DETERMINANTS OF GENDER RESPONSIVE MANAGEMENT OF WATER RESOURCES AND PROJECTS IN KAJIADO COUNTY, KENYA.

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C50/CE/14376/2009

A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF HUMANITIES AND SOCIAL SCIENCES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS IN SOCIOLOGY, GENDER AND DEVELOPMENT STUDIES IN KENYATTA UNIVERSITY.

OCTOBER, 2020
DECLARATION

I confirm that this project is my original work and has never been presented for any degree program in any other university for an award of degree.

Signature....................................................    Date................................

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SUPERVISOR

I confirm that this work in this project was carried out by the candidate under my supervision.

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DEDICATION

This project work is dedicated to my Parents; my late dad Dydmus Wakhungu and my Mum Veronica Namaemba.
ACKNOWLEDGEMENTS

I sincerely acknowledge those who were involved in this research. Their support was instrumental to the success of the study.

I thank God for His Guidance and Faithfulness that enabled this project to see the light of the day.

I would like to extend my sincere gratitude to my supervisor, Dr. Casper Masiga, for his guidance and support at every stage of this exercise that made the completion of this project report possible.

I owe special gratitude to the Kajiado West sub-county people for their valuable information and permission to conduct this research in the sub-county. I particularly thank some members of the Oloyiankalani Girls School Community for the support. Finally, I would like to acknowledge my family for their unwavering support, encouragement and prayers which gave me the strength to pursue this course to completion. Special thanks to my husband and life partner Wilberforce Juma.
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# ABBREVIATIONS AND ACRONYMS

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<td>Arid and Semi-Arid Lands</td>
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<td>Community-Based Water Resource Management</td>
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<td>FAO</td>
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<td>FGD</td>
<td>Focus Group Discussion</td>
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<td>Global Architectural Development</td>
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<td>Government of Kenya</td>
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<td>GWA</td>
<td>Global Workspace Association</td>
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<td>IFAD</td>
<td>International Fund for Agricultural Development</td>
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<td>IWRM</td>
<td>Integrated Water Resources Management</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<td>NACOSTI</td>
<td>National Commission for Science Technology and Innovation</td>
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<tr>
<td>NGOs</td>
<td>Non-Governmental Organization</td>
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<tr>
<td>SDGs</td>
<td>Sustainable Development Goals</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>UNICEF</td>
<td>United Nations International Children’s Emergency Fund</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>WEDO</td>
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ABSTRACT

The purpose of the study was to analyze the determinants of Gender-responsive management of water projects and resources in Kajiado West Sub County, Kajiado County, Kenya. The objectives were: to establish the numbers of both men and women in the management of water projects in Kajiado West Sub County, to examine the influence of water needs for men and women on the management of water resources in Kajiado West Sub County, to determine the constraints faced by men and women in access to water resources in Kajiado West Sub County and to identify the best strategies that can help the inclusivity of genders in the management of water resources and projects in Kajiado West Sub County, Kajiado County, Kenya. The study was based on the Patriarchy Theory by Juliet Mitchell, 1975 which describes the totality of oppressive and exploitative relations that affect women. Also, the study was based on the Harvard Analytical Framework which underscores the inclusion of both genders in development projects as beneficiaries and actors. The study used a descriptive survey research design. This design was adopted because it describes things as they are without manipulation and facilitates data collection. The target population was all the residents of Kajiado West Sub County. The sample was made of 47 respondents from 5 villages. The study used two research instruments for data collection namely Focus Group Discussion (FGD) guides and interview schedules. The validity of the research instruments was determined by the researcher in collaboration with the supervisor to make sure that the instruments reflect the objectives. Instrument reliability was determined using the split-half method. The study has two types of data: Qualitative and quantitative data. Quantitative data were analyzed using descriptive statistics for example percentages, means and standard deviations. The qualitative data was analyzed according to themes and patterns formed. The findings revealed that although women are represented in the management committees of the water projects, their number is much less compared to that of men. Men and women have different water needs. Men on one hand typically require water for productive activities and other related activities while women use water for productive activities as well as household chore related roles. The findings revealed that cultural customs and illiteracy in water resource management are among the major constraints facing men and women in the management of water resources. Also, poor access to water sources was cited as another problem men and women face. The study recommended that involving both women and men in integrated water resources initiatives can increase project effectiveness and efficiency. Hands-on support to community-level work is required to support field staff in enabling women and men to work together in community decision-making. Also, gender training of a very practical kind is needed focusing on the roles and responsibilities of project managers and their partner organizations, backed up with ongoing support through networks and exchanges.
OPERATIONAL DEFINITION OF TERMS

The following are definitions to some of the terms used in the study:

**Access**: Refer to the availability and right to use water resources for both men and women.

**Control**: Refers to the ability to make decisions about and derive benefits from a resource and opportunities.

**Gender**: Refers to the properties that distinguish people on the basis of their reproductive roles by assigning certain attitudes, roles and responsibilities to women and men.

**Gender disparity**: Refers to differential treatment to persons on the basis of their gender.

**Gender Roles**: Refer to the assigned and projected responsibilities to different persons especially across the gender facet.

**Management**: Refers to the overall control and daily running of the water projects.

**Water needs**: Refer to the comprehensive demands for water as a resource including access, use, quality and sustainability.

**Water projects**: Refer to boreholes where the residents of the sub county obtain water for livestock and domestic uses from.
CHAPTER ONE
INTRODUCTION

1.1 Background to the study

Water is a crucial resource not just for the sustenance of all life but also for human development; we rely on it to grow food, produce goods, and generate energy. Moreover, water is a necessary element for healthy ecosystems affecting biodiversity, livelihoods, health, and education (UNDP, 2006). Research on women's water resources management involvement has been pervasive in developed countries like the United States, Canada, Britain, and Brazil (Tedla & Flintan, 2007). In Brazil, women play a very significant role in managing water resources. They are the primary beneficiaries; this has been made possible through deliberate legislation and other related measures at the local levels (Kabeer, 2005). In developing countries, women's role in the management of water resources can never be overemphasized (Damisa & Johana, 2007). Gender determines what is expected, allowed, and valued in a woman or a man in a given context. There are differences and inequalities between women and men in most societies in responsibilities assigned, activities undertaken, access to and control over resources, and decision-making opportunities (Helen, 2012). Water adds to the human population's social welfare and economic growth because many socio-economic undertakings depend heavily on access to clean and sufficient quality and quantity of water (WHO/UNICEF, 2004).

In India and Bangladesh, the factors hampering women’s significant commitment to managing rural water resources and projects have been extensively acknowledged in academic and strategic paper literature (Singh, 2008). Amongst others, women’s challenging domestic chores and the social-cultural hurdles they encounter remain the main limitations to their active participation (Fulong, 2010). The regulations replicate customs and traditions which form social organizations, establish male and female identities, rule the division of labour, and strengthen social order (Harris, 2009). The Integrated Water Resources Management (IWRM) in Pakistan and India openly challenges conservative, disjointed water development and management arrangements and emphasizes an integrated approach with much more synchronized decision-making
process across factions and scales. The system realizes that completely top-down, supply-led, strict, and segmental tactics to water management are indefensibly high economic, social, and environmental expenses on people and the natural setting (Vijayanthi, 2010).

In Africa specifically, many countries have continued to experience water shortage despite massive investments from international and local donors. According to Mkandla (2003), by the early 1990s, nine African countries, namely, Algeria, Botswana, Burundi, Egypt, Kenya, Libya, Rwanda, Mauritania, and Tunisia, had their per capita renewable water supply less than 1000 cubic meters annually. They were categorized to have an inadequate water supply. Past research shows that water systems are misused in many African countries, not well repaired, and so fail to provide reliable water supply services. Failure of water systems attributed to a lack of sustainable water management. There is negligence in improving and maintain the existing infrastructure (Singh, 2006).

According to Alouka (2006), the third goal of the Millennium Development Goals (MDGs) “Promote gender equality and empower women” co-opted into the SDGs deals with equality between men and women to promote better and sustainable development. From the World Women Conference held in Beijing in 1995, gender has been progressively used in global discussions and declarations (Galaty, 2013). The promotion of women’s and girls’ inference and status is essential for any country’s development (Guide, 2006). According to Majekodunmi (2006), power imbalances in many African communities’ places women in a disadvantaged position. Lack of access to formal power adversely affects their negotiating capacity to get water supply as required. To ensure equitable access to basic needs like water, there is a need for a gendered approach in community water projects management, which calls for proper gender analysis to understand the existing gender relations within the community entirely.

Integrated and viable communal management of natural resources is a significant component in the future direction and development of water resources (Cheptoo, 2006). There is awareness towards appropriate and sustainable water systems management, which has been combined with the promising, nonetheless viable positive attitude towards
sustainable management of the environment overall, and water resources, specifically Shilabukha (2008). The quest for development has led to a consensus that both men and women's participation not as objects of action but as equal partners is essential for sustained interventions. Gender imbalance has been underscored among the main aspects contributing to poverty, especially women in many developing countries (Buluku, 2013).

According to Agwata, Gathagu and Mulwa (2014), Kenya is restricted by a yearly renewable freshwater supply of only 647 cubic meters per capita and is categorized as a water-scarce nation. In Kenya's rural areas, only 60% of the people can access better drinking water sources (Keriko, Omoti & Kitetu, 2016). The time-consuming activity of fetching and getting water obstructs women, specifically from engaging in other income-generating activities and makes girls not attend school regularly (Buluku, 2013).

Aspects of gender have assured positive potential for improving water project management and ensuring water and water resources utilization. Kajiado West Sub-county has a grim problem of water scarcity due to mismanagement, deforestation, climate change, population explosion, and fewer water resources (Keriko, Omoti & Kitetu, 2016). The sub-county is served mainly by seasonal rivers, boreholes and wells, some of which dry up, worsening the problem (Morara, MacOpiyo & Kogi-Makau, 2014).

