraints or economic factors. And one respondent explained to me that they have many duties to perform and that sourcing water is only one of many chores, all of which have to be done. One respondent also explained:

'How can I travel for 4 hours to fetch water from the spring? I will be branded a lazy wife! I go to the nearest water source to save time for other chores. I only rest when I go to sleep.'

The above situation was observed during the research when I saw mothers giving their children water to drink that they had collected but had not boiled, thereby exposing their innocent children to health risks.

UNIFEM's¹⁴ World Population Report states that 80% of illnesses are transmitted by contaminated water and CEDAW's General Recommendation No. 24 on 'Women and health', underlined that the health of a rural woman often crucially depends on adequate and non-discriminatory access to water.

4.1.5 Implications for the right to health

In 1948 the Universal Declaration of Human Rights guarantees every person people the right to a standard of living adequate for health and well being of himself. Article 12 of the $CESCR^{15}$ recognizes the right to health. Article 24 of the Convention on the Rights of the Child guarantees that all children are entitled to the highest attainable standard of health. Article 53(1)(c) of the Constitution of Kenya provides for the right of the child to basic nutrition, shelter and health care.

¹⁴ http:// www.arts.mcgill.ca/152-49b/h/water/gwater/wfacts.htm.

¹⁵ The state parties to the present convention recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.

However, the above rights are not being enjoyed by the Marakwet community as provided for in the country's Constitution or according to the rights guaranteed by the international instrument to which Kenya is a signatory. The research clearly established that there are no government hospitals to cater for the needs of the children in terms of medical care. The only available medical facilities in Kerio Valley are health centres which cannot handle critical cases such as acute malaria, dysentery and women's maternal health care.

The clinical officer of Chesongoach Health Centre told me how patients die due to lack of ICU and emergency cases which he has to refer to Eldoret Referral Hospital which is over 300 kilometers away.

He said to me:

'Women die of complicated birth deliveries here and there is nothing I can do, but do what I can.'

This was a sad indictment of helplessness when such disasters could be averted by the government which could allocate one hospital along the Kerio Valley to service the needs of the community and more particularly the medical needs of the desperate women and children in the area.

According to Gleick (1999), people in desperate situations often lack the choice or capacity to distinguish between safe water and unsafe water. This is the case in Marakwet community where people are forced to access polluted water because of lack of alternative sources and the government's failure to provide the community with of supply of clean water.

4.1.6 Implications for the right to education

Article 53(1)(b) of the Kenyan Constitution states that, 'Every child has the right to free and compulsory basic education.'

Education is one the fundamental rights that is recognized by the Convention on the Rights of the Child (article 28¹⁶) and article 28(a) makes primary education compulsory and available to all. But this right cannot be achieved by the children of the Marakwet community whose educational environment is not conducive by any standard. I entered several classrooms while interviewing pupils and teachers and I kept wondering, 'When will things change? Who will help them overcome their difficulties?' First, the research revealed that pupils have to carry water for their own use to school; secondly, the pit-latrines do not have any hand washing facilities and, thirdly, the school location is so far from the homesteads. For example, pupils of Koitilial Primary School have to walk over 20 km and must arrive school at 8 o'clock in the morning and they must carry their own drinking water which is untreated and which they fetch on their way to school adding another load to the pupil.

The study informed me that teachers at the Kerio Valley still gain or subject pupils to corporal punishment for getting late to school, and because of that many pupils abandoned school. Some girls do not attend school when they are having their monthly menstrual periods due to the lack of sanitary pads and sanitation facilities. The absenteeism of girls from school denies them their fundamental right to education.

¹⁶ States parties recognize the right of the child to education, with a view to achieving this right progressively and on the basis of equal opportunity.



Figure 4: Photograph of hand-washing equipment donated by World Vision International to Chepkum Primary School which is not functioning due to the lack of water

The above photograph is a hand-washing facility that was donated by World Vision International to Chepkum Primary School, but the facility does not have running water for the pupils to use after visiting the toilet.

This is signal that the donors to not go extra-mile to ensure that the facility has continues water supply to achieve its intended goal of benefiting the pupils to a better healthy living conditions.

4.1.7 Impact on sustainable development

Overseas Development Institutes (ODI, 2003) pointed out that where women undertake most of the agricultural labour, and productive impacts are significant. The opportunity cost of water collection can have social and economic dimensions, for example, the burden of fetching water on Marakwet girls has an impact on their education which is disproportionately higher than the impact that it has on the education of their male counterparts.

The study showed that there are men and women do not enjoy equal opportunities among the Marakwet community. When I interviewed women on irrigation projects in the area, the women said they only cultivated where their husbands had been granted a share. The study revealed that the men controlled the water-furrow irrigation schemes which are managed by the Kerio Valley Development Authority (KVDA), while women have access to household irrigated gardens that produce mainly mangoes in large quantities.

The Marakwet women should be empowered through the provision of potable water so that they can engage in income-generating activities and avoid spending so many hours sourcing water and this will help to motivate through government incentives to expand their mango businesses.