Water resources and projects are the pillar of agriculture, which is the Kenyan economy's backbone and presently signifies about 20 percent of the GDP (Buluku, 2013). Small-scale agriculturalists contribute over 75 percent of the total agrarian production in Kenya (USAID, 2007). According to Buluku (2013), women were estimated to own and control only one percent of the registered water projects. Only 5 percent of the titles are held joint names despite the women being in much more need of the resource. Kajiado county interior Maasai women's access to natural resources their husbands or male relatives generally control, especially water. A combination of gender-blind development interventions and policies underwater project management has resulted in resources, training, and technology. They are not directed to women who, as a result, have less access
to inputs and water projects and resources even though women are central to Kenya's agricultural productivity (Morara, MacOpiyo & Kogi-Makau, 2014).

The National policy framework and plan for natural resources management in the Arid and Semi-Arid Lands (ASALs) acknowledges that women are placed in a position where they are prospective due to their cultural and social roles. They endure most of the affliction related to environmental degradation, for example, climate change, desertification, land degradation and deforestation (Gachagu, 2013). Any attempts to improve access to water and ensure sustainable management of the resource should have the full participation of all stakeholders, including women. Despite the recognition of the important role played by women and the efforts that the government has made in enhancing women participation in water resources management; there is an existing gap between written intentions of enhancing women participation in water resources and projects management and the practice in Kenya and more specifically in Kajiado County. It is against this background that this study was conducted to investigate how women are participating and the factors hindering their effective participation in water resources management.

1.2 Statement of the problem

There are conflicts over water too much for animals in most arid areas, too little for household use, or too polluted that may harm people, food production, and the environment. Practical experience demonstrates that effective, efficient, and equitable water resources management can only be achieved when both women and men are involved in consultation processes and managing and implementing water-related services.

The women ought to be more included in the management of these resources. Adopting a gender-based approach in managing water resources would help reduce conflicts arising from resource use. Due to gender-sensitive water projects, it offers opportunities to address the inequalities between women and men in access to resources, services, and influence and promotion empowerment among women.
The government of Kenya and other stakeholders have insisted on the inclusivity in water resources management and projects because both men and women use water differently. This is evident in the policy documents from the Kenya Constitution 2010 to the policy frameworks in the ministry of water and the county departments of water. The inclusivity and attention, in reality, face a myriad of concerns and issues. Studies by Gachagu (2013), (Morara, MacOpiyo & Kogi-Makau, 2014) and (Kindiki, 2015) have been conducted on gender-responsive management of water resources.

However, the studies have been done in other places with different economic and socio-cultural dynamics compared to Kajiado County. The studies also do not delve into the different roles in the management of the resources by gender. In Arid areas, water needs for both men and women are varied: men need water for livestock keeping, while women need water for household function (washing, cooking) and the livestock. This is why the researcher thought it was important to investigate how women participate and the factors hindering their effective participation in water resources management.

1.3 Research objectives

The study was guided by the following objectives

i. To determine the numbers of both men and women in the management of water projects in Kajiado West Sub County, Kajiado County, Kenya.

ii. To establish how the water needs for men and women influence the management of water resources in Kajiado West Sub County, Kajiado County, Kenya.

iii. To determine the constraints faced by men and women in access to water resources in Kajiado West Sub County, Kajiado County, Kenya.

iv. To identify the best strategies that can help the inclusivity of genders in the management of water resources and projects in Kajiado West Sub County, Kajiado County, Kenya.
1.4 Research questions

i. Which are the numbers of men and women in the management of water projects in Kajiado West Sub County, Kajiado County, Kenya?

ii. What are the water needs for men and women in Kajiado West Sub County, Kajiado County, Kenya?

iii. Which constraints do men and women face in the access of water resources in Kajiado West Sub County, Kajiado County, Kenya?

iv. What are the best strategies that can ensure inclusivity of all genders in the management of water resources?

1.5 Justification and significance of the study

The largest category of water users globally, women have centuries of experience in managing community water resources and are a huge potential resource for the planning and implementation of water projects. The value they place on water is vital in identifying the most cost-effective solutions to management-related problems. The study was done because when men and women share the costs, burdens, and benefits of water resources management, the outcome is deepened community involvement and optimum use of time, money, and resources.

This study aimed to appreciate the various perspectives in Arid and Semi-Arid areas water projects and resources management. Therefore, it would enhance the acknowledgment of indigenous knowledge as a substitute method of contributing to water resources management at all levels.

It is anticipated that this study's findings would help the governments at both national and county levels formulate policy on smallholder relation to water resources development projects. Gender mainstreaming is critical in ensuring increased productivity among smallholder water resources manager. Therefore, the study would offer policy recommendations on how gender mainstreaming can contribute to increased cooperation
and better livelihood, particularly in areas where gender discrimination is more rooted in people's culture. This would contribute to increased ownership of water projects by the women who are the primary beneficiaries.

The study’s findings can be replicated in other areas more or less as Kajiado, such as Turkana or Mandera, where women walk for long distances looking for water. The study findings can lead to the suggestion of effective and efficient means of accessing water resources. Consequently, the time consumed in looking for water can be channeled to other economic activities that will improve these households' livelihoods. Finally, it is hoped that these study findings would add to the scarce literature on the subject in future research and be a foundation of reference to all players in water projects and resources.

1.6 Scope and limitations of the study

The study was geographically confined to the area within Kajiado West Sub County in Kajiado County. The study's focus was on the assessment of government and NGO water project management in this area. The investigation variables included gender roles, gender needs of water, and constraints faced by men and women in water project management. The study scope included views of both men and women. A limitation encountered during the study was on the methodology of getting responses from the respondents. The researcher had no control over the accuracy of the responses given, but this was triangulated with data collected from the special interest group.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the reviewed literature on some of the studies carried out on gender disparities in the management of water projects and resources. The section presents the roles of men and women in managing water projects, water needs, and management of water projects, Constraints faced by men and women in access to water resources. This section also has the theoretical framework and conceptual frameworks for the study. The literature was reviewed thematically.

2.2 Roles of men and women in the management of water projects

Gender does not simply refer to women or men, but to how their qualities, behaviors, and identities are determined through socialization. Gender is generally associated with unequal power and access to choices and resources. The different positions of women and men are influenced by historical, religious, economic, and cultural realities. These relations and responsibilities can and do change over time. It has become increasingly accepted that women should play an important role in water management and that this role could be enhanced through gender mainstreaming (Allendorf, 2007). The importance of involving both women and men in the management of water, sanitation, and access-related questions has been recognized at the global level. Starting from the 1977 United Nations Water Conference at Mar del Plata, the International Drinking Water and Sanitation Decade (1981-90) and the International Conference on Water and the Environment in Dublin (January 1992), which explicitly recognizes the central role of women in the provision, management, and safeguarding of water.

Women and men share different roles and responsibilities concerning water use and management of water resources or projects. These divergent roles influence water resources relations and how changes in the water projects affect men and women inversely. According to Wanjala (2009), women are not authorized to partake in water
resource and project management. Also, there are various additional reasons: poverty, education, cultural beliefs, and gender disparity, all of which make females inactive in water projects and resources management. It is imperative to appreciate the existent gender roles and cultivate action plans to decrease these differences' harmful effects. This can be done through a critical analysis of the gender roles in water resources management as what this study sought to address.

Gathagu (2013) conducted a study on the challenges and policy options for enhancing women’s participation in water resources management in Kajiado County. The research established that gender disparity on access and control of productive resources has been more pronounced in developing countries where men have more control over user rights to abundant resources than women and their children. The study established that gender roles were not evident in terms of expectations for both genders in water project management. The inadequate user rights by women limit their water resources management potential. This presents a gap in terms of the lack of clarity on roles and information about the roles of each gender in the management of the resources. This shows a gap in which the current study sought to fill by understanding the roles in water resources management by gender, in line with women’s empowerment in water project management tasks like control over decision making on land use. According to a study by Agwata, Gathagu and Mulwa (2014) is the primary source of livelihoods and power and status. This study highlighted the importance of water project management and control of women’s economic empowerment. The survey by Agwata, Gathagu and Mulwa (2014) did not assess the actual numbers of women and men who are in control positions in the management of water resources, a gap that this current study seeks to fill. This is the case, especially in countries that depend on agriculture for their livelihood and Sub-Saharan African countries are not exceptional.

2.3 Water needs for men and women and the management of water projects

Water is an important energy source, especially in the light of hydroelectricity and other forms of energy. In domestic circles, water has found the most important use for men and
women. It is useful in cleaning, washing, and maintaining general personal and household hygiene and food preparation. According to Singh (2006), women are knowledgeable about the availability, quality, reliability, and purity of water sources across household and community contexts. This depicts the need for women’s involvement in water management for improved water supply.

According to Lusuva (2009), domestic use of water is frequent and common in all communities. The emphasis on access to clean and safe water is pegged on the common and important use of water—drinking (Lusuva, 2009). This means that the need for clean water is non-negotiable, no matter which part of the economic scope is focused on. However, the needs of water by gender might vary depending on the nature of work done by both men and women. The study by Lusuva (2009) does not address water needs by gender, therefore leaving a gap that the current study sought to answer.

According to a study by Tedla and Flintan (2007), women in Ethiopia have developed precious knowledge, experience, and skills of fetching, handling, and using water resources through their daily roles and responsibilities within the household. This means that most women's water needs are centered around household responsibilities. Additionally, Okunade (2008) suggests that it is important to involve the women in assessing and solving their water problems since they are the ones who interact with their own environments and carry out activities that have an impact on the ground. In this context, women know what is in their best interest, and therefore, for any water project to be accepted and successful, it has to welcome women aboard. Their studies, however, do not distinctly show the water needs assessment by gender, a gap which this current study seeks to address by delving into the different water needs for men and women in Kajiado County.

According to a study by Majekodunmi (2006), at the centre of gender mainstreaming concerning water resource management is men and women's involvement, taking into account their roles, responsibilities, and underlying gender and power balances. It is about gender equality and equity. Consequently, as a condition for inclusive and people-centered
development, the Gender and Development (GAD) approach has focused on eliminating socioeconomic inequalities between men and women. Indeed, concerning the water sector, the GAD approach has informed gender inclusivity. The recognition that men and women have different participation levels in water resource management formed the platform for the discourse in mainstreaming gender in water management (GWA and UNDP, 2006).

According to a study by Kindiki (2015), producing certain crops such as rice requires regular water use, as exemplified in basin irrigation in Mwea irrigation in Kenya. Men and women also use water for agricultural purposes in two significant ways: crop and animal husbandry. On the one hand, in areas with insufficient rainfall or when crop production is not limited to rains, water is used for irrigation. In arid and semi-arid regions globally, crop production has been boosted through irrigation, where water has found considerable use. Across Kenya, several irrigation schemes sustain crop production in the event of rainfall shortage. Smallholder rice production in the Kano Plains in Kenya has shown similar water use for both men and women (Kindiki, 2015). The study acknowledges that water needs by gender should be investigated. This is based on the findings that men and women were at variance in responses concerning their water needs. However, this study does not account for the needs of water by both men and women, which governs the management and access to the resource, a gap that the current study seeks to fill by a depth analysis of the water needs by gender in the county. In Kajiado County, the main areas for irrigated cropping are along the Ngong Hills, along the Lolturesh River in the Kimana area, in the Kilimanjaro foothills Namanga (Mukuna, Kamuru & Bebe, 2015).

Livestock keeping involves multiple water use. Men and women have found water useful for livestock. Nomads and pastoralists such as the Maasai move from one place to another in such water for their animals, illustrating the importance and use of water in animal husbandry (Mukuna, Kamuru & Bebe, 2015).
2.4 Constraints faced by men and women in access to water resources

According to a study by Syed (2010), several aspects are hindering sustainable development and access to water projects and resources in Israel. They include the ever-increasing water demand, which has been deepened by the increase in population and concurrent growth of economic activities requiring water as an input such as in hydropower generation, irrigated agriculture, industries, tourism, and mining. Water scarcity is further compounded by the degradation of water sources and their catchments and depleting the existing natural storage capacity. In South Africa, water project resources' degradation can alter gender responsibilities and relations in homes and communities. For example, water degradation increases women’s time for labor-intensive household tasks, such as having to walk long distances to collect water (Sedibelwana, 2008). The inadequacy of water resources, such as dams and other reservoirs, exacerbates water deficiency even further. However, the study by Sedibelwana (2008) disagreed with findings of yet another study by Majekodunmi (2006), which established that there were no constraints based on gender in terms of access to and control over water resources in Obudu Plateau, Nigeria. This presents a gap in the findings' inconsistency and necessitates the need to carry out the current study to establish more true and current findings.

A study by Majekodunmi (2006), focused on gender mainstreaming in the management of water resources in Nigeria found that women received less than 10% of the credit for smallholders and only 1% of the total credit agricultural sector. Improving the access of rural female farmers to productive resources such as land, water and finance can significantly enhance female farmers’ productivity, food security and sustainable development. In addition, access by female farmers to the management role of water projects and resources enables them to manage their environmental and socio-economic challenges in agriculture on a sustainable basis (Buor, 2004).

According to a study carried out in Kenya, Kithome (2012) recorded 15 community water project visits for women against 5 for men. The results revealed that targeting men for water project management is based on erroneous assumptions. Men are farmers, and
secondly, that whatever they learn in community forums will effectively be shared with the family members. In Kenya, community water project management has been decentralized to the village and community level. The decentralization of communal water projects is aimed at improving farmer’s access to these services. However, water project decentralization has been hindered by accessibility to all genders (Kithome, 2012).

In many African societies, the men's and women's positions, interests, and concerns are diverse because of natural inconsistencies. Society's conception of male and female roles and qualities places the two groups in a definite association with one another. Another underlying factor causing the diverse priorities of men and women concerning water and sanitation programs is the low value placed on women's time (Njiriri, 2013). According to the study by Njiriri (2013), women have traditionally been allocated most of the domestic chores, such as cooking, disposing of human waste, and drawing water to the point that their public life is severely limited. This has constricted their public life, exacerbated further by the fact that men hold positions of authority. In Kajiado west sub-County still there exists a gender imbalance in water resources and project management. This is due to the reason that women are still considered as juniors to men in society due to cultural predispositions. In contrast, men are considered the heads of the homes and the main decision-makers in the domestic and community levels.

Kenya’s population explosion lately at a 5.5 percent per annum has led to incredible stress on the natural resources, particularly water resources, where sharing is now a common phenomenon. Invasion of land in fragile areas such as wetlands and conservation areas has led to desertification in the county and breakdown of natural ecological cycles. The ever increasing demand for available water resources has often led to human-wildlife conflict and environmental degradation (Mkandla, 2003). This study doesn’t interrogate the constraints men and women face in accessing water resources, thus leaving a gap that the current study sought to fill.

According to a study by Mwangi (2015) development and management of water resources, it is still rare for implementing organizations and program staff. For many
years’ programs dealing with irrigated agricultural, domestic water supply, environmental sanitation, and industrial development have seen the household as the lowest homogeneous unit of production-consumption and decision making. Yet in most cultures, men and women, often supported by children, do different work, have different access to resources, and different areas in which they can make decisions and exercise control over resources and benefits (UNDP, 2004). The study by Mwangi (2015) left a gap by establishing that there are constraints inhibiting access to water resources for both men and women; however, it does not highlight and analyze those constraints. This study sought to fill that gap.

2.5 Strategies of ensuring gender inclusivity

The Sustainable Development Goals (SDGs) have greatly improved water supply. However, still scores of women carry water throughout their whole life and consequently are kept out of school and away from other economic activities and other growth opportunities (Omari, 2010). Gender disparity is an important hurdle in the achievement of the SDG targets. Realizing the goals will be difficult without diminishing the gap between women and men in terms of capacities, access, and control of resources and opportunities (UNDP, 2006). According to Mayoux (2000), in the developed world, several serious misconstructions around gender concerns exist obstructing the effective implementation of gender-related policies and strategies. Therefore, strategies of ensuring gender inclusivity must be interrogated to ensure effectiveness in access to the resources.

According to Bennett (2008), women encounter more significant difficulties than men in accessing water on a large scale for irrigation purposes or livestock breeding. This is because access to irrigation systems is often contingent on land tenure; consequently, there is a general assumption that women’s water needs are subsumed under men or equate them with domestic purposes. Also, women are often excluded from user associations or participate only marginally. Men, in particular those from more affluent households, tend to have more external ties, including political connections to irrigation officials, and to be more active at water user association meetings giving them more significant influence
over water management (Bennett, 2008). This means that the relevant stakeholders should develop better strategies to ensure inclusivity by gender in the direction of water resources.

Damisa and Yahana (2007), researched Nigeria and discovered that land tenancy was a factor that deters women and the youth from engagement in agriculture and management of water resources. Almost 50% of the female operated farms were less than 50 acres, while only 285 of male managed farms were less than 50 acres according to the same research. Even in the pricing of land, gender was a key factor. The study recommended the encouragement of land ownership by women as one of the strategies to improve gender disparity situations in the management of water resources. However, the course did not interrogate different strategies as well as the practicality of the system, as mentioned above.

A study by Sedibelwana (2008) indicates that most development plans and policies of African countries have remained blind in terms of gender. The regions’ planning and policy-making processes have failed to appreciate that women and men have diverse responsibilities and that their needs and constraints are also dissimilar. The study projected that women in sub-Saharan Africa utilize nearly eighty percent of all water projects but own less than ten percent of them. This means that women, just like men, contribute a lot to establishing and maintaining water resources and projects. Strategies to improve gender inclusivity should thus be researched and understood a gap this study sought to fill.

2.6 Gaps in literature review

Although numerous studies have been carried out in Kajiado County of Kenya and also in other areas globally. For example, Allendorf (2007), Amina (2006), Ebila (2003) and Nzioka (2009), looking into the issue of gender disparity in the management of water resources, there exist many gaps in water projects management. Allendorf (2007) in Nepal established that living on the edge, women's role in the management of environment and development resources was still very limited since the men took up most roles. Ogato et al. 2009) in Ethiopia-Improving gender access to productive resources: a case study of
three rural communities in Ambo district in Ethiopia established that fewer women in the society partook in the management of water resources, especially decision making roles. The above studies have been conducted in other countries and parts of the world with different cultures and views towards gender inclusion in managing resources. Thus a comparative study needs to be done in Kenya to investigate the factors accounting for the gender disparities in water resources management. Nzioka (2009) established that several factors militate against women's inclusion in all levels of water projects and resources management. These factors include the different gender roles, different water needs, and challenges associated with culture. The study by Nzioka (2009) does not investigate the influence of the identified factors, thus presenting a conceptual gap that the current research seeks to fill. Women’s effort in managing water resources is hidden in the communities’ strife to acquire the resource. Partnerships are to be made within community members and other organizations, both government and non-governmental, to achieve goals in managing water resources. Water use and conservation should be planned together since community members are at the center of development. Maintaining motivation and enthusiasm should be focused on as well.

2.7 Theoretical framework

Kombo and Tromp (2006) define a theoretical framework as an assemblage of interconnected ideas based on theories. The study was guided by the patriarchy theory and the Harvard Analytical Framework. This study was based on Patriarchy Theory, as proposed by Juliet Mitchell in 1975. The patriarchy theory is a set of social associations between men and women, which have a substantial base and which nevertheless graded, establish, or create interconnection or harmony between men, which enable them to dominate women. It is a male authority system that subjugates women through its social, political, and economic foundations. The substantial base on which patriarchy is based lies most essentially on men’s authority above women. This authority or control is sustained by disallowing women access to essential economically productive resources and by limiting women’s sexuality. The theory describes the totality of oppressive and
exploitative relations that affect women. The patriarchy theory aims to address the reasons behind the gender disparities in the management of resources. The patriarchy theory was found relevant to this study because the study is based on gender role stereotypes in access to and control of water projects and resources and critical information expressively affect female’s progression in water projects and resources management. Women in Africa and specifically in Kenya do not have a say over land and water resources as a factor of production even though they are farm caretakers, men are the majority landholders. The focus on gender relations is instrumental in understanding the factors that influence access to and the role of men and women in water resource management. This is because gender relations between men and women yield differential power relations, which may influence water resource management. The gender roles explained in the framework situate men and women in different positions, influencing the management of key resources such as water. In this regard, the theory helped explore men and women's roles in water resource management in Kajiado West Sub County.