A study carried out in Kenya among the Natipkong and Ngendi communities established that women spend between 3 and 5 hours each day collecting water during the dry season and this period doubles during the rainy season because the place where they live is hilly and slippery (Roy *et al.*, 2005).

According to UNIFEM,¹⁷on average women and children travel between 10 and 15 kilometres spending 8 or more hours per day collecting water and carrying up to 10-20 kg or 15 litres of water per trip (Bulajic, 1998: 7).

Further a UNIFEM report indicates that in South Africa alone, women collectively walk the equivalent distance of 16 times to the moon and back per day gathering water for their families.¹⁸ And in India the economic value of this unpaid work is enormous as it is estimated that women fetching water spend 150 million work days per year, equivalent to a national loss of income of 10 billion rupees.¹⁹

¹⁷ http://www.arts.mcgill.ca/152-497b/h20/water/gwater/wfacts.htm.

¹⁸ Maude Barlow and Tony Clarck, Water Apartheid. The Nation.15 August 2002.

¹⁹ As reported in: Jal Swaraj Abhiyan (company for water liberation), NAVDANYA/Research Foundation for Science, Technology & Ecology. Equivalency: US\$ 1= 48.1 Rupees.

UNICEF and WHO (2008) studies also indicate that water collection is borne primarily by women in Asia²⁰ and in countries across North Africa and Middle East, including Morocco and Yemen. It is imperative for every country to recognize women's unpaid domestic work so that they too can receive value for their work.

4.2 Findings on the law and policies that are in place dealing with access to potable water

One of the underlying objectives of this study was to ascertain what laws govern water service delivery in the Marakwet community and whether the laws meet the community's demands for water provision as their fundamental right to water.

The laws that govern water in Marakwet community are the state laws and the Marakwet customary laws and norms.

From the study, the Marakwet communities have a traditional customary law and water governance that predates colonial rule²¹ and this is evidenced by the Marakwet water furrow irrigation system that is more than 200 years old (Kipkorir, 198: 96) which occurs along the Kerio Valley and stretches along more than 40 km of the Marakwet escarpment from the south of Arror to the north of Tot (Watson *et al.*, 1998).

The irrigation system practised is a form of hill furrow that has been described as slope offtake irrigation system (Linden, 1995) and the furrows are the main source of fresh water for the Marakwet community both for agricultural and domestic use.

4.2.1 Marakwet water governance, ownership of water resources and water supply

From the study, water is considered a sacred resource by the community and it is not owned by anyone, as it God given. However, the irrigation furrows are owned by the community. The elders are the custodians of the general customary laws and norms that regulate the community's day-to-day behaviour. The study further revealed that it is the elders of the community who regulate water resources and ensure compliance with the customary rules related to water use and management. The elders have powers to impose sanctions for non-

20 21

This is evidenced by the early accounts of the Marakwet's law and custom. For example, Mervyn W H Beech, 'Sketch of Elkeiyo law and custom' (1992) 20 (790) Journal of the Royal African Society.

compliance. Where there is a major dispute the elders refer the matter to the highest authority called *'Kap assiswo'* and that authority is entirely comprised of men.

4.2.2 The customary rules and norms discovered during the study

- 1. Prohibition of the community from cultivating up stream around rivers and streams.
- 2. Taboos were frequently imposed to protect water bodies (e.g., the following were strictly forbidden: lactating mothers forbidden from visiting water points; no throwing of objects into any water source; children forbidden from urinating into any water source).
- Occasional performance of water rituals by the elders in cases of prolonged droughts. Ingenious trees were considered sacred and were used for rituals. No one was allowed to cut down trees but dry wood was allowed for cutting.
- 4. Water allocation for controlled by the elders: at night and early mornings the water is allocated to wild animals; during morning hours until mid-day the water is allocated to domestic use and thereafter to the livestock.
- 5. Dirty water was purified using shrubs/herbs.
- 6. Each clan had their own 'furrow-man' (Watson *et al.*, 1998).

Customary law, according to Fisher (2009), refers to a poplar pattern that reflects the common understanding of valid, compulsory rights and obligations. And for a custom to acquire the status of law it must carry a popular perception of valid legal obligation (opinion necessitates sieve obligations) and what determines a custom is whether the public acts as if the observance of the custom is legally obligated (Orebach and Bosselman, 2005: 17).

According to Caponera (1992: 50), customary rules become more detailed where water is scarce as it is most known and respected laws especially in Africa.

According one elderly respondent, the water allocation programme has ensured that all people and animals have access to water and this has reduced conflicts between the community and wild animals. The research area along the Keri Valley used to be the home of many wild animals but they have since been relocated to Rimoi Game Reserve by the Kenya National Wild Life officials (KWS).

The findings indicated that although the water from the furrows is the main water supply in many villages, it is not sufficient or adequate and leads to supplementing the supply with water from other sources, such as the rivers and the springs, depending on where the water is available and how far it is from the respondent's residences. There is no payment or tariffs levied on the supply of water from the furrows but the community participates in the maintenance and constructions of the furrows.

4.2.3 Responsibility for water resource management; Gendered roles

The females interviewed informed me that they do not play a direct role in the construction of the furrows but that they provided meals for the builders who are all male and that women also carried grass used in the construction process. This meant that women were excused from doing hard labour, because the construction of water furrows required strong men to lift the stones that are used in the construction process.

The study further revealed that women did not participate in decision making over water furrow usage or the usage of water resources and that they cannot challenge the elders for fear of the Marakwet customary penalties which is 'a curse'. The research revealed that the Marakwet communities fear curses and that they are hardly performed except in the case of serious tragedies, e.g., concealed murders.

When asked why they obey the norms, most of the respondents replied that taboos are strong convictions and beliefs and, therefore, that all people, including children, must follow them and that the norms are passed down by word-of-mouth from the older to the younger generations in homes and during circumcision periods.

4.2.4 State laws and policies relating to water governance in Kenya

The Water Act, 2002 decentralizes functions to lower level public institutions but does not go as far as to devolve these functions to lower entities and the ultimate decision making remains centralized.

According Mumma (2007), the Water Act assumes that the legal framework in Kenya comprises a monolithic and uniform legal system, which is essentially state-centric in nature; and that the continued denial of existence of a pluralistic legal framework is inimical to the success of the new law in meeting the needs of the rural poor.

The Marakwet community lives within a normative framework where the state laws are not applicable and the people's customs and norms apply in water governance.

Along the Kerio Valley (Tunyo, Mokil, Chesongoach, Chesoi) the laws that exist in practice are the Marakwet customary laws and norms. The research revealed no trace of state intervention in water services. The lowlands area of the study area did not have access to piped water from the government and the community accesses their main sources of water from the streams, furrows, rivers and springs.

In the uplands areas of (Kapsowar, Cheptongei and Chebara) some members of the community have access to piped water in their small centre. Here the applicable laws are both the state laws as they are governed by the local county council of Marakwet (now called Elkeiyo/Marakwet) county and the Marakwet customary laws.

The research revealed the existence of legal pluralism in water governance in the community.

The definition of legal pluralism is:

"... a situation characterized by the existence of multiple normative systems all experiencing validity" (von Benda-Beckman *et al.*, 1997).

And further definition describes it as:

"... a set of intellectual tools for looking at a common property, resource management, not just in terms of institutional mechanism, incentives, monitoring and enforcement but in terms of contesting claims conceptions through which meanings are defined and debated' (Brunts and Meinzen-Dick, 2000: 23).

The research revealed that the Marakwet community use water basically used for domestic, livestock and irrigation purposes. Section 56 of the Water Act requires that individuals or communities to obtain a water permit so that they can use a water resource and water permits require one to have a title deed to the relevant property, a condition that cannot apply to rural communities such as the Marakwet who hold land under customary law.

Section 56(2) criminalizes the accessing of water resources without a licence. The technical procedure for obtaining a license to run a community water supply is not realistic in rural areas like the Marakwet where the people are of extremely low economic status. This implies that only rich communities can access water sources supply to the detriment of poor communities or organizations such as women's self-help groups.

Section 57 of the Water Act 2002 stipulates further conditions under which a service provider can acquire a licence to be a water service provider and one of them is that a service provider must have the requisite technical and financial competence to provide the service.

Even though it would be possible for the community to register as a community self-help group and therefore qualify as a service provider, this could not be practically realized due to financial and technical constraints the communities normally face. Mumma (2007) observes:

'The ability of rural communities to provide water services through community groups is demonstrated by the fact that presently a population of not less than 2.3 million people get water services from systems operated by self-help (community) groups – traditionally known as water users associations (WUAs); and that these systems are diverse in nature and capacity, ranging from fairly sophisticated systems with well structured tariffs to simple gravity schemes operated without any formal processes (Njonjo, 1997).'

These self help groups are not recognized as legal personality in the statutory laws, therefore they cannot own land in their own names under the prevailing land laws. This implies that women's self-help groups will not qualify to be services providers, thus the need to amend the Water Act to factor in the needs of rural communities based on their own lived realities.

Article 56 of the Water Act 2002 offers a window of opportunity for women in law and policy as it provides that the state shall put in place affirmative action programmes designed to ensure that minorities and marginalized groups have reasonable access to water, health services and infrastructure.

The Constitution of Kenya further establishes a fund into which shall be paid one half percent of all the revenue collected by the national government each year. The beneficiaries of the fund are vulnerable groups and marginalized rural communities. This calls for the national policy makers to establish an accountable and transparent legal framework that will ensure that marginalized communities, like the Marakwet, benefit.

Further, article 56(a) of the Constitution states that the state shall put in place action programmes to ensure that minorities and marginalized groups participate and are represented in governance and other spheres of life.

Although this provision is excellent, there are many factors that prevent women in Marakwet from utilizing this constitutional right which includes their lack of participation in decisionmaking processes as discussed below in this dissertation.

4.3 Findings on community participation in water governance

From the findings it was apparent that the communities do not participate effectively in decision-making processes which deal with water governance at the national and at the local level. This was exhibited by the construction of non-functioning boreholes along the Kerio Valley. The boreholes are not being utilized by the community because they cannot afford to buy diesel to pump the water, a sign that they were not part of the initial plan for their drilling and management.