On the other hand, the Harvard Institute for International Development developed the Harvard analytical framework in partnership with the United States Agency for International Development (USAID) and was published in 1985. The Harvard Analytical Framework is often referred to as the Gender Roles Framework or Gender Analysis Framework. The framework was adopted because it aims to help planners design more efficient projects and improve overall productivity. This theory is relevant because it would map out the work and resources of men and women in a community and highlight the main differences, which are prime areas of study in the current research. This enables project planners and policymakers to make an economic case for allocating resources to women and men. It is used in adopting a sustainable livelihoods approach to poverty reduction. The Figure 2.1 presents Harvard analytical framework.
Figure 2.1 Gender analysis Framework

Activity profile
Who does what?

Access and control profile
Who has what?

Analysis of factors and trends
What is the socioeconomic context?

Programme cycle analysis
What gender considerations are needed for the project?

What men and women (adults, children, elders) do and where and when these activities take place.

Who has access to and control of resources and services and decision making?

How activity, access, and control patterns are shaped by structural factors (demographic, economic, legal and institutional) and by cultural, religious and attitudinal.

Gender-sensitive project planning, design, implementation, monitoring and post-evaluation.
2.8 Conceptual framework

Figure 2.2 gives a pictorial presentation of the interrelatedness of selected independent variables and management of water projects.

**Independent variables**

- **Determinants**
  - **Gender roles**
    - Participation of both men and women in the management of water resources and projects
  - **Water needs**
    - Men versus women water requirements
  - **Constraints**
    - Challenges
    - Social problems

**Intervening variables**

**Dependent variables**

- **Gender responsive management of water resources and projects**

**Figure 2.2 Conceptual framework**

Figure 2.2 gives a pictorial presentation of the relationship between the independent variables and the dependent variable. In this case, the independent variables are gender roles, water needs, and constraints, and the dependent variable is gender disparities on
water project management. The framework also shows some intervening variables which may influence the findings of this study.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explicitly describes how data was obtained, processed, analyzed, and interpreted to fulfill the research objectives and answer the subsequent questions. The methodology elements in this section were the research design applied, target population; sampling design and procedures; the types of data; research instruments; and data processing and analysis techniques. Details of these were discussed in the succeeding sections.

3.2 Research design

The study adopted a descriptive survey research design to undertake a gender assessment of water resources management in Kajiado West Sub County. According to Oso and Onen (2009), this research design presents an oriented methodology used to investigate populations by selecting samples to analyze and discover occurrences. It describes events as they are and facilitates rapid data collection and the ability to understand the sample population. The study employed a descriptive survey design, which was deemed appropriate because data analysis from the people’s perspective permitted the researcher to recognize their insights about gender and water project management.

3.3 Location of the study

The study site was in Kajiado West Sub County in Kajiado County. Kajiado West Sub County borders Kajiado East and Kajiado Central. The researcher chose Kajiado West Sub County because the location faces water challenges as the place is classified as ASALs and most of the dwellers are the Maasai community. Some of the economic activities common in Kajiado West Sub County, which necessitate the need for water, include, to a large extent, livestock keeping and limited extent subsistence farming. The community is generally patriarchal. Most of the decisions are made by the male who is
considered superior to women. Consequently, gender and water project management has not been pronounced because of the different roles that men and women of Kajiado West perform (GoK, 2009).

3.4 Target population

According to Oso and Onen (2011), the target population is the total number of subjects or the study’s entire interest environment. The target population consisted of all the residents of Kajiado West Sub County and the 54 water projects in the sub county's five villages. The unit of analysis was the individual woman or man in households.

3.5 Sample size and sampling procedures

The sample size and sampling procedures is presented in Table 2.1.

<table>
<thead>
<tr>
<th>Table 3.1 Sample size and sampling techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td>Borehole managers</td>
</tr>
<tr>
<td>Respondents (villagers)</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

A sample is identified as a representative part of a whole. According to Mugenda and Mugenda (2003), 20 percent to 30 percent of the targeted population is sufficient to generalize. For this study, 30% of the target population was adequate to generalize because it represented the target population. Purposive sampling focuses on a particular characteristic of a population that is of interest to the researcher. For this study, five villages involved in water projects and resources were purposely selected. Seventeen key
informants (borehole managers) from each water project were selected for interviews using purposive sampling.

Focus Group discussions encompassing between 5-10 participants were conducted with participants from the five villages of the sub-county. The researcher further selected six people from each of the villages to also form part of the sample. These persons were selected through simple random sampling in sets of 3 males and 3 females for each village. All the village residents' names were written on pieces of paper, folded and thoroughly mixed for selection. The selection was made without replacement until the 6 names for each village were identified and repeated for all the 5 villages. According to Oso and Onen (2011), a sample drawn through simple random sampling is unbiased because it accords each member of the population an equal and independent chance of being picked for inclusion in the select sample.

3.6 Research instruments

In this study, two sets of research instruments were used to collect data: Focus Group Discussion (FGD) guide and interview guide. The FGD guide had two sections, whereby section A collected the demographic characteristics of the respondents. In contrast, section B had questions designed to give details on gender disparities in the management of water projects in Kajiado West Sub County. The interview guide of the key informants had questions regarding gender issues and water resources management in the sub-county. Interviews were used to collect data because they permit much greater details through the respondents' careful motivation and the maintenance of a rapport with the respondents. The interview also provided a triangulation angle to overcome challenges from solitary reliance on one instrument for data collection.

3.7 Validity and Reliability of research instrument

Validity is defined as the extent to which the data analysis results represent the phenomenon under research (Orodho, 2004). For this study, content validity is the extent to which a test can stand by itself as an adequate measure of what it is supposed to
measure. The interview and focus group discussion guides were formulated under the guidance of the researcher’s supervisors to ensure their content validity. Face validity was enhanced by conducting a pilot study on one non-sampled village to clarify the instruments’ ambiguous items.

According to Mugenda and Mugenda (2003), a research instrument’s reliability is the degree of consistency of an instrument in availing the same or similar results when used repeatedly. The researcher adopted the split-half method to test the reliability of the instruments. The method involves scoring the odd versus the even items of the test separately for different instrument categories and then computing the Karl Pearson product-moment correlation coefficient for the two sets. Pearson’s Correlation Coefficient Formula will be given as follows:

\[
r = \sqrt{\frac{N\sum XY - \sum(X) \cdot \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \cdot \sqrt{N\sum Y^2 - (\sum Y)^2}}}
\]

Where:
\(\sum X\) = the sum of scores in x distribution.
\(\sum Y\) = the sum of scores in the Y distribution.
\(\sum X^2\) = the sum of the squared scores in the X distribution.
\(\sum Y^2\) = the sum of the squared scores in the Y distribution.
\(\sum XY\) = the sum of the product of paired X and Y scores.
\(N\) = the number at paired X and Y score.

From the results, split-half reliability coefficient was calculated for the village elders’ questionnaire using Spearman’s-Brown Prediction formula as follows:

\[
r = \frac{2r}{r + 1}
\]

Where \(r\) = reliability of the coefficient resulting from correlating the odd items’ scores with the scores of the even items. If the correlation coefficient is closer to +1 or -1, then the variables are closely related. According to Orodho (2004), a reliability coefficient of
around 0.8 is sufficient enough to judge an instrument as reliable for use in conducting a study.

3.8 Data collection procedure

The researcher applied for and obtained permission to conduct a study from the National Commission for Science Technology and Innovation (NACOSTI). A research permit was also obtained from the Kajiado County Water Department and the Kajiado West sub-county Water officer. According to Kumar (1987), Focus Group Discussion (FGD) is a rapid assessment, semi-structured data gathering method. A purposely selected set of participants gather to discuss issues and concerns based on a list of key themes drawn up by the researcher. For this study, five (5) gender-separated focus group discussions were conducted consisting of 3 men only and 3 women only FGDs. A focus group discussion guide was used as the instrument for data collection. It mainly focused on key areas exploring the perceptions, experiences and understanding of gender in water resource management. A moderator will do facilitation of the FGDs while a note-taker records the discussions in a notebook. The researcher in person conducted the key informant interviews.

3.9 Data analysis

The primary data obtained from the field was cleaned and edited to minimize or do away with errors made by respondents. Data were coded to put responses of questions into specific categories reducing it into manageable summaries. The quantitative data were analyzed using descriptive statistics like percentages, means, and standard deviations. They were presented in tables, charts, and graphs. The qualitative data from the key informant interviews and focus group discussion was analyzed according to themes and patterns. They were presented in the form of narratives and verbatim quotations. This is because the study sought to solicit data that is qualitative. The findings from the FDGs were presented in tables and charts, while those from the interviews were presented in the form of text and verbatim quotes.
3.10 Logistical and ethical issues

This research dealt with people, and therefore the researcher considered ethical issues. Before commencing the research, a permit was sought from NACOSTI. Respondents were assured of their confidentiality at all times in that their names were neither included anywhere in the instruments nor used for data collection nor disclosed at any time. The researcher obtained consent from all relevant authorities and subjects participating in the study because participation was their own volition.
CHAPTER FOUR
FINDINGS AND DISCUSSIONS

4.1 Introduction

This study aimed to investigate the determinants of gender-responsive management of water resources in Kajiado County, Kenya. The factors considered included gender roles, water needs by gender, constraints that men and women face in managing water resources, and strategies to ensure all. The findings and data analysis is discussed under the following sub-headings.

4.2 Response rate

The study involved 17 borehole managers as key informants and 30 residents of Kajiado County who participated in focus group discussions. The return rate information is shown in Table 4.1.