There were various complaints (received during the interview) by the residents of Chebara about the contractual agreement entered into between the Marakwet community leaders and the Lake Victoria North Basin Authority (LVNA) over the Chabara Dam in that they were not involved in the signing of the agreement that saw a diversion of water away from the rivers that feed the dam, meaning that downstream users receive less water that could have been utilized for irrigation at the Kerio Valley. This issue will be elaborated further in this chapter.

The World Bank defines participation as 'a process through which stakeholder's influence and share control over development initiatives and decision and resources which affect them' (Bhatnaggar *et al.*, 1996).

Kate *et al.* (2010) states that social participation in water governance requires more involvement than just activism where approaches that focus on water participation

mechanism's tend to emphasize issues of empowerment, stress the needs of the marginalized, suggest distrust of the state and celebrate local knowledge (Henkel and Stirrar, 2001).

Kate *et al.* (2010: xxi) looks at the many pertinent research questions that need to be addressed on water management and governance and sets them out as follows:

- 1. How to effectively balance administrative control and reforms with social participation.
- 2. Why some parties are more involved and others are excluded.
- 3. What sorts of historical cycles and geographic patterns are associated with social participation.
- 4. How power differentials affect participation.
- 5. How rhetorical appeal meshes with actual experiences.
- 6. How to encourage effective, open public decision-making.

The findings in Marakwet revealed that women do not participate in public forums and do not attend the water development forum in the village. This is because the custom regards it as taboo for a woman to speak in front of men. One respondent had this to say:

'It's a taboo for a woman to address men on water-furrow matters, it is like one is cursing the existence of the men in the clan.'

This implies that Marakwet women are marginalised at three levels: first, by the community custom and beliefs; secondly, by the fact that they are women and, thirdly, they live in a rural set-up which is a marginalized arid area. Lack of economic empowerment, illiteracy and lack of information prevents women from effectively participating in water management and governance. The community leaders and people have to rely heavily on their traditional customs and NGOs to have emergency issues addressed. A good example is where, due to the urgent needs of the people, the functions of the chief's office can become very difficult without the government's support. The chief 'acts as the government'. I interviewed one of old senior chiefs from the Arror location. He explained to me how at one time he had to act as the government because people were dying of hunger and disease. The people of Marakwet, Baringo and the Tugen needed a bridge across river Kerio to access basic needs like health care services and food. He told me:

'I acted as "the government" and the Catholic Missionary father acted on behalf of the people and we were arrested by the government officials for constructing a bridge across river Kerio.'

Thomson (1991) stated that when there is an absence of support for public matters one might even say that the rural people are actually under-governed. And communities can resort to taking the law into their own hands to solve pressing issues affecting them and their environment.

4.3.1 Importance of community participation

According to Madulu (1998), it is important to involve the local communities in assessing and solving problems since they are the ones who interact with their environment.

The Dublin Principles recognize, among other principles, the importance of participatory approaches to integrated water resources management (GWP, 2000a) and state the importance as follows:

- 1. They demonstrates the importance of the local community's consent in taking part in public decision-making processes, especially on issues that directly affect their welfare. This will provide an important database, experience and the eventual realization of practical, relevant and achievable, acceptable solutions to water related problems.
- 2. They use indigenous knowledge.
- 3. They build public trust.

Participation allows communities to identify their specific problems regarding access to potable water and come up with area specific solutions that will also address emerging environmental changes and challenges.

4.3.2 Reasons why women do not participate in decision making

4.3.2.1 Lack of adequate education

One of the reasons why women do not participate is their lack of adequate education. Most of the respondents had reached primary or secondary school level. This is because of the difficult economic hardships that many women and girls endure. The study area is composed of poor citizens as the area is of low economic value, especially along the Kerio Valley as indicated in chapter 1 which deals with the background of the study.

The community is disempowered due to poverty and poverty goes hand in hand with disempowerment, hence, the lack of ability (power) to make choices.

According to Jejeebhoy (1995), education brings cognitive ability, which is essential to women's capacity to question, to reflect on, and to act on the conditions of their lives and gain access to knowledge, information and new ideas to help them. Research carried out in Bangladesh showed that educated women participated in a wider range of decision making than un-educated ones (Kabeer, 2003).

4.3.2.2 Lack of good leadership in the political arena

The lack of political representation at the national and local level has contributed to the lack of access to potable water among the Marakwet community. The research revealed that most leaders in the national political arena have been mainly men and they all live in the highlands and not along the Kerio Valley; hence, women's water problems have not been articulated in the political arena. The research further revealed that when Hon. Martha Karua was the Minister of Water, she visited Marakwet and constructed one system of piped water at Kassang village and since then (2002) no other minister has ever visited the area. This means that if there could be more women ministers, women's water problems would be adequately be addressed.

She narrated the following:

'Only Karua cared about water here, but the pipe is currently not functioning because it's filled with sand. The male Members of Parliament only visit us during campaigning period and disappear to Nairobi after being voted in.'

This support for female leadership was corroborated by one respondent who narrated that when the people of Marakwet East elected a woman, Hon. Linah Jebii Kilimo, as a Member of Parliament in 2002, she managed to have a tarmac road constructed in her constituency from Kapsowar to Chesoi within a very short time. This informed me that women leaders are more concerned with the plight of women and children, unlike the male leaders. The

construction of a tarmac road meant that women can access transport to health facilities quickly when they are sick or when their children need better medical health care.

4.3.3 Impact of community's/women's non-participation in water projects

The study revealed that there are several water projects that have been constructed by the government and NGOs such as World Vision International and Save the Children. Although the projects have been constructed and use underground clean water, the communities are unable to draw water from them because their pumps need diesel to work.

The findings revealed that the communities were not consulted; they did not participate in the initial designs and constructions of the boreholes. Further there was no assessment of the economic ability of the intended beneficiaries.

The impact is that the boreholes remain unutilized, idle and a waste of resources which could have been diverted elsewhere to benefit the rural women.

4.3.4 Lack of adequate negotiating skills over the construction of the Chebara Dam/Water Project

The study revealed that the community leaders did not have the capacity to negotiate the initial drafting of the agreement between themselves as community representatives and the Lake Victoria North Services. The water project was first negotiated by the government through the Water Services Regulatory Board (WSRB), i.e., the Lake Victoria North Regulatory Board, and the water service provider (WSPB) which is the Eldoret Water Services and Sanitation (ELDOWAS). The community is mandated by law and policy to participate in the establishment of the projects so as to protect the interests of the community. The findings established that there were no stipulated guidelines given to the people to deliberate and put their demands forward before entering into a legal contract.

The study revealed that the Chebara's multi-million dam project serves 2/3 supply of water to the residents of Uasingishu County in Eldoret Town and its environs. Although the dam is located in Marakwet County, the community does not have access to the clean water.

The community participation was brushed aside ignored by powerful political forces that the community could not challenge.

One of the respondent resident's of Chebara recalled the tension that was high at a public baraza (i.e., an open meeting) where one politician accused the community of blocking the construction of the water dam until its interests were recognized and made part of the agreement.

The politician at that time asked the community:

'How can you deny others water, yet water belongs even to the hyena?'

The above quotation is a misuse of a powerful Kalenjin saying that implies that water is Godgiven and people must share it. It does not advocate that water resources of a community should be taken away without due consideration for the needs of the resource holders.

Reisner (1986) says about water in Western USA that it is power and control of water is absolute power; whisky is for drinking and water is for fighting; and that water ignores the laws of gravity and flows uphill towards political power and money.

This situation is ironic: there is political interference in multi-million dollar projects but no interference in small projects that do a great deal to worsen women's suffering due to lack of access to clean water. No one makes the rights of the rural population a priority but what can be gained from rurally owned resources is given priority to the detriment of its resource holders.

At one point at a press conference the Governor of Elkeiyo Marakwet accused Uasingishu County of exploiting the resources of Marakwet county without benefitting the community and threatened to shut down the dam (The Kenya Daily Star Newspaper, 10 October 2013).²²

According to Kabeer (1999),²³ the concept of empowerment can be explored in three closely interrelated dimensions: Agency, resources and achievements. Agency represents the processes by which choices are made and put into effect; resources refer to the medium through which agency is exercised; and, lastly, achievement refers to the outcomes of agency.

²² http:allafica.com/stories/201310101450.html,accesed on 27/3/2014 at 1.29 pm.

³ Gender.eqality and women's empowerment; a critical analysis of the Third Millennium Development Goal 1- Gender and Development Vol 1.No.1, March 2005.

In the case of the Marakwet dam construction, the agency here can infer to 'power over'; and that the community lacked the capacity to make their own choices and the overriding capacity of other actors over the community's agency was due to the absence of explicit forms of agency or by use of coercion.

4.3.5 The construction and drilling of water boreholes along the Kerio Valley

About the local community boreholes, one respondent said:

'These donors and government have surplus of money they cannot account for, that is why they come and parachute projects without consulting us.'



Figure 5: Photograph of a borehole constructed by the Ministry of Water that has clean water but does not function

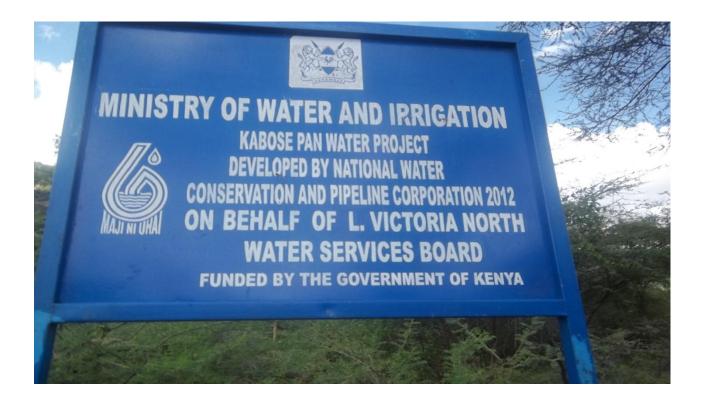


Figure 6: Photograph of a sign for a non-functioning borehole that was drilled by the Lake North Water Services Board



Figure 7: Photograph of a borehole which was constructed and drilled by the World Vision International (WVI). It has clean water but is not functioning.