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Sampled</th>
<th>Returned</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borehole managers</td>
<td>17</td>
<td>17</td>
<td>100.0%</td>
</tr>
<tr>
<td>Residents</td>
<td>30</td>
<td>27</td>
<td>90.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>47</strong></td>
<td><strong>44</strong></td>
<td><strong>94.0%</strong></td>
</tr>
</tbody>
</table>

The findings in Table 4.1 show that the study recorded a 94% response rate. This response rate was considered suitable for use. It was found to agree with Mugenda and Mugenda (2003) affirmation that seventy percent response rate and over is considered excellent. The three residents who never participated in the focus group discussions were not available when the sessions were conducted, and the researcher could not trace them.
4.3 Demographic characteristics of the respondents

The first item to be analyzed for this research was the respondents' general characteristics in an attempt to understand them. The demographic characteristics of the respondents who participated in the study were under the following subtopics:

4.3.1 Gender of the respondents

The study first wanted to establish the gender of all the respondents. This was meant to establish whether the views of all genders were accommodated in the study. This was in recognition that one’s gender is very significant because the study is gender aligned and all the variables are affected by gender. The findings are presented in Table 4.2.

Table 4.2 Gender of respondents

<table>
<thead>
<tr>
<th></th>
<th>Borehole managers</th>
<th></th>
<th>Residents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Male</td>
<td>16</td>
<td>94.0%</td>
<td>8</td>
<td>30.0%</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
<td>6.0%</td>
<td>19</td>
<td>70.0%</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>100.0%</td>
<td>27</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The findings indicate that a large majority (16) (94%) of the borehole managers were male gender. This indicates a major disparity in terms of the management roles played by men and women. Further findings show that the majority (19) (70%) of the residents who participated in the FGDs were female. This is in comparison to 30% who were men. This finding concurs with Wanjala (2009) findings, which revealed that the study had many more female participants than the male ones. This finding indicates that women are more likely interested in water matters despite being less involved at the management levels.
4.3.2 Age of respondents

The respondents were requested to indicate their ages. This item was considered for all respondents because according to Chan (2008), a person’s age grouping can be a pointer to their know-how level, skills, and physical maturity rate. The findings are presented in Table 4.3.

Table 4.3 Distribution of students by age

<table>
<thead>
<tr>
<th>Age bracket</th>
<th>Borehole managers</th>
<th>Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>25-34</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>35-44</td>
<td>2</td>
<td>12.0%</td>
</tr>
<tr>
<td>45-54</td>
<td>8</td>
<td>47.0%</td>
</tr>
<tr>
<td>55-64</td>
<td>6</td>
<td>35.0%</td>
</tr>
<tr>
<td>65 and above</td>
<td>1</td>
<td>6.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

The findings in Table 4.3 show that many (47.0%) of the borehole managers were aged between 45 and 55 years, while only 1% were aged 65 years and above. This implies that the borehole managers are the elders who are deemed mature enough to handle the pressures that come along with their job. This finding agrees with that by a study conducted by Syed (2010) who found that most respondents were aged between 45 and 54 years old, with only very few above 60 years of age.

Further findings show that many (48%) of the respondents were aged between 35 and 44 years. Seven percent of the respondents were aged above 65 years of age. This finding implies that the respondents were mature enough to understand the county’s factors affecting water project management.
4.3.3 Highest level of education of the residents

The residents were requested to indicate their highest levels of education. This item was considered given that one's education level can be an indicator of their research and comprehension of issues (Sedibelwana, 2008). The findings are presented in Figure 4.1.

Figure 4.1 Highest level of education of residents

Figure 4.1 shows that many (37.04%) of the residents had primary education level as their highest education level and 30% had secondary level education as their highest level of education. Only 7.41% of the residents had a master's as their highest level of education. These findings imply that most of Kajiado County residents have low levels of education as registered at primary school levels. Only very few residents in the sub-county had
attained higher levels of education like degrees and masters. This finding agrees to those of studies by Kithome (2012) and Mwangi (2015), who found that many residents had education only up to lower secondary school and primary school levels.

4.3.4 Marital status of residents

The residents were required to indicate their marital status. This information would be useful to the researcher in giving insights on the experience they had and their understanding of the issues under study. The data is presented in Figure 4.2.

Figure 4.2 Marital status of the residents
The findings in Figure 4.2 show that the majority of 70% of the respondents were married while only 7% of them indicated being divorced. This implies that the respondents clearly understood the water needs from a household perspective, given most of them were married. This finding also implies that most people in Kajiado County are in a marriage. Marriage is a key life commitment to understanding the issues affecting society like gender alienation in management issues. The findings disagree with Bynner and Joshi (2008), who found that many parents monitor their children’s homework. This finding agrees with that by Njiriri (2013), who established in her study that most of the respondents were married.

4.3.5 Occupation of the residents

The residents were also required to indicate their occupations. This information was important since it would give insights relevant to the study factors like water needs. The findings are presented in figure 4.3.

![Figure 4.3 Occupation of the residents](image)

The findings in Figure 4.3 show that many 33% of the respondents indicated they are farmers and 30% indicated they are teachers. Only 7% of the respondents indicated that they were civil servants. This implies that they have in the same manner that the residents
of Kajiado County have different occupations, so diverse are their water needs too. The findings concur with that by Mwangi (2015) and Mwaura, Kiringe and Warinwa (2016), whose studies established that many of the respondents in his study in Kajiado County were farmers and teachers. However, the findings disagree with that by Gathagu (2013), whose study also carried out in Kajiado County found that the majority of the respondents were self-employed in business.

4.4 The numbers of men and women on management of water projects in Kajiado west Sub County

This first objective of the study was to determine the numbers of both men and women in the management of water projects in Kajiado West Sub County, Kajiado County, Kenya. The question under this objective was covered using 8 items in the 3 sets of questionnaires, subsequently analyzed through frequencies under the following discussion. The findings showed that there were more men involved in the management of water resources compared to women. This was indicated in the key informants’ responses on the item “who manages water in the village.” The findings are presented in Figure 4.4.

Figure 4.4 Managers of water projects by numbers

The findings in Figure 4.4 show that the majority (81%) of water project managers were men. Only 19% of the project managers were female. This finding implies a major disparity in gender roles between the managers of the water projects in the sub-county.
This perhaps could be attributed to the fact that the area is inhabited by the patriarchal Maasai community, which assumes that men should take up all leadership roles. This finding agrees with Lusuva (2009), whose study in Tanzania established that most water project managers were men. The findings imply that societal norms and traditions have a prime place in the management roles in certain communities like the Maasai community. The finding disagrees with that of Harris (2015), who established in his study that there was a 50% gender parity in the management of natural resources. This implies that societal norms and practices could hamper problems in the management of water resources.

The study also sought to find out who manages the water projects in the sub county from the residents themselves. The findings are presented in Figure 4.5.

![Figure 4.5 Involvement of men and women in management](image)

The findings in Figure 4.5 show that the majority (52%) residents indicated that men are more involved in managing water projects in the sub-county. Fifteen percent indicated that both men and women are involved in the management of water projects. The finding implies that society recognizes the role of everyone in fostering development in their
localities. This finding concurs with that by Kithome (2012) and Gathagu (2013), whose study in the Mbiuni location of Machakos County established that men are mostly involved in managing water projects in the area. The involvement of women in water resources management and projects is important to ensure effectiveness in the whole management.

The findings showed that women had the major obligation of managing domestic water supply, cleanliness and hygiene. In our focused group discussion, Alice 45 years old and Sanaipei 36 years old, (not their real name) said:

“In this sub county, women have customarily been involved in carrying and fetching water to the homes frequently since men are out with animals or other duties.”

“All women in the society are concerned with the availability of water in the house. When the water is polluted, the woman usually lets other family members know.”

The findings show that women are more involved in uses of water and water resources in the sub-county, especially for domestic uses. However, the women are not very much engaged in managing water projects, as evident in the numbers of men that surpass women in management by all proportions. The women have a role in establishing the suitability of water sources in terms of replacing clean water. It is similarly apparent that women are in close interaction with water sources because men are often out with animals. Because of the role of ensuring water availability in the homes, women often go to the water resources for fetching water. This experience and role make the women have amassed substantial knowledge about water resources and projects such as location, quality of water and storage methods as demonstrated in these quotes by John (34 years old) and Linnet, 54 years old (not their real name):

“Because we women go to fetch water daily; we get to understand the best sources of water in the sub county.”
“Men manage the water projects as per the requirements of our culture but it is us women who fetch the water and use it in our homes. This means that we are the main consumers of the resource.”

Therefore, this finding places women in a suitable position to be included in water management based on their awareness of major issues around the management of water and water projects. They are holders of vital knowledge on water resources and consequently, essential participants in water project management. Furthermore, the results showed that women and girls are the primary users and fetchers of water and the caretakers of household cleanliness. In Kajiado West Sub County, the fetching of water includes women and girls sacrificing their valuable time and efforts. This was brought out by a quote by Saidimu (not his real name), one of the Focus Group Discussants below.

“Girls in this part of the country do not have a good chance of studying and advancing in their studies given that they have to fetch water and transport the water home, tasks which consume much of their time and expose them to back aches.”

The underrepresentation of women numbers in the management of water resources in the sub-county is entrenched in the traditional and cultural tenets that limit women’s participation in key decision-making processes. According to the FGD response by 37 years old Brenda (not her real name), women are expected to be obedient to their husbands not managers. Therefore, they are expected to be more passive than active.

"In our community, women have no say in most matters, they are expected to be submissive to their husbands and do household duties. Men assume all leadership roles.”

From the outcomes, the researcher discovered that men and women played different roles in water resource management. This was so because men are traditionally inclined to make the key community-related decisions. For instance, Abel (not his real name), one of the key informants, brought this perspective.
"The women fetch and ensure that there is water in the household for the domestic related duties while the men ensure there is security in the water sources and take care of all management duties."

The findings revealed that women have customary roles with key decisions being made by the men. Likewise, women seemed to be more operational in sharing information within their families and through informal networks and the men sharing information outside of their families and through formal networks. Consequently, gender disparities affect shared responsibilities to the aspects of water resources and project management. Both genders tend to consolidate in different ways; for instance, women repeatedly face precise hurdles to partake in the projects or contribute to a discussion assembly. Additionally, the study established that women are often the ones most interested in establishing and maintaining good water supply. Yet, they do not essentially take part in main decisions and in the management of water projects. In contrast, men controlled water projects management because they made important decisions on when and where to start and locate the projects like boreholes and the time to supply water. Furthermore, men controlled most of the water points and therefore had the powers to regulate when and how much to sell the water. The study sought to establish the numbers of men and women in water resource management and from the findings of the study, it was established that both men and women participate in water resource management. However, the men had more roles owing to the patriarchal nature of Kajiado West Sub County. This finding agrees with that by Mwangi (2015), whose study in Kajiado County also established that men and women's roles are different; thus, their numbers in management also vary with the diverse roles.

4.5 Water needs for men and women and management of the water projects

The second objective of the study was to examine the influence of water needs for men and women on water resources management in Kajiado West Sub County, Kajiado County, Kenya. Under this objective, the question was answered using 5 items across the
2 sets of instruments for the key informants and the Focus Group Discussions. The items were summarized using frequencies and discussed as follows.

The study established that even though the water in Kajiado West Sub County is scarce, men and women have water needs and use it for different purposes such as household and livestock uses. One of the main topics deliberated in the FGDs was both men's and women's water needs. The discoveries show that both men and women use water for unlike functions. Women use water mainly for domestic purposes like laundry and cooking. Men’s needs for water include irrigation and livestock purposes. This is shown in comments by Cosmas, 45 years old and Anna, 51 years old (not their real names), during the focus group discussions.

“Water in this area is used for different things like irrigation and it is also given to the livestock. These water uses are mostly for the men. Women mainly use water for cooking and washing the clothes.”

“The women are the primary caretakers of the homes and thus have more needs of water compared to the men, they cook, wash and do all cleaning chores.”

Besides the uses of water, water needs in Kajiado West are understood based on the accessibility facet. The severe water scarcity in the area has led to boreholes' construction since the area is arid and lacks flowing rivers. Therefore, this shows a substantial water need. Water from the boreholes is pumped and stored and in water tanks to respond to regular water shortages, even though this is not always the case. From the analysis of the study findings, most of the respondents said that they have to walk for long distances as the boreholes, water points are at long distances, and these force women and girls to wake up very early in the morning to look for water. The following were comments by Moses, 53 years old and Nancy, 32 years old (not their real names), on the same.

“Men have to travel many kilometers away in search for water for their livestock like cows, goats and sheep.”
“Girls and mothers have to be up very early in the morning to fetch water before the sun becomes unbearable.”

The perennial water shortage in the Arid and Semi-Arid Areas (ASALs) area is attributable to the low rainfall received in the area. The area thus suffers from many drought conditions throughout the year.

**4.5.1 Water needs for men**

The key informants and the residents were required to give both the men and women the water needs in the sub-county. The findings for this were presented in Table 4.4.

**Table 4.4 Water needs by gender**

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>Domestic chores</td>
<td>3</td>
<td>11.0%</td>
</tr>
<tr>
<td>Irrigation</td>
<td>7</td>
<td>26.0%</td>
</tr>
<tr>
<td>Drinking</td>
<td>4</td>
<td>15.0%</td>
</tr>
<tr>
<td>Livestock</td>
<td>11</td>
<td>41.0%</td>
</tr>
<tr>
<td>Cooking</td>
<td>2</td>
<td>7.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

The findings in Table 4.4 show that many (41%) respondents in the FGDs indicated that men mainly required water for livestock needs. Only 11% and 7% of the respondents indicated that men require water for domestic chores and cooking, respectively. This is because the work of livestock keeping is mainly men’s job. Women most times will be the homesteads’ caretakers and thus will require water for domestic chores, which are usually very many. This finding agrees with Gathagu (2013), whose study established that men and women have different water needs, which influences their active participation in water project management.
Further findings show that most residents (59%) indicated that women require water for domestic uses. Only 1% of the residents indicated that women required water for livestock needs. This shows the distinct water needs for both men and women in the sub-county. However, this finding disagrees with that by Kithome (2012) whose study in Machakos County established that there are no distinct water needs for men and women by gender. The finding agrees that Mwangi (2015), whose study in Kisamis District found that men and women have different water needs.

The study findings revealed that water needs for men and women in Kajiado West Sub County could be hypothesized based on the magnitudes of water uses and needs, access to water and water points, and the quality of the water. Both men and women walk for many miles to the water points. If men and women have to spend so much time collecting water, their other obligations are not fulfilled, bringing up battles. Carrying water for long distances and sometimes up steep terrain also led to health risks such as frequent headaches and backaches, malformed spine. Due to water scarcity, individuals may purchase the commodity from vendors or collect it from polluted sources due to lack of money for household water treatment in case of contamination. The study also discovered that girls are accustomed to giving up school to help their mothers in fetching water. Consequently, the water needs can generate gender inequalities centered on gender roles where girls are forced to give up educational opportunities and remain at the receiving side of gender inequalities. This finding agrees with that by Mwangi (2015) in a study in Kisamis District.

4.6 Constraints faced by men and women in Management of water projects

The third objective was to examine the constraints men and women faced in access to water resources in Kajiado West Sub County, Kajiado County, Kenya. To answer the question set under this objective, the researcher used 4 items in the research instruments.
4.6.1 Customs and traditions

The examination of water requirements for both men and women in Kajiado West offers perceptions of the problems encountered. Gender relationships between men and women as entrenched in the traditional customs present trials not only for women but also for men. Strict cultural norms in the community are the main constraint that men and women face in Kajiado west concerning water resource management. The traditional beliefs demand that women partake in diverse responsibilities from men. Even though specialization and labour division is obvious in most societies and essential in livelihoods and maintenance systems, some gender roles are discriminative, especially when women are expected to be obedient and not managers. Females’ responsibilities are looked upon with household lenses instead of the line of community improvement and decision-making in water projects and resources management. It was revealed that women in society could not control water projects since they do not own livestock in Kajiado West Sub County's patriarchal society.

The study findings revealed that the Kajiado West people's ethos favours men because they have more powers in the controlling and ownership of water resources. The bulk of the residents believed that water is mainly meant for livestock and irrigation. Men regulate the water projects; women must get up very early before sunrise to fetch water before the men come with the livestock. The study further established that men give priority to watering their cattle even before the women can fetch water for domestic usage. This is substantiated in Annita's following quote, 40 years old (not her real name) in the Focus Group Discussions.

"Women in this area and neighbouring areas too have to wake up as early as 4:00 AM to head to the water points in order to fetch water early enough before the men arrive with their cattle because men don’t care if the women haven’t fetched, they just drive in their cattle and force the women to wait for long and also the water gets dirty."

Because of such struggles, the water quality in Kajiado west has worsened to such a level that individuals have complained of health problems because the cattle pollute the water
also meant for household uses. The constraints encountered by both men and women can also be implicit in gender inequalities, entrenched in the cultural beliefs. The findings established that the Kajiado West area is part of the bigger Maasai settlement in which women are regarded among men's possession. Kajiado is a male-controlled society, and this means that there are massive gender disparities in many things. This is exemplified in quotes like these by Agnes, 46 years old and Jimmy, 53 years old (not their real names)

“In this our community, women and men have their roles and duties. More so no one does duties that are not theirs because there is a clear cut difference in roles by gender.”

“Women and men have their responsibilities as per the Maasai traditions. The roles clearly spell out what females and males should engage themselves in the community. The roles are not similar.”

To this end, women have unequal access to information in water resource management to the extent that they are underrepresented in decision-making. This study established from focus group discussions and key informant interviews that women were still underrated and thus not deemed fit to be in a leadership position in most areas. Nonetheless, in line with the statutory requirement for equal opportunity, men have no choice but to permit females to be among the management group. Nonetheless, it was established that even after women are counted in water project management, they still are afraid of talking when men are around due to their beliefs. Men are respected in society because they own everything and are the decision-makers in the community. Women are not permitted to communicate publicly in line with the cultural norms and thus are not likely to argue with or be in opposition with men. For that reason, females are fearful of demanding their just positions to avoid percipience at their homes and in public places.

The females in Kajiado West Sub County still encounter many obstacles to partake in community development undertakings such as water projects. These obstacles consist of denial by spouses to go to meetings that talk about safe water, percipience, subsidiary
responsibilities, frail management, lack of time and failure to see the benefits of their involvement.

Their involvement in water projects is largely centered on providing their labor for unskilled work, often adding to their already heavy workload. This indicates that although policymakers had undertaken efforts to encourage women’s participation in water resources management, women did not participate effectively due to a lack of confidence in standing up for their rights. Illiteracy and social norms prevented women from taking up any public role. Even where women have been given a responsibility in the water committees, they have often been token representatives with a passive role without effective participation.

4.6.2 Lack of Knowledge in Water Resource Management

Most of the Kajiado West sub-county residents indicated that they lacked formal education and training because they either dropped out of school or did not attend school at all. A key informant Derrick (not his real name), informed the researcher the following:

“Honestly, even some of us managers of the water projects and boreholes did not attend formal education, some don’t even know how to read and write especially the elderly ones”

Illiteracy in the sub-county limits the appropriate control of water resources and projects. Additionally, many of the residents of Kajiado West argued that they have never attended school and this had restricted their comprehension of water resources management as exemplified by these quote from Rebecca, 35 years old (not her real name) during the focus group discussions:

“Most of us never went to school and thus cannot understand fully how to manage the resources, the management is therefore left for the elderly men.”
Additionally, the findings displayed a gender angle in line with the awareness of water resource management. Many times, females have failed to attend school and have had to assist their mothers in fetching water. It came out also that youthful girls are habitually circumcised as per the cultural dictates. When married off, the community regards girls as resources who provide them dowry in the form of livestock. Therefore, girls are not accorded education opportunities.