The UNDP-World Bank (2008) report estimated that achieving lasting benefits from water supply interventions involves much more than building facilities. There must be community participation in service delivery and the use of appropriate technologies.

The communities need to be consulted so that the project can meet their demands and be people driven so that they are sustainable in terms of operation costs and management. The community should be trained as to how to operate the technical machines.

According to Haysom (2006), the management of water projects encompasses, among other critical elements, participation that is viewed as a tool for improving the efficiency of a project.

4.3.6 Example of failed project - Msanzi irrigation projects in Tanzania

The Msanzi project was developed in the 1930s using indigenous skills, but the main canal was destroyed by a series of floods. Through the Rukwa Development Project (RUDEP), experts planned and designed a new system of canals that were different from the traditional ones and the work brushed aside all local knowledge and experience with the previous system. Conflicts then emerged between the community and the experts which saw government withdrawal of funding support.

4.4 Emerging issues

4.4.1 High poverty levels

The study revealed that high poverty levels in Marakwet community have contributed significantly to the lack of access to potable water. Although the community has access to several drilled boreholes with clean water, the boreholes are not utilised due to the high cost of diesel which is required to pump out the water.

This condition brings into focus the many challenges facing the government of Kenya to provide potable water to remote parts of the country, such as Marakwet, and, therefore, calls for the Ministry of Water to obtain more pro-poor resources for this purpose. Investors shy away from helping poverty stricken communities yet those same communities cannot help themselves because they cannot afford to raise the heavy investment required to build the necessary infrastructure required for water projects. According to Crow and Roy (2004), the lack of financial resources and lack of water resources are linked together in a negative feedback loop that can keep individuals households and communities in a dynamic poverty trap. This is the case in Marakwet where the community is practically trapped in poverty.

4.4.2 Corruption in the water sector

The study revealed that because of the many laws and regulations that govern the water sector in Kenya, some government officials take advantage of this and divert resources away from marginalized communities without due consideration for the plight of such communities and thus prevent the effective use of natural resources.

This is further aggravated by the lack of a comprehensive land policy which has caused many Marakwet people to illegally invade water catchment areas at Embobut Forest,²⁴ which has reduced water flow into rivers. This means that water in the lower lying areas will decrease and women will be forced to travel even further in order to access potable water, thus impacting even more negatively on the community, more particularly on the women and children.

²⁴ Naemi Gunlycke and Anja Tuomaala, 'Detecting Forest Degratation in Marakwet Distric, Kenya using Remote sensing and GIS' (2011).accessed online on ... Htt;/www.natgeo.lu.se/ex-jobb/exj_200.pdf>.

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The main objective of this research was to establish what kind of potable water the Marakwet community have access to and its impact on women and children. The following conclusions were made from the study:

The Marakwet communities do not have access clean and safe water for drinking and women and children have to travel long distances in order for them to access potable water. Natural springs are the only water points that have clean water but the locations of the springs are far from the homesteads. And the quality of water from the laboratory analysis clearly indicates that the various water points are unsafe for human consumption. The water is mixed with faucal which causes amoebiasis in the intestine.

Lack of access to safe drinking water has impacted on women and children negatively in terms of health, education, women's empowerment, and self-realization for women and girls.

The community is governed by legal pluralism and this fact has been ignored to the disadvantage of women and girls whose rights to land and water are governed by the customary laws.

On the water law and policy fronts, women's rights have been excluded as the Water Act is silent on gender mainstreaming and rural women's water and land rights are therefore ignored. The study showed that there is a lack of equitable access to water for all, especially in the rural areas where women are more marginalized.

The laws/policies on water need to be re-enacted to address gender discrimination and the government should be urged to urgently impose affirmative action in the water sector to reflect gender in water governance at the local and national level.

The Water Trust Fund set out no provisions or guidelines as to how marginalized communities can benefit from the fund. This requires urgent attention and the formulation of

procedures that are transparent, accountable and written in simple language so that its intended beneficiaries are aware of and can demand their rights. Its provisions and guidelines should be able to indicate how each marginalized groups can access the fund and how the fund will be made sustainable.

Though water rights are not a silver bullet to address the world's water crisis, water rights can be a powerful tool to focus attention on improving access to potable water for the marginalized people/rural communities; hence, the slogan, 'Water For All' can be achieved.

5.2 **Recommendations**

The recommendation are based on the findings of this study which is basically on the right to potable water and the implication for women and children in the Marakwet community of Kenya.

5.2.1 Administrative reforms

The Water Bill, 2012, pending in Parliament should be properly debated in the Upper and Lower Houses before the same is enacted as the new water Laws in Kenya.

Kenyan citizens should be engaged through civic education on their entitlement to potable water as duty holders and the state's obligations to them as duty bearer. The pending Bill should stipulate how it should be implemented at both national and international levels. The process of implementation must reflect the needs of individual groups of people or communities so that it can be properly adopted and sustained.

5.2.2 Gender sensitization

The community's perceptions on access to water must be sensitized accordingly and people's attitude that girls and women are the main water collectors must change to attain gender equality in households and families. The country's laws should ensure women's security of tenure on land user rights and water user rights that women only enjoy by virtue of their relational capacity.

Women's 'merry-go rounds' and self-help groups should be recognized as an empowerment tool in the rural areas. Women should increase their involvement in income-generating businesses so that they can become more empowered and better equipped to make informed decisions regarding access to potable water.

5.2.3 Capacity building

The Marakwet community needs capacity building, so that they understand the implications of agreements between themselves and other investors private or public before entering into any meaningful negotiations. This includes training and capacity-building for women to enable them take to take leadership roles to voice their concerns without any hesitation and to enhance their technical skills. Rural men should also be encouraged to support rural women instead of isolating them in water projects and management in their areas which always dominated by men.

Simple language should be adopted by developers who use scientific terminology which is not easily understood by those who work on water installations in rural areas (Zwarteveen, 2006b).

Capacity building for women will ensure they understand relevant the water management concepts, literature, hygiene, and health issues and thus enable them to make informed choices. Empowerment therefore means:

'To enhance the capacity of an individual, or group to make purposive choices and to transform those choices into desired actions and outcomes.'

There should be official recognition and strengthening of the community's existing indigenous knowledge of water governance, such as the Marakwet's indigenous knowledge of water furrows governance and irrigation systems.

NGOs should work closely with women and equip them with tools to exercise, secure and defend their rights by way of drama as is the case in Zimbabwe where Ntengwe for Community Development engage women and girls in drama activities that address property and inheritance rights (ICRW).

The government should reinforce the capacity and the roles of the district community development officials as a means of providing support to the community's women's self help-groups and the Marakwet 'furrow men'.

5.2.4 Building partnerships

The current Constitution mandates that each county government partner with both the private and the public sector in investment projects in their county.

There needs to be awareness raising among the Marakwet community, whose population, according to the research findings, do not enjoy a high level of education, in order to improve their knowledge of the relevant laws before they enter into partnerships with which they are not familiar so that they may understand how future generations will be affected by the decisions and agreements they make today.

Women in particular should be aware of the global partnership processes that have been in the hands of central government, negotiated by experts who are usually men and always excluded women's interests and needs.

There should be a high level of consideration on the part of the county government, leaders on the economic level of the community so that they partner in projects that 'works' for the community and avoid 'a one-size-fits-all' projects.

The county government must develop clear evaluation mechanisms and transparent systems that ensure partnership projects benefit the target groups, mainly women and children.

5.2.5 Women's participation in decision-making processes

Women are the primary users of water as they are the managers of family households and therefore they need to participate in decision making on water governance both at the local and national level .Women's role in agriculture in sub-Sahara Africa has been confirmed by vast literature and this led to a need for gender mainstreaming in water governance (UNDP Report, 2005).

They should be encouraged to embrace the advantages of new information technology such as the use of cell-phone, mpesa and make decisions starting right from the grass-root level moving up to the national level (i.e., 'bottom-up') rather than 'top-down'.

If women participate their needs and rights will be achieved and they will benefit and it will be sustainable because it is a woman-driven process.

Women should network with other women in marginalized areas and share information on what management skills are practical and have worked for other women; sharing success stories among various women groups or self help groups will also help women in the vital element of encouraging one another.

5.2.6 Political good will

There can be no meaningful development if the central government does not support the local authorities in development processes in their respective counties. Some counties do not have the capacity to implement some of the responsibilities bestowed upon them through the decentralization of power and will need the support of the government by way of funding through the WTF or other forms of funding.

Political good will is also needed through the government's enacted good workable legal frameworks that ensure the smooth implementation of respective county development.

The central government needs to fully participate with the local counties decentralization development to be realized otherwise 'Kenya will have decentralization of power without development' (Oyugi, 2000).

Oyugi (2000) states that the assumption behind power sharing is the existence of a balance of forces between the interacting parties. Therefore, there is a need for the central government to make good the intentions of the constitutional provision of devolution of power in Kenya.

Brisco (1994) states that, 'No matter how inefficient system may be, there are always those who benefit from these inefficiencies and who therefore oppose change'.

Being located in dry lands, Marakwet has been politically marginalized due to many problems that governments do not want to deal with and according to Morton (2001), it is considered a barren place inhabited by some of the world's poorest people.

5.2.7 Legislative reforms

The pending draft Water Bill (2012) should be amended to recognize all different forms of land holdings in Kenya. The current draft Bill does not recognize the active legal pluralism that govern most of the communities in Kenya, especially those in the marginalized rural areas where land is held on community basis.

The provisions of water of the pending Act cannot be implemented because community lands do not hold any title deeds to their land; nor, for this reason, is it possible to create a legal security of tenure to enable women user rights to land and water be legalized to protect their rights (Women's water rights and land rights as human rights, Kameri-Mbote, 2002).