4.6.3 Constraints of access to water

The study revealed that Kajiado west is classified as an ASAL and its dwellers encounter access to water. Residents in the FGDs pointed out that they had challenges accessing water points like boreholes because they must get up very early in the morning and walk for many kilometers in search of water. These women were forced to walk long distances with children on their backs because they are also in charge of domestic chores. On the other hand, the men trek for long distances with their livestock searching for pasture and water. Rita (not her real name) was quoted in the FGD as follows:

“The roads here in Kajiado west are very poor and therefore women walk for long distances carrying babies to fetch water for home use.”

Subsequently, young girls and boys are not able to go to school regularly as required. The boys have to take care of the cattle while they are forced to stay at home and carry out domestic tasks or assist their mothers in fetching water.

According to the Kajiado District Development Plan Report (GoK, 2008), the women and girls in Kajiado walk for long distances searching for water, which is a very precious commodity. The findings of this study agree with the revelations of the development plan. This is a quote from Mary (not her real name), one of the FGD members.

“The problems associated with the fetching of water by women are many. The women are for the most time of the day away searching for water and therefore domestic conflicts are very common here.”
The study’s findings revealed that water quality is also not guaranteed and remains one of the major constraints that the residents of Kajiado West encounter daily. The livestock contaminates the water at the water points. Even though there are domestic water treatment options, such as reagents, the monetary constraints may restrict this. The demographic features of the respondents indicated that many of them are not of affluent income-generating activities.

4.7 Strategies to ensure the inclusivity of gender

The fourth objective sought to examine the best strategies that can help the inclusivity of genders in managing water resources and projects in Kajiado West Sub County, Kajiado County, Kenya. The researcher had 6 items in the research instruments to answer the question asked under this objective. The findings are summarized in Table 4.5:

**Table 4.5 Strategies to ensure gender inclusivity in water resources management**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enforce the one third gender rule in the constitution</td>
<td>17</td>
<td>63.0%</td>
<td>6</td>
<td>22.0%</td>
</tr>
<tr>
<td>Ensure that where a man is the manager of a project, the vice is a woman</td>
<td>21</td>
<td>78.0%</td>
<td>5</td>
<td>19.0%</td>
</tr>
<tr>
<td>Encourage women to attend adult learning centers to ensure they are empowered</td>
<td>14</td>
<td>52.0%</td>
<td>8</td>
<td>30.0%</td>
</tr>
<tr>
<td>The elders should abolish some restrictive cultures</td>
<td>20</td>
<td>74.0%</td>
<td>6</td>
<td>22.0%</td>
</tr>
</tbody>
</table>
The findings in Table 4.5 show that the majority (63.0%) of respondents showed strong agreement with the strategy that the one third gender rule in the constitution should be fully enforced in the region. Only one respondent strongly disagreed that that strategy wouldn’t work. This implies that if the one-third gender rule is fully implemented, we would have many women in water projects management and the gender disparity would narrow. The finding agrees with that of Lusuva 2009) in Tanzania’s Usangu plains, which established that one strategy to improve women's participation in water project management would be through reliance on the constitutional dictates. The finding agrees with another one by Buluku (2013) who also established that enforcing the one-third gender rule can go a long way in enhancing improvement in the management of natural resources.

Further findings show that the majority (78.0%) of the respondents indicated that the strategy that would close the gender gaps is that it should be ensured that where a man is the manager of a project, the vice is a woman. Only one respondent indicated that it would not work. This would guarantee women participation in the management of water resources. This finding agrees with that of Kithome (2012) whose study on water management in Machakos district indicated that ensuring women deputize in the management positions ensures better management and participation by all.

The study further reveals that the majority (52%) of the respondents strongly agree that encouraging women to attend adult learning centers to ensure they are empowered is a good strategy to ensure their management participation. When women are educated to higher levels, they become enlightened and empowered to participate more actively in their lives' crucial roles. The finding agrees with Mwangi (2015) who discovered that women were not participating in water resources management because of illiteracy.

The findings additionally show that the majority (74.0%) of the respondents agree that the strategy to improve gender participation would be that the elders should abolish some restrictive cultures. The finding implies that culture is central to some of the restrictions that women face in their participation in crucial roles in society. This finding agrees with
the findings of Majekodunni (2006) who assert that culture is a predictor of participation in water resources management by gender.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presented the research results in line with the research questions of the study. The aim of this chapter was to discuss the results of the data analysis using qualitative means and the interpretation thereof. The chapter sets out to present a discussion of the findings and draw conclusions from it. This was done by careful analysis of the findings in the context of relevant existing literature on gender disparities in management of water resources. This chapter is divided into four sections.

5.2 Summary of the study

The study sought to find out the determinants of gender-responsive management of water resources and projects in Kajiado County, Kenya. The researcher singled out four challenges that she deemed are the factors influencing gender effectiveness in water resources and project management in the county. The study had a target population of 54 water projects and all the residents of Kajiado County. The study sample consisted of 47 respondents composed of 17 key informants and 30 residents. Simple random sampling and purposive sampling techniques were used to select the respondents for the study. The study used questionnaires and focus group discussions were used as the main data collection instruments. Validity was safeguarded through expert judgment. The study used the split-half method of testing reliability. Raw data were collected and analyzed by use of quantitative and qualitative methods and presented in tables and graphs. The data collected were analyzed using SPSS version 20.0 computer program. Descriptive statistics and thematic discussions were used.

5.2.1 The numbers of men and women and management of water resources

The numbers of women and men concerning water resources management differ in most societies, and this is also the case for the case study of Kajiado West Sub County. The study showed that although women are represented in the management committees of the
water projects, however, their number is much less compared to that of men. It can be argued that women were not nominally represented in the management of water projects and as such have no decision-making roles. The findings as revealed in Chapter 4 about women’s role in the management of water resources are validated with other related studies on gender and natural resources management such as that of Oluwole (2010), who found that the nature of women’s involvement in decision-making is limited, where women are often not made aware of meetings, and when they did attend, they would rarely speak up, and if they did speak up, their sentiments have little weight. In her research of natural resources management in Southern Asia, Agarwal (2001) further contends that women are involved in participatory institutions, nevertheless instantaneously left out due to customary practices and traditional customs of gender-based segregation in addition to social views of women’s capability to fund user groups amid other things. The investigation results indicated that the number of women active in water resources management in Kajiado West is very low compared to men. Such findings could be attributed to outmoded customs and practices that were found to begin from deep-rooted communally created roles that to large extent favour men, therefore producing a powerfully men-dominated social order.

The findings show that Kajiado county is marred with old-style concepts of contribution instituted through protection arrangements and relationship structures that place women far below on the class ladder. Based on such inequalities, women were found to be socially and culturally controlled from participating in decision making. Male chauvinism and customs have had a negative outcome regarding how women view themselves (Moyo, 2014). Gender sensitivity has a great influence on the whole water project management since it prescribes who is mandated to make the decisions. Women put importance on household roles and difficulties that women face daily. Women see themselves as mothers and wives, being powerless and inferior only with obligation for the family and domestic work. Although both men and women view men as powerful and as heads of the household and decision-makers, some women view men as controllers and autocrats. By difference, men take themselves as superior and possess the ability to make suitable resolutions
Another study by Irounagbe (2010) had a similar view and emphasized that cultural outlooks towards women have added to and propagated the image of women as inferior in most African countries. Additionally, culture has made the females believe that decision-making and issues of development are manly, implying that they are a reservation for the men. Men are thought to be gifted with great knowledge and wisdom, while women, on the other hand, are linked with household roles, which include taking care of the family, cleaning, and looking after the elderly. This state of affairs makes women view themselves as lesser beings who have nothing significant to contribute. The way society views women and how women ultimately view themselves affects in as far as women’s role in development issues is concerned, specifically concerning water project management. According to Nkonya (2008), women’s low level of self-confidence is typical because of cultural constrictions, which forbid women from liberally articulating themselves and participating themselves in decision-making responsibilities where men are involved. This is comparable to the outcomes of the research where women tend to obey men and often challenge them when they feel that men are right. Women are supposed to be submissive to men in all aspects. With the respect to the findings of the study, the number of women involved in the management of water resources is less than that of men.

5.2.2 Water needs for men and women and the management of water resources

Men and women have different water needs. Men on one hand typically require water for productive activities and other related activities. Contrary, women also use water for productive activities as well as household chore related roles. The study revealed that women’s role in water management can be taken to be a passive one. However, the needs of water for men and women are at variance. This statement is in agreement with other studies on gender and natural resources management such as that of Bennett (2008), who found that the water needs of both women and men were hampered by invisibility, whereby women were minimal associates who were repeatedly not made conscious of meetings, and if they did go to meetings, they would not often talk, and if they did talk, their sentiments carried little weight. This means that despite them having most domestic-
related needs for water, women face problems and have little participation in the management of the resources to channel their issues.

Regularly, male managers of the water projects are chosen because the women are not educated enough or are left to attend to domestic chores. Buluku (2013), in her research of agricultural resources management in Kenya, submits that women are involved in the use of resources, yet concurrently excluded due to traditional practices and established norms of gender-based exclusion, social opinions of women’s capability to contribute to user groups, among other things. Similarly, Gathagu (2013) described the role played by women in water and the productive use of water as a minor due to the nature of their domestic-related water needs. Gathagu (2013) further stated that women’s role in water management and the related access to irrigation assets is always lower than men’s, and where it does exist, it tends to be lopsided, restricted, or lessened over time. The nature of women’s need for water as revealed by the study was largely determined by the cultural customs of the Maasai people. Cultural customs and traditions delimit and shape the behaviour of men and women and the behaviour and duties, in turn, will dictate the water needs. Furthermore, men are taken to be responsible for community development and authority. Based on that, women have different water needs compared to men and the differences are dependent on the duties performed by them.