The Act should enact transparent guidelines that will be followed in the implementation of the Water Finance Trust Fund (WTF) so that the poor can access the funds in a more accountable manner. Further, the guidelines should contain no loop holes which can allow corrupt officials to manipulate and misappropriate the funds.

5.2.8 Investments in programmes documentation and monitoring

The county government of Elkeiyo Marakwet should evaluate and investigate existing projects that are already in place and what projects need to be carried out as on an urgent basis and /or in the long term (i.e., projections beyond 15-20 years) and see 'what really works', improve what is possible or establish new projects.

Local media, such as radio stations, private media institutions and print media, play an important role in escalating communities' issues by reporting them in informative ways. Promotions of exchange of development projects from the 47 different counties in the Republic can be utilized by the counties. These will generate active citizen participation in projects and their development from the ground up to the national level. Communities can borrow and exchange ideas through the media.

Indigenous knowledge of the community should be documented so that future programmers and project designers can refer to and come up with well-suited projects blended with the knowledge of the locals that will provide sustainable solutions.

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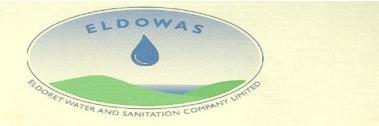
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Appendices: Test results of 6 samples of water collected from various water points in the research area

	WATER AND SANIT		BORATORY.
Sample ref Sampling o	irce: <i>Arrow ri</i> . no :620 -13/ late : 3/12/201 by : <i>Mr.Kipn</i>	14. 13. g tich D Rop	
Date receiv	(u.)/14/201.		
Date receiv Parameters	Units	Results	Limits (max)
-	1	Results 4.0	Limits (max) 6.5-8.5
Parameters	Units		
Parameters pH	Units pH scale	4.0	6.5-8.5
Parameters pH Turbidity Total dissolved	Units pH scale NTU	4.0 179	6.5-8.5 5.0

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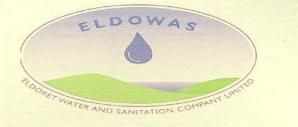


Sample source:*Kerio River*. Sample ref. no: 618-13/14. Sampling date: 3/12/2013. Submitted by : *Mr.Kipng tich D Rop* Date received: 3/12/2013.

Parameters	Units	Results	Limits (max)
pH	pH scale	7.4	6.5-8.5
Turbidity	NTU	2097	5.0
Total dissolved solids	Mg/l	95	1200
Faecal coliform	Cfu/100ml	60	Nil
Conductivity	µs/cm	153	1500

Comments: The tested samples performed as shown.

Sign Jungers For QUALITY ASSURANCE MANAGER.



Sample source: *Tunyo Dispensary.* Sample ref. no: 621-13/14. Sampling date: 3/12/2013. Submitted by : *Mr.Kipng tich D Rop.* Date received: 4/12/2013.

Parameters	Units	Results	Limits (max)
pH	pH scale	8.1	6.5-8.5
Turbidity	NTU	1.1	5.0
Total dissolved solids	Mg/l	864	1200
Conductivity	µs/cm	1394	1500
Faecal coliform	Cfu/100ml	8	Nil

Comments: *The tested sample performed as shown.*

Sign... _ **QUALITY ASSURANCE MANAGER.**

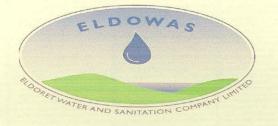


Sample source: Arrow st Benedict. Sample ref. no:619-13/14. Sampling date: 3/12/2013. Submitted by : Mr.Kipng tich D Rop. Date received: 3/12/2013.

Parameters	Units	Results	Limits (max)
pH	pH scale	5.4	6.5-8.5
Turbidity	NTU	38.2	5.0
Total dissolved solids	Mg/l	174	1200
Conductivity	µs/cm	108	1500
Faecal coliform	Cfu/100ml	30	Nil

Comments: The tested sample performed as shown.

Sign Frages Fr., QUALITY ASSURANCE MANAGER.



Sample source: Chepkum pri sch. Sample ref. no:623 -13/14. Sampling date: 3/12/2013. Submitted by : Mr.Kipng tich D Rop Date received: 4/12/2013.

Parameters	Units	Results	Limits (max)
pH	pH scale	4.0	6.5-8.5
Turbidity	NTU	826	5.0
Total dissolved solids	Mg/l	252	1200
Faecal coliform	Cfu/100ml	80	Nil
Conductivity	µs/cm	407	1500

Comments: The tested samples performed as shown.

Sign Lugar Fr, QUALITY ASSURANCE MANAGER.



Sample source: Kapkemet Dam. Sample ref. no:621 -13/14. Sampling date: 3/12/2013. Submitted by : Mr.Kipng tich D Rop Date received: 4/12/2013.

Parameters	Units	Results	Limits (max)
pH	pH scale	6.1	6.5-8.5
Turbidity	NTU	95.8	5.0
Total dissolved solids	Mg/l	298	1200
Conductivity	µs/cm	481	1500
Faecal coliform	Cfu/100ml	44	Nil

Comments: The tested sample performed as shown.

Sign Justin **OUALITY ASSURANCE MANAGER.**

For,