5.2.3 Constraints facing men and women in the management of water resources

The study also sought to determine the constraints that both men and women face in water project management. The findings indicated that cultural customs and illiteracy in water resource management are among the major challenges. Poor access to water sources was also cited as another problem men and women face. However, all these constraints weigh negatively more on women than men and further limits women's participation in the management of water resources. The cultural norms that advance authoritarian and mannish welfares prevent women from partaking in water management decision making. Livestock rearing is taken as the predominant traditional and economic activity in Kajiado West Sub County and the findings show that because of this predisposition, the
management of water projects in the sub-county is the role of men. The fundamental purpose is that cattle rearing is a main economic activity and constitutes the major use of water subsequently, thus giving men an upper hand in the management of water projects. Nonetheless, this is a traditionally modeled notion arising from customary gender disparities and intended to validate and propagate the marginalization of women from water resources management in addition to decision-making. Nevertheless, the cultural customs are a significant stimulus and are a restriction in water resource management as it excuses women on the grounds of male chauvinism cultural outlook. The study discovered that gender control associations and disparities, ascending from customary gender inequalities, percipience, and demotion of women are accountable for women’s prohibition from active water resources management. Comprehensive water management is elusive as the study findings show well that women are left out in water management committees and cannot make decisions thereof.

Inaccessibility to water projects was also cited as another constraint facing men and women in the management of water resources. The water resources and projects are located far from the homes and the topography that leads towards the resources is not favorable. Based on their gender characteristics of providing water to the households, the females have to walk for long distances to fetch water for domestic use.

5.2.4 Strategies to improve inclusivity and the management of water resources

The study also sought to analyze some strategies that could be used to improve gender inclusivity in the sub-county of Kajiado West. It was apparent from the FGDs that enforcing the one-third gender rule of the constitution would go a long way in improving women's participation in management and decision making in water project management. This is because women would be more alive to what they should do to be proactive members of society. It was also clearly recommended that all male managers should be deputized by females and vice versa to encourage women participation in management. Illiteracy among women especially was also identified as a major constraint to participation in management. Women should be encouraged to attend training institutions
to get empowered. Elders should do away with the restrictive traditions that limit women's participation in decision making.

5.3 Conclusion
Gender is a key determinant in the effectiveness, sustainability and general achievement of any water venture. In reality, gender mainstreaming calls for participation of both men and women in a development process and considering the effects for both genders. Regarding water resources management, the numbers of men and women should be harmonized. This would ensure an equal playing field in terms of decision making as far as water resources management. This comes from the notion that women and men have different roles and knowledge that can be pooled to make evocative and healthy water resources management. However, men and women are not involved equally and equitably in water resource management. The numbers of women in the management of water resources versus those of men are very wanting in the sense that most people still view management as a man’s job hence limiting the participation of women in the management of the projects. The number inequalities have served to maintain and justify not only socioeconomic inequalities but also the exclusion of women in decision-making. The management of water resources negates gender equality fundamentally and the gender assessment in Kajiado west demonstrates this well. The needs of water for men and women are different because they are dictated by the responsibilities of these genders which are different.

In the management of water resources, women’s contribution is not felt despite their roles and responsibilities that put them at the heart of management. Women are passively involved in water projects management and do not make decisions on water resources. They are not allowed to participate in community water committees, thereby perpetuating traditional gender inequalities. Education of women is educated to empowerment hence the girl child education means more lady managers in many different spheres hence narrowing the gap. Society should be alive to the realities of the 21st century world and
hence abolish demeaning customs and traditions to safeguard the participation of women in the management of water projects.

5.4 Recommendations

i. Hands-on support to community-level work is required to support field staff in enabling women and men to work together in water resources management. The numbers should be harmonized in line with the recommendations of policy documents.

ii. The differences and inequalities between women and men influence how individuals respond to changes in water resources management. Understanding gender roles, relations, and inequalities can help explain the choices people make and their different options. Involving both women and men in integrated water resources initiatives can increase project effectiveness and efficiency.

iii. Gender training of a very practical kind is needed focusing on the roles and responsibilities of project managers and their partner organizations, backed up with ongoing support through networks and exchanges. It is particularly important to provide support to staff within projects who have responsibility for spearheading, supporting and sustaining gender-sensitive practice, such as social development staff or gender focal point.

iv. The study also recommends that women need to learn about their rights and take charge of the process of change. Women’s active involvement in water management requires a strategy of empowerment. The governments at both national and county levels need to assist in the empowerment of women by creating development policies that improve the knowledge and skills of both women and men.
5.5 Suggestions for Further Study

It is worth mentioning that although the research set out to cover many aspects of this study, it has shortcomings in some insights that can broaden the comprehension of women's involvement in water project management. Intrinsically, these suggestions for further research are made:

i. A similar study should be carried out in a larger part of the country to confirm the findings of the study. The scope of the study can be broadened to consider other aspects of gender as well as increasing the number of women for the study.

ii. Another study should be done on the same but considering other aspects affecting women's participation like socio-economic background, marital status, poverty among others.

iii. There is a need for further research on how societies can realize gender mainstreaming in natural resource management.
REFERENCES


Alouka, S. (2006). Integrating Gender into the Promotion of Hygiene in Schools. In: Office of the Special Adviser on Gender Issues and Advancement of Women, Gender,


Hannan, C. (2001). ‘From concept to Action: Gender Mainstreaming in operational activities’ Paper delivered at the Technical Review Meeting: Assessment of


APPENDICES

APPENDIX I: INTRODUCTORY LETTER

KENYATTA UNIVERSITY

P.O BOX

NAIROBI, KENYA

11/03/2019

TO MR/MRS/MISS………………………………………………

Dear Sir/Madam

RE: DETERMINANTS OF GENDER RESPONSIVE MANAGEMENT OF WATER RESOURCES PROJECTS IN KAJIADO WEST SUB COUNTY, KAJIADO COUNTY, KENYA.

I am currently a student pursuing a master’s degree in Kenyatta University. I am carrying out the above study in your Sub-location as part of the requirements for the fulfillment of the degree. The purpose of this letter is to humbly request you to participate in the study by completing the attached questionnaire.

All the information collected will be treated as strictly confidential and will not be published anywhere.

Your participation in this research is out of your own will.

Your cooperation and support in this study will highly be appreciated.

Yours sincerely,

Gladys Nafula
APPENDIX II: KEY INFORMANT’S INTERVIEW GUIDE

I am Gladys Nafula Wakhungu from Kenyatta University. Am conducting research on: Determinants of Gender Responsive Management of Water Resources Projects in Kajiado West Sub County, Kajiado County, Kenya.

You have been chosen for this interview because of your knowledge and expertise in the area of water projects management. I would like to ask you a few questions that will take approximately 20 minutes. Your participation and responses will be highly appreciated. Please let me know whether you have any questions.

Your age……………………..

Your gender…………………

1. What is the current water situation in the area (Probe in terms of water availability and access)

2. Who manages the water projects in your village? Men or women. (Probe in terms of the roles of men and women)

3. In your opinion, what is the link between water projects management and access to water?

4. What social and cultural factors rule access to water and water management in your sub location?

5. What is the significance of involving both men and women in management of water projects?

6. What are the water needs for men and women in your area?

7. What are the challenges that people encountered in accessing water in your area?

8. In your opinion, what can be done to improve water projects management water?
9. In your opinions, which strategies should be done to improve gender inclusivity in the management of water resources and projects in the sub county?

*Thank you for your participation.*
APPENDIX III: FOCUS GROUP DISCUSSION GUIDE

I am Gladys Nafula Wakhungu from Kenyatta University. Am conducting research on: Determinants of Gender Responsive Management of Water Resources Projects in Kajiado West Sub County, Kajiado County, Kenya.

I would like to ask you a few questions that will take approximately 20 minutes. Your participation and responses will be highly appreciated. Please let me know whether you have any questions. Do you allow me to continue? Yes {    } No {   }

Section A: Demographic characteristics

1. Please provide the following details:

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<th>Respondent</th>
<th>Age</th>
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<th>Highest level of education</th>
<th>Marital status</th>
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Section B: Gender related issues and water

2. What are the main sources of water in this area?

3. What are the main uses of water?

4. What are the water needs for both men and women in this sub county?

5. What do you think is the importance of water projects management?
6. Who do you think is responsible for water project management (men or women?)

7. Do you think it is important to involve both men and men in water resource management?

8. What roles do both men and women play in the management of water resources and projects in the sub county? 0

9. Between men and women who should have a more central role in the management of water resources and projects and why?

10. What challenges do people face in terms of access and control of water resources here?

11. What are some possible solutions to the constraints identified above?

12. What strategies do you think can be used to improve gender inclusivity in the management of water resources in your sub county and why?

Thank you for your participation.
APPENDIX IV: APPROVAL OF RESEARCH PROJECT

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 4150

FROM: Dean, Graduate School
TO: Wakhungu Gladys Nafula
     C/o Sociology, Gender & Development Studies Dept.

DATE: 19th August, 2019
REF: C50/CE/14376/2009

SUBJECT: APPROVAL OF RESEARCH PROJECT PROPOSAL

This is to inform you that Graduate School Board at its meeting of 7th August, 2019 approved your Research Project Proposal for the M.A Degree Entitled, “Determinants of gender responsive management of water resources and project in Kajiado County, Kenya”.

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking Forms per semester. The form has been developed to replace the Progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

Thank you,

HAILET ISABOK FOR DEAN, GRADUATE SCHOOL

cc. Chairman, Sociology, Gender & Development Studies Department Supervisors:

1. Dr. Casper Masiga
   C/o Department of Sociology, Gender & Development Studies
   Kenyatta University
APPENDIX V: RESEARCH PERMIT FROM NACOSTI

Ref No: 551510
Date of Issue: 19/September/2019

RESEARCH LICENSE

This is to certify that Ms. Gladys Waikhuu of Kenyatta University, has been licensed to conduct research in Kajiado on the topic: DETERMINANTS OF GENDER RESPONSIVE MANAGEMENT OF WATER RESOURCES AND PROJECTS IN KAJIADO COUNTY, KENYA for the period ending 19/September/2020.

License No: NACOSTI/P/19/1465

Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

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